UTILIZATION OF PRECONCEPTION CARE AND ASSOCIATED FACTORS AMONG REPRODUCTIVE AGE GROUP WOMEN IN DEBRE BIRHAN TOWN, NORTH SHEWA, ETHIOPIA.

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A THESIS SUBMITTED TO JIMMA UNIVERSTY INSTITUTE OF HEALTH, FACULITYOF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN MATERNITY NURSING.

JIMMA UNIVERSITY

INSTITUTE OF HEALTH

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Abstract

Background: *Preconception health refers to things women can do before and between pregnancies to increase the chance of having a healthy baby and being a healthy mother .Unfortunately, millions of women in the world do not have access to pre-pregnancy, pregnancy health services and childbirth with suitable quality. Therefore Addressing this important topic and coming up with necessary information is helpful to improve maternal and child health in our country.*

Objectives: *To assess Utilization of Preconception Care and Associated Factors among Reproductive Age group Women in Debre Birhan Town, North Shewa, Ethiopia, 2017.*

Methods: *community based cross-sectional study with both quantitative and qualitative method of data collection was employed from March 1st to 30, 2017.Systematic sampling technique was used to select a total of 424 reproductive age women. Thedata was collected using pre-tested and structured questionnaire and eight in-depth interviews were done using interview guide. The collected data was coded and entered to Epi data 3.5.1and exported to SPSS version 21 for cleaning and analysis. Descriptive statistics like frequency table and graphs were used for data presentation. Factors with p-value < 0.25 in bivariate analysis were entered to multivariate logistic regression and statistical significance was considered at p-value < 0.05. OR and 95% CI were used to show the strength and significancy of the association.*

Result: *A total of 410 subjects were participated with a response rate of 96.7%.The overall utilization of Preconception care was 13.4%. Women's age, marital status, knowledge and availability of unit for preconception care were significantly associated with utilization of preconception care with (AOR: 3.567; 95% CI: 1.082, 11.758), (AOR: 0.062;95% CI: 0.007, 0.585), (AOR= 6.263; 95% CI: 2.855, 13.739) and AOR: 13.938; 95% CI: 3.516, 55.251) respectively.*

Conclusions: *The finding of this study showed that women's utilization of preconception care is low. Therefore, establishing preconception care strategies which can address all the components of the care and understanding the views of reproductive age women's and care providers will be essential when designing effective implementation strategies for improving delivery and uptake of preconception care.*

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Acronym

ACOG American Congress of Obstetrics and Gynecology

AIDS Acquired Immuno Deficiency Syndrome

ANC Ante Natal Care

ATSDR Agency for Toxic Substances and Disease Registry

BSC Bachelor of Science

CDC Center of Disease Control

CI Confidence Interval

CSA Central Statistical Agency of Ethiopia

DM Diabetes Mellitus

ETB Ethiopian birr

FA Folic Acid

HIV Human Immuno Virus

HTN Hypertension

KM kilo meter

MSC Master of Science

NCD Non Communicable Disease

OR Odds Ratio

PCC Preconception Care

PRAMS Pregnancy Risk Assessment Monitoring System

SRS Simple Random Sampling

SPSS Statistical Product and Service Solutions

UN United Nation

WHO World Health Organization

CHAPTER ONE: INTRODUCTION

1.1. Background

Preconception care is defined as a set of interventions and/or programmes that aims to identify and enable informed decision-making to modify biomedical, behavioral, and (psycho-) social risks to parental health and the health of their future child, through counseling, prevention and management, emphasizing those factors that must be acted on before conception and in early pregnancy, to have maximal impact and/or choice (1).It is an integral part of antenatal care because this care programme has potential to assist women by reducing risk, promoting healthy lifestyle and improving readiness for pregnancy. As well as it is important to minimize fetal malformation(2).

Preconception health refers to things women can do before and between pregnancies to increase the chance of having a healthy baby and being a healthy mother (3). As many women are not aware of being pregnant at first, it is important to establish healthy behaviors and achieve optimal health well before pregnancy(4). A healthy pregnancy begins long before a woman conceives.(3).It continues with appropriate prenatal care and preventing problems if they arise. The ideal result is a full-term pregnancy without unnecessary interventions, the delivery of a healthy baby, and a healthy postpartum period in a positive environment that supports the physical and emotional needs of the mother, baby, and family(5).

In 2012, WHO organized a meeting to develop a global consensus on preconception care to reduce maternal and childhood mortality and morbidity. In a review prepared for the meeting, the list of programmes included in preconception are Tobacco use prevention and cessation, Nutrition, Vaccine, Fertility and infertility, Female genital mutilation, HIV testing and counseling, Mental health, Substance use, Intimate partner and sexual violence, Premarital counseling, Genetic counseling, Maternal and child health, Adolescent-friendly services, and Occupational health(6).

Even if maternal health has significantly improved in the 21st century, but too many women continue to die or suffer severe pregnancy complications every year (3).Worldwide by the end of 2015, 3 03 000 women will have died during and following pregnancy and childbirth. Almost all maternal deaths (99%) occur in developing countries, more than half of these deaths occur in

sub-Saharan Africa **(7).** In the same year, an estimated 5.9 million children under 5 years of age died, of those deaths, 45% were newborns **(8)** and Preterm birth complications are the leading cause which is responsible for nearly 1 million deaths in 2015**(9).**This risk of maternal and infant mortality and pregnancy-related complications can be reduced by increasing access to quality preconception (before pregnancy) and interconception (between pregnancies) care **(10).**

Between 2016 and 2030, as part of the Sustainable Development Agenda, the target is to reduce the global maternal mortality ratio to less than 70 per 100 000 live births and new born mortality at least as low as 12 per 1000 live births**(7).** Preconception care has a positive impact on reduction in mortality and improvement in health outcomes for the mother, offering long-term benefits for the woman; improved health outcome for the neonate/child, which will lead to health benefits in later life as an adolescent and adult; reduction in the incidence of too-early and too-frequent pregnancies and abortions; and improvement in the nutritional status of mothers and women**(11).**

1.2. Statement of the problem

The Center for Disease Control (CDC) recommends risk assessment and counseling for all women of childbearing age as part of primary health care visits in order to improve pregnancy outcomes**(10)**.But unfortunately, millions of women in the world do not have access to pre-pregnancy, pregnancy health services and childbirth with suitable quality, especially poor, illiterate women or those in deprived areas **(12).**

The World Health Organization (WHO) recently stated that globally four out of 10 women report that their pregnancies were unplanned. As a result, 40% of pregnancies miss the essential health interventions required prior to pregnancy**(13).**According to PRAMS report 2004-2008 inUtah, only 32% of the 30,481 reproductive aged individuals reported they had received preconception counseling, with significantly low rates among those with unintended pregnancy **(14).**

In low-income countries, Preconception care has not been widely implementedbecause its aims and objectives are not widely understood and accepted**(6).**Due to that premature deaths caused by infectious diseases, maternal and perinatal conditions and nutritional deficiencies is high**(15).** If the risk factors were prevented, an estimated 75% of premature heart disease, stroke and diabetes, and 40% of cancer could be prevented globally**(16).** So Preconception care has found a place in the continuum of care aimed at improving maternal, newborn, and child health in Low and middle income countries**(17).**

Chronic disease Evidence also exists supporting the importance of preconception counseling and planned pregnancy; however, it is estimated nearly half of all pregnancies are unplanned **(18).** In fact, more than 60% of women with pregestational diabetes have unplanned pregnancies, lack access to preconception care, or feel challenged to comply with glycemic control regimens **(19).** As a result, 18% of these women do not seek early prenatal care and fewer have any form of preconception counseling **(20).**A study conducted in Saudi among 355 child‑bearing age women with self‑reported DM also showed, only 29.3% were provided with preconception counseling after being diagnosed with DM**(21).**

A good pregnancy outcome is partly determined by women's preconception health and healthy lifestyle. Nowadays the incidence of congenital malformations, preterm births, low birth weight and maternal mortality has not significantly declined over the years**(22).**The preconception period is seen as a critical period where intervention can lead to both short term benefit, by reducing pregnancy complications and adverse birth outcomes, and long term health gain**(23).** The importance of this element of contemporary health care has been acknowledged by health professionals and policy makers through international bodies and organizations. However, this acknowledgement has not been translated to the development of national policy in most countries, outcome **(24).**

Ethiopia also one of the country with high Maternal mortality rate , 412 deaths per 100,000 live births in 2016**(25)** and it accounts for 30 percent of all deaths to women age 15-49 **(26).** Preconception care is one of the Components of maternal health services that help to decrease maternal mortality **(27)**. Despite its importance in promoting maternal health, contributing to a healthy pregnancy, little is known about how Ethiopian women, especially child bearing women's have been preparing for a pregnancy and what they know about preconception preparation.So this study was designed to assess the preconception care utilization and determine factors that influence the uptake and utilization of preconception care among reproductive age group women.

1.3. Significance of the study

This study can show how Ethiopianreproductive age women prepare for healthy pregnancy and what factors affect utilization of preconception care and fill the literature gap in the area.

It also plays significant role for medical providers, educators, and policy makers for multiple reasons. First, this study will provide insights into reproductive age women's knowledge and practice regarding Preconception care.Second encourages health professionals to make changes to Preconception careservices delivered to women's in their practices. Also help Policy makers and stakeholders with up to date information for future planning and interventions.

Furthermore the study findings will be helpful for other researchers as stepping stone for further investigations in the area. The study will supply baseline information so as to improve utilization of Preconception carein the country in the long run.

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CHAPTER TWO: LITERATURE REVIEW

2.1. Utilization of preconception care

An integrative review conducted on the prevalence and nature of the use of preconception services by women with chronic health conditions indicates that the Prevalence of engagement with preconception care services and practices ranged between 18.1% through to 45% **(28).**

The study used data from the Pregnancy Risk Assessment Monitoring System (PRAMS) for the survey years 2005 to 2008; only 12.0% of Oklahoma women received any type of counseling or advice to prepare for becoming pregnancy**(29).** Another study the 2009 – 2011 Maryland PRAMS survey also, only 32% of women receive PCC prior to their most recent pregnancy **(30)**. In addition PRAMS report 2004-2008 inUtah showed that, only 32% of the 30,481 reproductive aged individuals reported they had received preconception counseling, with significantly low rates among those with unintended pregnancy **(14).**

Another study done in London with n=1173women, overall 27% of women reported visiting a health professional for advice about getting pregnant, (51%) of all women and (63%) of those with a planned pregnancy took folic acid before pregnancy .The 51% of all women who reported advice from a health professional before becoming pregnant were 2.34 times more likely to adopt healthier behaviors before pregnancy as compared with none for taking folic acid and 2.18 for adopting a healthier diet before pregnancy **(31).**

Another cross-sectional quantitative study conducted in São Paulo city, Brazil, Preconception health behaviors were performed by only (15.9%) of women **(32).** Another study done in Brazil among adolescents (n=126) also highlighting that 84.9% have not taken any action in preparation for pregnancy. Among the measures adopted, non-use of alcohol was the most frequently mentioned. The use of folic acid before conception was reported by only one adolescent (0.7%)**(33).**

A community-based cross-sectional study conducted among migrant women in China reveled that only 20.6% of women had received PCC**(34).**Another study done in Sri Lanka among consecutively recruited 250 pregnant women presenting for booking antenatal care at <28 weeks gestation, Only 27.2% of subjects had received PCC**(35).**

Anothercross-sectional study conducted in Saudi among 355 child‑bearing age women withself‑reported DM, showed that only 29.3% were provided with preconception counseling after being diagnosed with DM**(21).**

Study done in Nigeria revealed that determinants of folic acid intake during preconception and in early pregnancy, the majority of respondents (92.9%) took FA at some point or the other during pregnancy. Only (2.5%) respondents took FA during preconception**(36).**

A cross-sectional study conducted in Sudan among Reproductive Age Women with Rheumatic Heart Disease indicates that 40% of the participants in the study had been offered counseling against pregnancy and only half of the women had been counseled as couples**(37).**

2.2. Factors associated with utilization of preconception care

The study used data from the Pregnancy Risk Assessment Monitoring System (PRAMS) for the survey years 2005 to 2008 in Oklahoma indicates that, Women who received preconception care were more likely to be more than 25 years of age, have some college education, or be married. They were also more likely to have health insurance prior to pregnancy, had an intended pregnancy, and were trying to become pregnant at the time of conception**(29)**.

A study done in Utah also indicates that women younger than age 20, women aged 20-24, and women who lacked health insurance prior to pregnancy had significantly higher odds of not reporting a preconception visit. These results also indicated that being primigravid and having 16 years or more of education had significantly higher odds of reporting a preconception visit**(38)**.

The 2009 – 2011 Maryland PRAMS survey showed that Health and behavioral factors are associated with increased likelihood of Preconception care included a pre-existing diagnosis of diabetes .asthma, a dental cleaning in the year prior to pregnancy and consumption of a prenatal vitamin at least one day per week in the month prior to pregnancy. Women with unintended pregnancy and a prior term birth were associated with a decreased likelihood of preconception care**(30).**

Another study done in London showed that Taking folic acid or vitamin supplementation before pregnancy was significantly associated with age, ethnicity, employment status and educational achievement, taking (other) medication, having a previous miscarriage, stillbirth or termination

due to fetal abnormality and pregnancy planning. Reducing or stopping smoking before pregnancy was also significantly associated with age and employment status, while reducing or stopping alcohol was significantly associated with having a relevant medical condition or a previous miscarriage, stillbirth or termination due to abnormalities(31).

A cross-sectional quantitative study conducted in São Paulo city, Brazil, showed that a strong association between the preconception health behaviors and a planned pregnancy with odds of 16.77. Age over 30 years, paid work, and the time interval between menarche and first sexual intercourse were also associated with completing preconception measures without considering pregnancy planning(32).

A study conducted among migrant women in China reveled that Younger age women (20–24 years old) were less likely to receive PCC compared with women older than 25 years of age. Compared with the families with only one child, those with more than one child were less likely to receive PCC.Knowledge of maternal health care was also associated with receiving PCC. Women who had a better knowledge of maternal health care were 1.3 times more likely to receive PCC (34).

In another study done in Sri Lanka, an educational level < G.C.E.O/L (General Certificate of Education, Ordinary Level) also carried a higher risk of not receiving PCC (35).A study conducted in Saudi among women with diabetes mellitus indicates that women with extensive level of PCC knowledge were highly provided with preconception counseling (21).

Another Study done in Nigeria among reproductive age women regarding factor that influences utilization of maternal health care services shows that poor knowledge of the existing services, previous bad obstetric history; attitude of the health care provider, availability, accessibility and husband's acceptance of the maternal healthcare services were the major variables associated with barriers to utilization of maternal health services. Women's with higher level of education and who had a better knowledge of maternal health care were more likely to utilize maternal health care services like pcc. The finding also revealed that women with higher age and parity were less likely to utilize maternal health care services(36).

A qualitative study conducted in Iran reveled that importance of integration of PCC with other health care services. Data analysis among health professionals also showed that any opportunity should be used for PCC because it is rare that a woman asks for preconception care **(37).**

2.3. Conceptual frame work
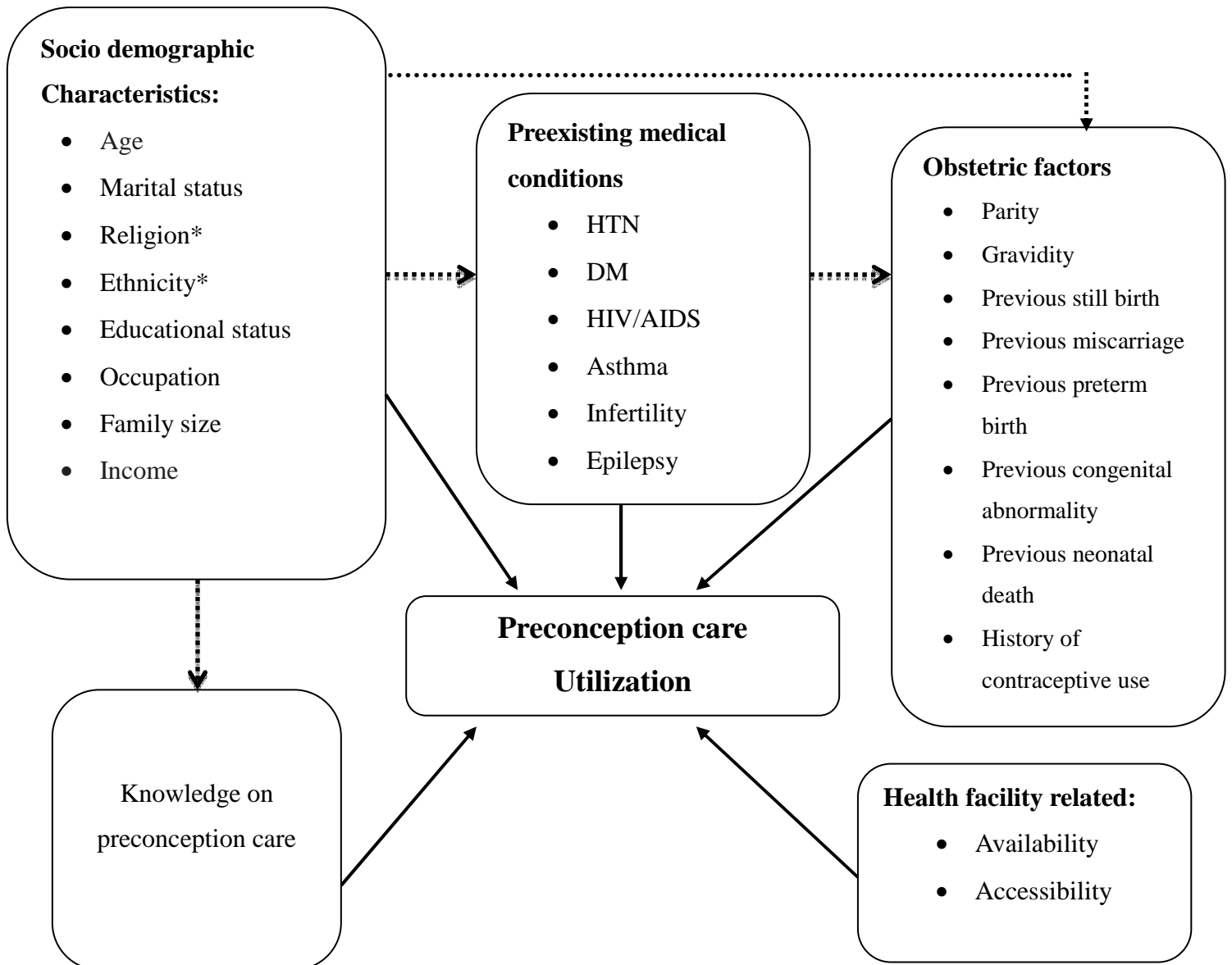
Figure 1.Conceptual frame work on Utilization of Preconception Care and Associated Factors among Reproductive agegroupWomen in DebreBirhanTown, North Shewa, Ethiopia, 2017. (Developed after review of different literature)

***The broken line indicates there may be relation but not the intention of the researcher in this study.

CHAPTER THREE: OBJECTIVES

3.1 General objective

To assessutilizationof preconception care and associated factors among reproductive age group women in DebreBirhan Town, North Shewa, Ethiopia, 2017.

3.2 Specific objectives

1. To determine the level of preconception care utilizationamong reproductive age groupwomen in DebreBirhanTown, North Shewa, Ethiopia, 2017.

2. To identify the factors associated with preconception care among reproductive age groupwomen in DebreBirhanTown, North Shewa, Ethiopia, 2017.

CHAPTER FOUR: METHODS AND MATERIAL

4.1. Study area and Period

The study was conducted in Debre Birhan Town, North Shoa Zone, Amhara Region,Ethiopia; fromMarch 1st to March 30, 2017 .The town is established in 1456 by Emperor Zera Yaeqob. It is situated in Amhara National Regional State and currently, the city is serving as the seat of Northern Shoa Zone Administration. The town is located at 130 kilometres northeast of Addis Ababa on the way to Dessie-Mekele route. The geographical coordinates are approximately at 9°41' North latitude and 39°40' East longitude and characterized by cool temperate climate. The annual average temperature of the city ranges between 4°C in the coldest month (August) to 26°C in the hottest month (April). Average annual rainfall ranges between 814 to 1080 mm. The town is divided in to 9 Kebeles that has a total area of 14.71km^2 with an average elevation of 2840 meters above sea level. According to the information obtained from District Health Office, in 2015/16, the total population size of the district is putted as 92,887 out of which 54.78% (50,883) are women. From those women 23.58% (21,903) are age between15-49. There isone referral hospital, four health centres, one university and four colleges under government and, one private hospital and 17 private clinics in the town.The study was conducted from March 1st to 30, 2017.

4.2. Study Design

A community based cross-sectional study design was employed.

4.3. Population

4.3.1. Source population
All reproductive age (15-49years) women who lived in Debre Birhan town

4.3.2. Study population
All selectedreproductive age (15-49years) women who lived in Debre Birhan town

4.3.3. Study unit
Individual reproductive age group women

4.4. Inclusion and exclusion criteria

4.4.1. Inclusion criteria

All reproductive age group women who had history of pregnancy andwho lived in Debre Birhan Town for 6 months and above were included.

4.4.2. Exclusion criteria

Women's who are critically illor unable to talk or listen during the study period were excluded.

4.5. Sample size determination
 Quantitative

Sample size was determined by single proportion formula by considering proportion of preconception care utilization hence, there is no reasonable estimate about utilization of preconception care, and then 50% (0.5) was used to get the maximum sample size, 95%CI and 5% of marginal error.

Therefore, based on the above assumptions the sample size could be calculated as:

$$n= \frac{(Z\ \alpha/2)2 \times P \times (1-P)}{d^2}$$

$$n= \frac{(1.96)20.5(1-0.5)}{(0.05)^2}$$

$$n= 384.16$$

So, minimum sample size, n=384.16 ~ **385**

Considering 10% non-response rate, total sample size was **424.**

Therefore, **424** reproductive age group women were subjects of the study.

Where $Z_{\alpha/2}$ is standard score value for 95 % confidence level of two sides normal distribution (Z=1.96 for 95% Confidence level)

Qualitative

Eight health professionals sevenfrom health institution and one from Woreda health officewere included in the study.

4.6. Sampling procedure

The entire nine Kebeles of Debre Birhan town was taken. A total number of households in each Kebele were taken from the 2017 work plan of the District Health Office. The sample size for each Kebele was determined proportionally to the number of households with in each Kebele. To reach the study unit systematic sampling technique was used in the Kebeles. The sampling interval of the households in each Kebele was determined by dividing the total number of households in the specific Kebele to the allocated sample size $(N/n)^{th}$which is forty two. The first house was selected randomly in one place and every 42th house for all Kebeles was asked.When there was no eligiblewoman in the selected house, nearby house was asked. In case of more than one eligible woman were encountered in the selected household, a lottery method was used to determine which woman would be interviewed.

For qualitative study

The key informants for in-depth interview were selected usingpurposiverandom sampling technique.The purpose was health professionals that were working on maternal, sexual and reproductive health services and related issues.
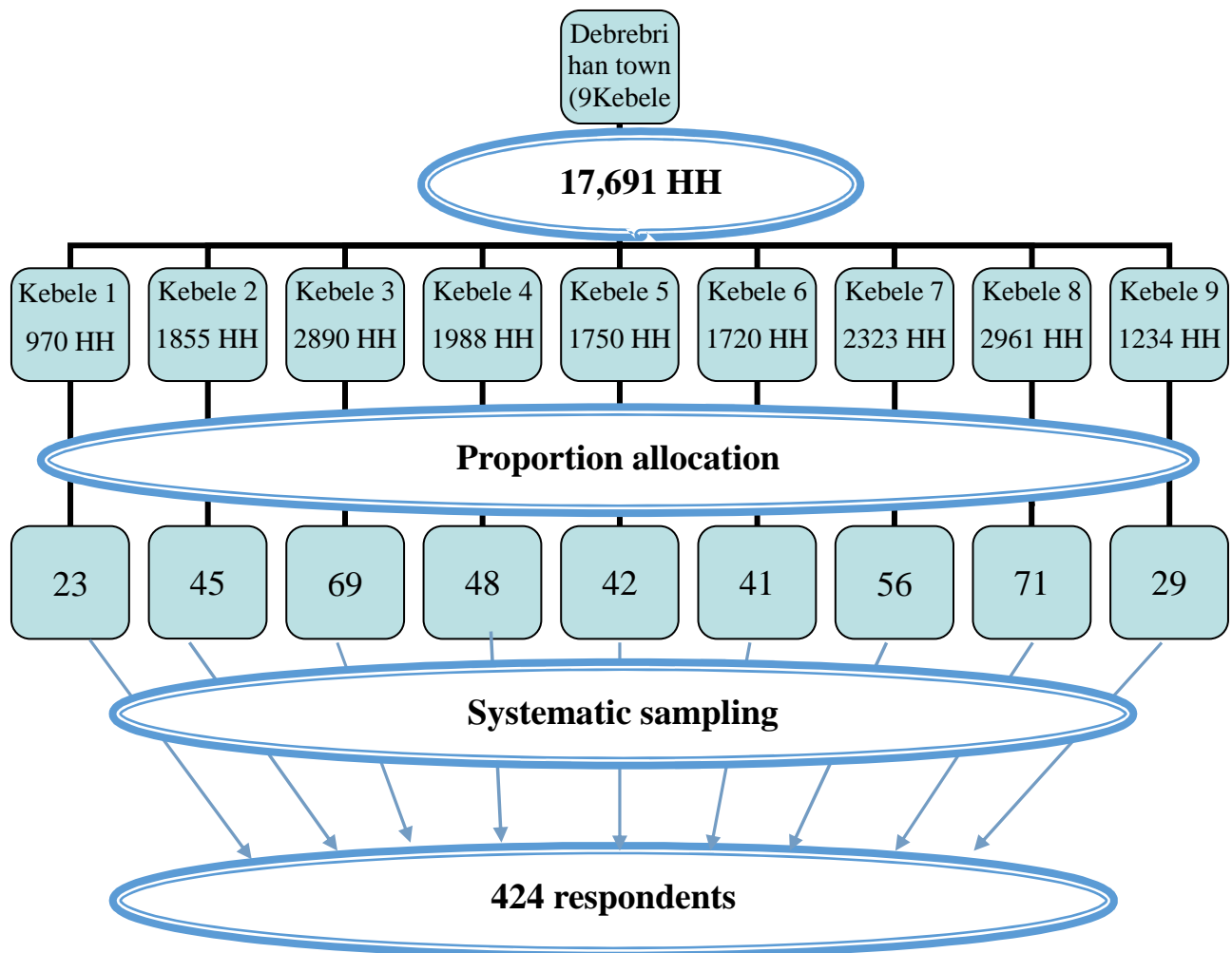
Figure 2: Schematic representation of sampling procedure

4.7.Data collection instrument and procedures

4.7.1. Data collection instrument

Quantitative

An interviewer-administeredstructured questionnaire was used for data collection. The study questionnaire consists of different parts for data collection up on the tool adapted from previous literatures in different parts of the world and modified according to local context **(31), (33), (39), (41).**In general the questionnaire consisted ofinformation on socio-demographic characteristics, Obstetric characteristics, Knowledge based information, Practice based of questions, Health status of women and health facility related questions.

Qualitative

Semi structured in-depthinterview guide wasused tocollect the data.

4.7.2. Data collection procedure

Quantitative

Data was collected using a pre-tested structured questionnaire through face to face interview. Six (6) Diploma nurse and three (BSc) holder supervisors who were familiar with the study area and experienced in data collection were hired to collect the data after attending one day training on the aim of the study, content, objective, data collection and interviewing technique and, issue on confidentiality. During the data collection, regular supportive supervision and discussion with data collectors and supervisors was done. Every day, the supervisors were checked all the filled questionnaires for completion and clarity.

Qualitative

The principal investigator were collected the data by the assistance ofone Msc degree who are experience on qualitative data collection.

4.8. Variables

4.8.1. Dependent variables

- Preconception care utilization

4.8.2. Independent variables

- Socio-demographic characteristics (Age, Marital status, Religion, Ethnicity, Educational status, Occupation ,Family size, monthly family Income)
- Knowledge on preconception (benefits to couples)
- Obstetric and gynecological factors (Gravidity, Parity, Previous still birth ,Previous miscarriage, Previous preterm birth, Previous congenital abnormality, previous neonatal death, history of contraceptive use)
- Health facility related (Availability, Accessibility)
- Preexisting medical conditions (HTN,DM, Asthma, HIV/AIDS, Infertility, Epilepsy)

4.9. Operational definition

Preconception care- Any interventions either advice or treatment, and lifestyle Modification a women received regarding components of preconception care before being pregnant**(41).** (Preconceptioncare Components in this study isHIV testing and counseling, STI screeningand treatment, Infertility/sub-fertility treatment, Nutrition, Ferrous supplementation, Immunization,Advice on cessation of alcohol,Adviceon cessation of cigarette smoking).

Unit for preconception care: is a unitwhere women's received care regarding component of preconception care before being pregnant.

Preconception care utilization: If womenreceived any interventions either advice or treatment, and lifestyle modification regarding components of preconception care at least once before being pregnant.

Good knowledge: Those who have scored above or equal to 50% of correct responses to preconception care knowledge questions**(41).**

Poor knowledge: Those who have scored less than 50% of correct responses to preconception care knowledge questions**(41).**

Accessibility: The location of client to health facility it takes in to account clients travel time on foot(less than 5 kilometer).

Adequatemedication: If a woman getsmedications like STI treatment, vitamins, vaccinations and iron folic if she goes there for any cases.

Adequate laboratory: If a woman gets laboratory like STI screening, HIV testing, blood group and Rh, urine analysis, hematocrit and hemoglobinif she goes there in any cases.

4.10. Data Processing and Analysis

The collected data was first checked manually for completeness, missed values, unlikely responses and then coded, and entered to Epi data 3.5.1. Then the data were exported to SPSS version 21 for data checking, cleaning and analysis. Once data was exported frequency distribution of all variable was examined to check for data entry errors. Simple descriptive analysis such as measures of central tendency, data dispersion and proportion was used to summarize the finding. Bivariate analysis was performed to assess the association of each independent factor with dependent variable. Variables with p-value less than 0.25 in bivariate analysis were selected as candidate and entered into multivariate logistic regression.

In the multiple logistic regression analysis, backward regression method was used to develop the final model for the dependent variable. Independent factors associated with preconception care utilization were declared with p value less than 0.05. OR and 95% CI were used to show the strength and significance of the association. Results were presented using tables, graphs and text.

For the qualitative part thematic analyses were employed to extract meanings out of the texts manually.First the data was transcribed and coded. Then categorized and thematized in line with predetermined thematic areas. Factors affecting utilization of preconception care as explained by the participants were thematically categorized to knowledge and health facility related factors. Then finally results were presented by supporting with the quantitative data.

4.11. Data quality management

The data collection tool was translated into local language, Amharic by experts in both languages and was translated back to English by another person to ensure consistency and accuracy. Training was given to both the data collectors and supervisors for one dayon the purpose of the study, data collection tools and procedure, how to interview, handling ethical issues and maintaining confidentiality and privacy. Each supervisor and Principal investigator was supervised data collectors and checked all the filled questionnaires for completion, clarity and consistency on daily bases. The questionnaire was pre tested on 5% of calculated sample size to familiarize enumerators with the administration of the interview process and for ensuring consistency. The pre-test study covered 22 eligible reproductive age group women who are living in Shewarobit town, which become out of the main study two weeks before the

commencement of the main data collection. Debriefing sessions were held with the pre-test field staff and the questionnaires were modified based on lessons drawn from the pre-test. The validity of the tool was also approved by experts.

4.12. Ethical considerations

Ethical clearance and approval letter to conduct study was obtained from Jimma University institutional review board and a letter of cooperation was taken from the institute of health to DebreBirhan Town health office. The purpose of the study was explained to the study participants and oral informed consent was secured before data collection was started and confidentiality of the information was ensured by coding. Participation was on a voluntary basis after written consent, and responses were kept confidential. The interview was undertaken privately in separate area. Only authorized person was get access to raw data collected from the field.

4.13. Dissemination of the Result

Up on finalization of the analysis and interpretation of the result comprehensive report will be submitted to Jimma University institute of health, school of nursing and midwifery. Hard and soft copies will be submitted to school, then it will be disseminated to DebreBirhantownhealth bureau and other local governmental and non-governmental organizations working in the area through presentations on conferences as well to the community; with that, it will help them to improve the problem. Also it will be presented on seminars, workshops and conferences .Further effort will be made to publish on relevant and reputable journal.

CHAPTER FIVE: RESULT

5.1. Socio demographic characteristics

A total of 410 subjects were participated with a response rate of 96.7%. The mean age of the participants was 28.8 years, with standard deviation of ±6.739 and with maximum and minimum age of 46 and 18 years respectively Three hundred eight (75.1%) of the participants were Amhara and 310(75.6%) were Orthodox Christian. One hundred and sixty seven (40.7%) of respondents had a monthly household income of 1000-3000 ETB and 141(34.4%) were educational level of more than secondary school. Majority of the participants 304 (74.1%) were married and 118(28.8%) of women were Government employers. One hundred thirty four (43.4%) and 150(49.3%) of the participant's husband were Government employers and More than secondary school respectively. Majority of the participants 208(50.7%) has family size below the mean <4 (Table 1).

Table 1: Distribution of study subjects by socio-demographic characteristics in Debre Birhantown, North Shewa, Ethiopia, March 2017(n=410)

Characteristics	Category	Frequency(N)	Percent (%)
Age of mother	15-24	114	27.8
	25-34	207	50.5
	35-49	89	21.7
Religion	Orthodox	310	75.6
	Muslim	45	11
	Protestant	41	10
	Catholic	14	3.4
Ethnicity	Amhara	308	75.1
	Oromo	60	14.6
	Tigray	23	5.6
	Guragie	19	4.6
Marital status	Married	304	74.1
	Single	78	19.0
	Others[1]	28	6.8
Educational status of women	No formal education	60	14.6
	Primary school	73	17.8
	Secondary school	136	33.2
	More than secondary	141	34.4
Women occupation	House wife	103	25.1
	Government employee	118	28.8
	Market trade vendor	90	22.0
	Student	73	17.8
	Daily laborer	26	6.3
Husband education (N=304)	No formal education	21	6.9
	Primary school	53	17.4
	Secondary school	80	26.3
	More than secondary	150	49.3
Husband occupation (n=304)	Government employee	132	43.4
	Market trade vendor	106	34.9
	Daily laborer	48	15.8
	Others[2]	18	5.9
Total household income per month in ETB	<1000**	70	17.1
	1000-3000**	167	40.7
	3000-5000**	109	26.6
	>5000**	64	15.6
Family size	<4	208	50.7
	>=4	202	49.3

Others[1]Widowed and Divorced

Others[2]farmer and student

**Birr

5.2. Obstetric and gynecologic characteristics

More than half 213(52.0%) of the respondents had history of one pregnancy and 216(54.1%) of them had <2 alive children. The majority 275(67.1%) of respondents had a history of family planning use. Twenty three (5.6%)of the respondents had history of spontaneous abortion (Table 2).

Table 2:Distribution of study subjects by their Obstetric and gynecologic characteristics in Debre Birhan Town, North Shewa, Ethiopia,March 2017(n=410)

Variable	Frequency (N)	Percent (%)
Number of pregnancy		
<2	213	52.0
≥2	197	48.0
Number of live birth(n=399)		
<2	216	54.1
≥2	183	45.9
History of spontaneous abortion		
Yes	23	5.6
No	387	94.4
History of still birth		
Yes	13	3.2
No	397	96.8
history of preterm birth		
Yes	11	2.7
No	399	97.3
history of congenital abnormality		
Yes	10	2.4
No	400	97.6
history of neonatal death		
Yes	9	2.2
No	401	97.8
History of contraceptive use		
Yes	275	67.1
No	135	32.9

5.3. Health status of women

Fifty (12.2%) of respondents had a chronic health problem and from those who had chronic health problem 22 (44%) of them were known hypertensive patients (figure 3).Only 23(46%) of participants who had chronic health problem received preconception counseling**.** Among those who received preconception counseling majority 15(65.2%) of them counseled about Maintaining optimal weight control, 10(43.5%) maintaining a regular exercise program, 8 (34.8%) maximizing diabetes mellitus control, 7(30.4%) ceasing tobacco, alcohol, and drug use and 3(13%) change or cessation of their medication.
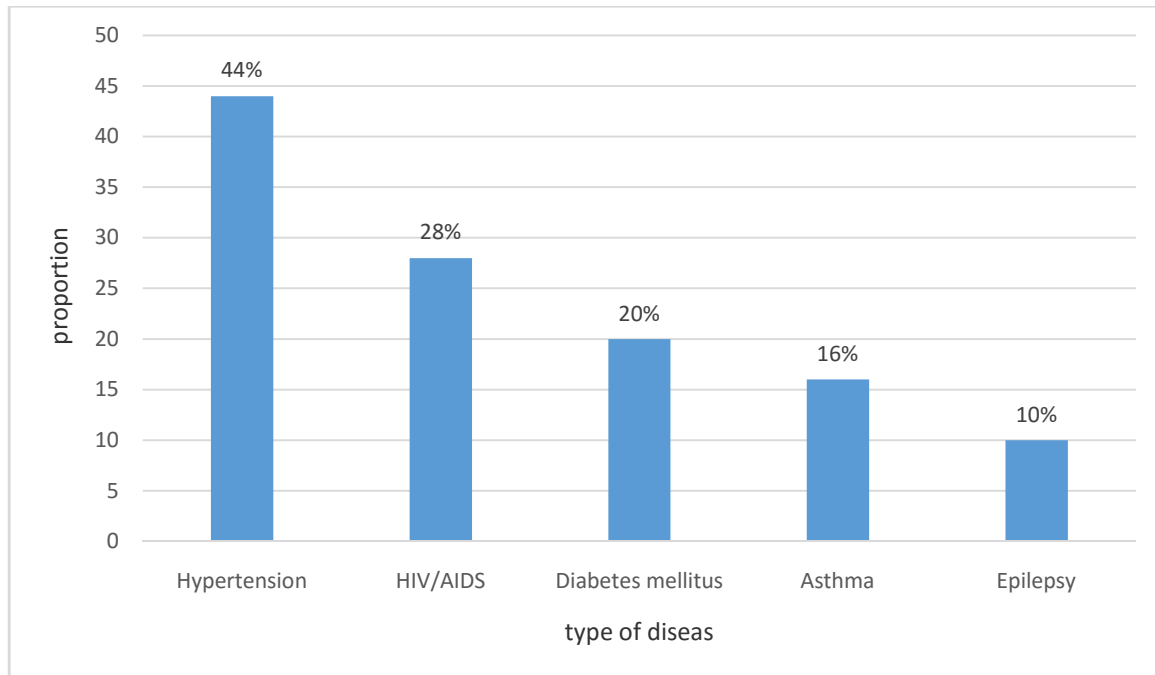
Figure 3: Types of chronic health problem among reproductive age women in Debre BirhanTown,North Shewa ,Ethiopia,March 2017(n=50)

5.4. Preconception care knowledge score

Among the total of 410 participants, 145 (35.4%) of women have heard about preconception care before. For those who have heard about preconception care; the major source of information was health workers 92 (63%) and minority 39 (26.9%) of them have heard from friends/family. (Table 3).

Level of women's knowledge on preconception care was measured based on correct response using six preconception care knowledge questions and the question wasscored out of 18 pointswomen's knowledge was categorized by using 50% as cut of point.The minimum and maximum score of participants was 0 and 18 respectively. Seventy one (17.3%) of them had good knowledge on preconception care (figure 4)**.**

Table 3: Women's information on general concept of preconception care in Debre Birhan Town, North Shewa, Ethiopia,March 2017(n=410)

| Variables	Frequency (N)	Percent (%)
Ever heard		
Yes	145	35.4
No	265	64.6
Information heard from(n=145)		
Friends/family	39	26.9
Mass media	49	33.8
School	50	34.5
Health workers	92	63
preconception care needed		
For women only	77	18.8
For women and men	129	31.5
Don't know	204	49.8
preconception care important		
For baby only	35	8.5
For mother only	28	6.8
For baby and mother	164	40.0
Don't know	183	44.6
Preconception care benefit couples		
No	166	40.5
Yes	244	59.5
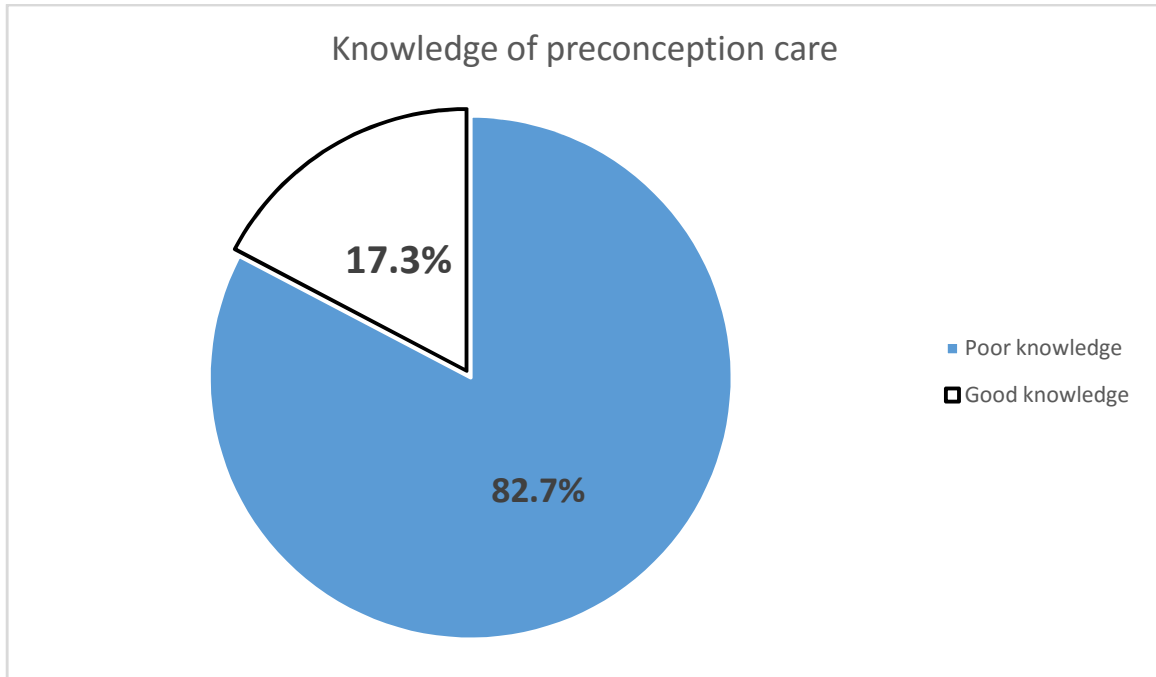
Figure 4:Women's general Knowledge about preconception care in Debre BirhanTown, North Shewa,Ethiopia,March 2017 (n=410)

5.5. Health facility related factors

As shown in the table 4 below availability of health facility in the study area was assessed. Accordingly all 410 (100%) of respondents confirm the availability of health facility (hospital/health center). Majority 307(74.9%) and 287 (70%) of the participants confirm that there were availability of adequate medication and laboratory service respectively.Only 23 (5.6%) of the participants confirm that there were unit for delivery of preconception care.Two hundred and fifty (61%) of participants mentioned that time to reach nearby health facility on foot took <5 kilo meters.

Table 4:Availability and accessibility of health facility in Debre Birhan Town, North Shewa, Ethiopia,March 2017.

Variables	Frequency (N)	Percent (%)
Availability of adequate laboratory service		
Yes	287	70
No	32	7.8
Don't know	91	22.2
Availability of adequate medication		
Yes	307	74.9
No	31	7.6
Don't know	72	17.6
Availability of unit for preconception care		
Yes	23	5.6%
No	135	32.9%
Don't know	252	61.5
Time to reach health facility (on foot)		
<5 km	250	61.0
≥5 km	160	39.0

5.6. Utilization of preconception care

Fifty five (13.4%) women's were utilized preconception care services (figure 5). Among those HIV testing and counseling was majorly utilized 51(92.7%) service. Fourteen (25.5%) of the participants who received of preconception care faced challenges during care. Among the participants who faced challenges majority 10(71.4%) told consumption of extended time during care provision and negligence from health care providers. Among the study participantswho are married majority 48(92.3%) had support from their husbands for preconception screening. Only 4 (7.7%) of the subjects have no support towards care from their husband, among those all of the husbands due to lack of knowledge on how preconception care benefits the couples.

Utlization of preconception care
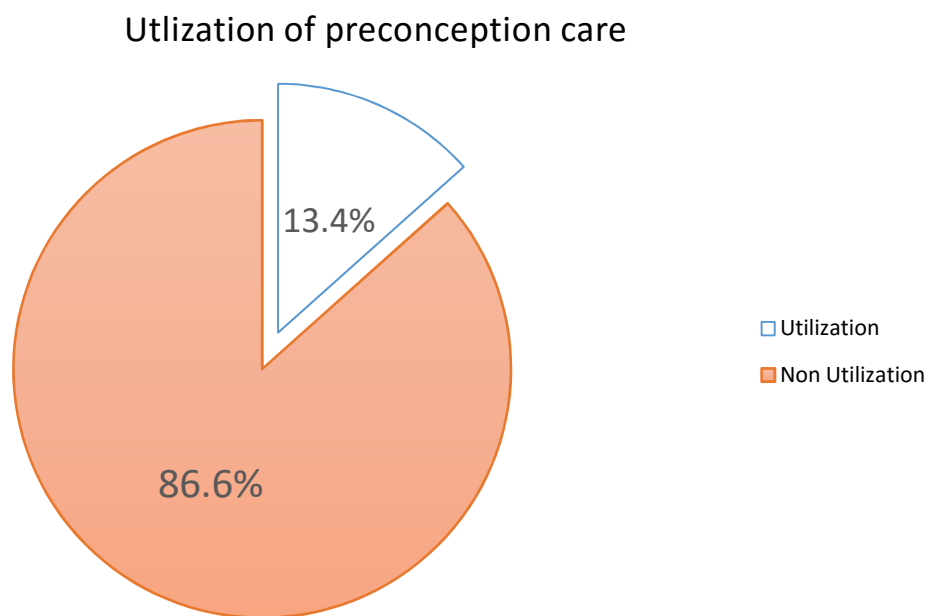
Figure 5: utilization of preconception care among reproductive age group women in Debre Birhan Town, North Shewa, Ethiopia, March 2017 (n=410)

Table 5:Women's utilization of the components of preconception care in Debre Birhan Town,
North Shewa, Ethiopia,March 2017(n=55)

Variable	Frequency (N)	Percent (%)
HIV testing and counseling		
Yes	51	92.7
No	4	7.3
STI screening and treatment		
Yes	24	43.6
No	31	56.4
Infertility/sub-fertility treatment		
Yes	7	12.7
No	48	87.3
Nutrition		
Yes	21	38.2
No	36	61.8
Ferrous supplementation		
Yes	8	14.5
No	47	85.5
Immunization		
Yes	20	36.4
No	35	63.6
Advice on Cessation of alcohol		
Yes	9	16.4
No	46	83.6
Advice on Cessation of cigarrete smoking		
Yes	8	14.5
No	47	85.5

5.7. Reason for non-utilization of preconception care

From the study participants who didn't receive preconception care service majority 252 (71%) were due to they didn't know as there was such a service and minority 61 (17.2%) were due to the reason that lack of integrated preconceptional care (Table 5).

Table 6: Reason for non-utilization of preconception care among reproductive age group women in Debre BirhanTown, North Shewa,Ethiopia, March 2017 (=355)

Reason for non-utilization of preconception care (n=355)	Frequency (N)	Percent (%)
I didn't know as there was such a service	252	71
Health care providers didn't told me to have the service	182	51.3
I'm not certain that preconception will benefit me	103	29
Due to lack of integrated preconceptional care	61	17.2
Others *	6	1.4

Others* do not want to be pregnant, unplanned pregnancy

5.8. Factors associated with utilization of preconception care

5.8.1. Bivariate analysis

In the bivariate analysis, independent variables having p-value less than or equal to 0.25 were considered as a candidate for multivariate analysis. According to these criteria women's age, education and occupation, marital status, Total household income per month, family size, knowledge of women about preconception care services, history of preterm birth, history of contraceptive use, Preexisting chronic medical problem, availability of adequate laboratory service, availability of adequate medication, availability of unit for preconception care were variables that are candidate for multivariate analysis (table 6 and 7).

Table 7: Bivariate analysis of socio demographic, knowledge and preexisting medical conditionrelated factors associated with utilization of preconception care in Debre Birhan town, North shewa, Ethiopia, 2017(n=410)

Variable	Category	Utilization of PCC		P-Value (<0.25)	COR,95%CI
		Yes	No		
Age of women	15-24	8(14.5%)	106(29.9%)		1
	25-34	32(58.2%)	175(49.3%)	0.033	2.423(1.076,5.454)
	35-49	15(27.3%)	74(20.8%)	0.033	2.686(1.083,6.659)
Marital status	Married	52(94.5%)	252(71.0%)		1
	Single	1(1.8%)	77(21.7%)	0.007	0.063(0.009,0.463)
	Others[1]	2(3.6%)	26(7.3%)	0.188	0.373(0.086,1.619)
Educational status of women	No formal education	1(1.8%)	59(16.6%)	0.008	0.055(0.007, 0.416)
	Primary school	6(10.9%)	67(18.9%)	0.009	0.293(0.117,0.737)
	Secondary school	15(27.3%)	121(34.1%)	0.005	0.406(0.209, 0.787)
	More than secondary	33(60.0%)	108(30.4%)		**1**
Women occupation	House wife	12(21.8%)	91(25.6%)		1
	Government employee	30(54.5%)	88(24.8%)	0.011	2.585(0.245, 5.369)
	Market trade vendor	11(20.0%)	79(22.3%)	0.903	1.056(0.442,2.525)
	Student	1(1.8%)	72(20.3%)	0.263	0.303(0.038,2.446)
	Daily laborer	1(1.8%)	25(7.0%)	0.033	0.105(0.013, 0.829)
Total household income per month in ETB	<1000**	1(1.8%)	69(19.4%)	0.001	0.030(0.004,0.229)
	1000-3000**	13(23.6%)	154(43.4%)	0.000	0.173(0.080,0.373)
	3000-5000**	20(5.9%)	89(25.1%)	0.033	0.460(0.226,0.938)
	>5000**	21(5.9%)	43(12.1%)		1
Family size	<4	23(41.8%)	185(52.1%)		1
	≥4	32(58.2%)	170(47.9%)	0.157	1.514 (0.852,2.690)
preexisting medical condition	Yes	10(18.2%)	40(11.3%)	0.149	1.750(0.818,3.742)
	No	45(81.8%)	315(88.7%)		1
Knowledge of women on PCC	Poor knowledge	28(50.9%)	331(87.6%)		1
	Good knowledge	27(49.1%)	44(12.4%)	0.000	6.816(3.682,12.616)

Table 8:Bivariate analysis of Obstetric, gynecologicandhealth facility related factors associated with utilization of preconception care in Debre Brihan town, North Shewa, Ethiopia, 2017(n=410)

Variable	Category	Utilization of PCC		P-Value (<0.25)	COR,95%CI
		yes	No		
No of pregnancy	<2	27(49.1%)	186(52.4%)		1
	≥2	28(50.9%)	169(47.6%)	0.648	1.141(0.647,2.015)
No of live birth	<2	26(48.1%)	190(55.1%)		1
	≥2	28(51.9%)	155(44.9%)	0.316	1.320(0.743,2.345)
History of abortion	Yes	2(3.6%)	21(5.9%)	0.499	0.600(0.137,2.634)
	No	53(96.4%)	334(94.1%)		1
History of still birth	Yes	1(2.0%)	12(4.8%)	0.545	0.529(0.067,4.153)
	No	49(98.0%)	238(95.2%)		1
history of preterm birth	Yes	3(5.5%)	8(2.3%)	0.186	2.502(0.643,9.736)
	No	52(94.5%)	347(97.7%)		1
History of congenital abnormality	Yes	1(1.8%)	9(2.5%)	0.750	0.712(0.088,5.732)
	No	54(98.2%)	346(97.5%)		1
History of neonatal death	Yes	2(3.6%)	7(2.0%)	0.440	1.876(0.380,9.272)
	No	53(96.4%)	348(98.2%)		1
History of contraceptive use	Yes	45(81.8%)	230(64.8%)	0.015	2.446 (1.192, 5.019)
	No	10(18.2%)	125(35.8%)		1
Availability of adequate laboratory service	Yes	43(78.2%)	244(68.7%)		1
	No	6(10.9%)	26(7.3%)	0.576	1.309(0.509,3.369)
	Don't know	6(10.9%)	85(23.9%)	0.044	0.401(0.165,0.975)
Availability of adequate medication	Yes	48(87.3%)	259(73.0%)		1
	No	3(5.5%)	28(7.9%)	0.383	0.578(169, 1.978)
	Don't know	4(7.3%)	68(19.2%)	0.033	0..317(111, 0.911)
Availability of unit for preconception care services	Yes	6(10.9%)	17(4.8%)	0.000	8.541(2.772,26.316)
	No	39(70.9%)	96(27.0%)	0.000	9.831(4.720,20.476)
	Don't know	10(18.2%)	242(68.2%)		1

5.8.2 Multivariate analysis

The final model was fitted using backward stepwise logistic regression method. All variables which had shown statistically significant association during the bivariate analysis were included in the final model to control the effect of confounder.

Finally, women's age, marital status, educational status, knowledge about preconception care services and availability of unit for preconception care were found to be the factors associated with preconception care utilization.

As shown in the table 6 below, women whose age is 34-49 years were 3.6times more likely to utilize preconception care than women whose age is 15-24 years (AOR: 3.567 ; 95% CI: 1.082, 11.758). Accordingly women who have good knowledge of preconception care services were 6.2 times more likely to utilize preconception care than that of poor knowledge (AOR= 6.263; 95% CI: 2.855, 13.739).

The Qualitative study also supports this finding; lack of awareness about preconception care is the major problem that affects the utilization of the service among reproductive age groups.

As one of a 30 years old female participant said: *"…the main problem here is lack of familiarity and knowledge of PCC both among women's as well as healthcare professionals', for example we provide preconception information when we directly asked by the women rather than spontaneously offer it."*

Similarly a 34 years old male participant said: *"there is not a concept of preconception in our society, so using special way of giving information is very important, especially Medias have a great role on this."*

In addition as explained by a 28 years old female participant: *"Our problem is that our target group does not have information on pregnancy and health and has not yet believed that what the benefits of PCC, so they do not take the service."*

In addition Women who mentioned there is available unitfor preconception care were 14 times more likely to utilize preconception care than women who don't know availability of unit for preconception care (AOR: 13.938;95% CI: 3.516,55.251). Also women who mentioned that there

is no availableunitfor preconception care delivery were 10 times more likely to utilize preconception care than women who don't know availability of unit for preconception care(AOR: 10.027;95% CI: 4.331,23.320).

Most of the participants of in-depth interview also stated that, the lack of a centrally coordinated and comprehensive offer of PCC was also another issue that was raised as an important reason for the low uptake of PCC amongst reproductive age groups.

As explained by a 33 years old male participant said: *"even though the government believes on this program, there is Poor organization and coordination of PCC during routine care. Due to that there is limited information about the availability of the service among women's regarding pcc so many women's comes to health institution when she get pregnant."*

In addition another a 32 years old female participant stated that *"Eventhouh there is no available unit for delivery of PCC alone in our health care setting, PCC is given by integration with other maternal and reproductive health care services like ANC and family planning services."*

However,women who did not attend formal education were 92.4% (AOR: 0.076; 95% CI: 0.009, 0.639) less likely to utilize preconception care than women whose educational level more than secondary. Also single women were 93.8% (AOR: 0.062; 95% CI: 0.007, 0.585)less likely to utilize preconception care than married.

Table 9: Factors associated with utilization of preconception care among reproductive age group women in Debre Birhan Town, North Shewa, Ethiopia,March 2017 (n=410)

Variable	Utilization of PCC		P-Value	COR,95%CI	AOR,95%CI
	Yes	No	(<0.05)		
Age of the women					
15-24	8(14.5%)	106(29.9%)			1
25-34	32(58.2%)	175(49.3%)	0.558	2.423(1.076,5.454)	1.373 (0.475, 3.972)
35-49	15(27.3%)	74(20.8%)	**0.037***	2.686(1.083,6.659)	3.567 (1.082, 11.758)
Marital status of women					
Married	52(94.5%)	252(71.0%)			1
Single	1(1.8%)	77(21.7%)	**0.015***	0.063(0.009,0.463)	0.062 (0.007, 0.585)
Others[1]	2(3.6%)	26(7.3%)	0.693	0.373(0.086,1.619)	1.394 (0.269, 7.234)
Educational status of women					
No formal education	1(1.8%)	59(16.6%)	**0.017***	0.055(0.007, 0.416)	0.076 (0.009, 0.639)
Primary school	6(10.9%)	67(18.9%)	0.089	0.293(0.117,0.737)	0.380(0.124, 1.160)
Secondary school	15(27.3%)	121(34.1%)	0.092	0.406(0.209, 0.787)	0.497(0.221, 1.119)
More than secondary	33(60.0%)	108(30.4%)			1
Occupation of women					
House wife	12(21.8%)	91(25.6%)			1
Government employee	30(54.5%)	88(24.8%)	0.320	2.585(0.245, 5.369)	0.562(0.180,1.753)
Market trade vendor	11(20.0%)	79(22.3%)	0.566	1.056(0.442,2.525)	0.719(0.233,2.220)
Student	1(1.8%)	72(20.3%)	0.716	0.303(0.038,2.446)	0.650(0.064,6.604)
Daily laborer	1(1.8%)	25(7.0%)	0.311	0.105(0.013, 0.829)	0.242(0.015,3.777)
Total house hold income per month					
<1000 birr	1(1.8%)	69(19.4%)	0.083	0.030(0.004,0.229)	0.119 (0.011,1.324)
1000-3000 birr	13(23.6%)	154(43.4%)	0.142	0.173(0.080,0.373)	0.441(0.148,1.316)
3000-5000 birr	20(5.9%)	89(25.1%)	0.377	0.460(0.226,0.938)	1.658(0.260,1.666)
>5000 birr	21(5.9%)	43(12.1%)			1
Family size					
<4	23(41.8%)	185(52.1%)			1
≥4	32(58.2%)	170(47.9%)	0.833	1.514 (0.852,2.690)	1.101(0.450,2.692)
History of preterm birth					
Yes	3(5.5%)	8(2.3%)	0.135	2.502(0.643,9.736)	3.824(0.659,22.201)
No	52(94.5%)	347(97.7%)			1
History of contraceptive use					
Yes	45(81.8%)	230(64.8%)	0.988	2.446 (1.192, 5.019)	1.008(0.318,3.156)
No	10(18.2%)	125(35.8%)			1
preexisting medical condition					
Yes	10(18.2%)	40(11.3%)	0.146	1.750(0.818,3.742)	1.999(0.786,5.087)
No	45(81.8%)	315(88.7%)			1

Knowledge of women on PCC					
Poor knowledge	28(50.9%)	331(87.6%)			1
Good knowledge	27(49.1%)	44(12.4%)	**0.000****	6.816(3.682,12.616)	6.263(2.855,13.739)
Availability of adequate laboratory service					
Yes	43(78.2%)	244(68.7%)			1
No	6(10.9%)	26(7.3%)	0.962	1.309(0.509,3.369)	1.033(0.271,3.933)
Don't know	6(10.9%)	85(23.9%)	0.689	0.401(0.165,0.975)	0.735(0.162,3.327)
Availability of adequate medication					
Yes	48(87.3%)	259(73.0%)			1
No	3(5.5%)	28(7.9%)	0.269	0.578(169, 1.978)	0.416(0.088,1.969)
Don't know	4(7.3%)	68(19.2%)	0.539	0..317(111, 0.911)	0.661(0.177,2.475)
Availability of unit for preconception care					
Yes	6(10.9%)	17(4.8%)	**0.000****	8.541(2.772,26.316)	13.938(3.516,55.251)
No	39(70.9%)	96(27.0%)	**0.000****	9.831(4.720,20.476)	10.027(4.331,23.320)
Don't know	10(18.2%)	242(68.2%)			1

** Significant level <0.001,*Significant level <0.05

CHAPTER SIX: DISCCUSION

The study revealed that overall utilization of preconception care by reproductive age group women was 13.4%.Women's age, marital status, educational status, knowledge about preconception care services and availability of unit for preconception care were found to be the factors associated with preconception care utilization.

As shown in the above utilization of preconception care by reproductive age group women in this study was 13.4%, which issignificantly higher than study carried out in Nigeria (2.5%) **(36)**.The highest prevalence is due to, in Nigeria the prevalence was done only for folic acid intake with small sample size but in this study different components of preconception care was assessed according to WHO (2012) recommendation with maximum representative sample size which make the study comprehensive.

However, it is significantly lower than the finding from Sudan (40%) **(37)**.High prevalence in Sudan might be due to, it is hospital based which is done only on small sample size of reproductive age women's with Rheumatic heart disease.Also it is lower than studies from Saudi Arabia (29.3%) **(21)**and Sri Lanka (27.2%) **(35)**.The possible explanation might be due to the difference in study setting, study participants and health care system of the countries.

This finding alsolower than study conducted in Maryland (32%) **(30)**and Brazil (15.9) **(32)**.This might be due to the fact that this are reports of 2-3 years cumulative results that were conducted on different study participants with large sample size in different study settings and period. It is also significantly lower than study conducted in China (20.6%) **(34)**and London (27%)**(31)**.This might be due to the fact that there were difference in culture, health care system and educational status of women.

The major factors that influenced utilization of preconception care in this study were women's age, marital status, educational status, knowledge about preconception care services and availability of unit for preconception care.

It was observed that women whose age is from 34-49 years were 3.6times more likely to utilize preconception care than women whose age is 15-24years (AOR: 3.567; 95% CI: 1.082,11.758). This finding is not consistent with studies conducted in Utah **(36),**Brazil **(32)**and China **(34).**Older women may have thought they were not on an appropriate age for conceptionand they areat risk for pregnancy complication. Thus, they tended to use Preconception care.

In additionwomen who have good knowledge of preconception care services were 6.2 times more likely to utilize preconception care than that of poor knowledge (AOR:6.263; 95% CI: 2.855,13.739). This is in line with a finding from Nigeria **(36),**Saudi Arabia **(21)**and china **(34).**This might be due to an in-depth knowledge of preconception care may increase women's understanding and awareness of the purpose and importance of PCC, and thus, their use of this service.

As explained in the qualitative part of this studyMost of the participants also agree with the quantitative finding giving information and education regarding preconception care is essential to increase knowledge and utilization of the care.

However, women who did not attend formal education were 92.4% (AOR: 0.076; 95% CI: 0.009, 0.639) less likely to utilize preconception care than women whose educational level more than secondary. The finding of this study is consistent with a study done in Nigeria **(36),**Sri Lanka **(35),**Oklahoma **(29),**Utah **(38)**and London **(31).**This might be due to the fact that the women's with lower educational level might be less exposed to information regarding to preconception care. The information gap might an able them to understand purpose and importance of PCC. This may have influenced their utilization because for these women to utilize the pcc services, they must be knowledgeable about the existing services.

Accordingly single women were 93.8% (AOR: 0.062; 95% CI: 0.007, 0.585)less likely to utilize preconception care than married. This is consistent with study done in Oklahoma **(29)**. This might be due to cultural influence in Ethiopia regarding sexual and reproductive life before marriage may make them to fear and not utilize the service. Also single women's are not want to have a child before marriage, due to that they are not prepare themselves for pregnancy and unplanned pregnancy is common this make them less utilize the service.

Finally, Women who mentioned there is available unitfor preconception care were 14 times more likely to utilize preconception care than women who don't know availability ofunitfor preconception care (AOR: 13.938;95% CI: 3.516,55.251). This might be due to the fact that if women have information about the availability of the services they might be more interested to utilize it. In addition women who mentioned that there is no available unit for preconception care delivery were 10 times more likely to utilize preconception care than women who don't know availability ofunit for preconception care(AOR:10.027;95% CI: 4.331,23.320). This might be due to the delivery of preconception care services with other health care services ,according to WHO(2012) recommendation that PCC may delivered by integrating with other health care services**(8).**

The qualitative result also supplement this finding in fact that there is no coordinated and well organized delivery of preconception care as a service alone, providing this service with other health care services is mandatory to address the services.

Strengths and limitations of the study

Strength of the study

The following were the strength of the study

- The study tried to generate as rich information as possible by employing data fromboth quantitative andqualitative methods of data collection.
- This study was done in all Kebeles in the town with maximum representative sample size and used probability sampling technique so findings can be generalized the whole country.

Limitation of the study

The following are the possible limitation of the study

- There might be a risk of interviewer bias and social desirability bias.

- Since women's were asked for the past experience of the service, recall bias may occur.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

7.1. Conclusion

The finding of this study showed that women's utilization of preconception care is low. Woman's age, marital status, educational status, knowledge about preconception care services and availability of unit for preconception care were statically associated with utilization of preconception care. The main Reasons for non-utilization of preconception care is mostly because of didn't know as there was such a service. It indicated that being married; having a high educational level, good knowledge about preconception care services and knowing availability of unit for preconception care were increased women's utilization of preconception care.

7.2. Recommendations

In this studygap of knowledge was seen on reproductive age groups regarding preconception care which could diminish the utilization of the care. Therefore, establishing preconception care strategies which can address all the components of the care and advocating women's education, increasing women's knowledge regarding PCC and understanding the views of reproductive age women's and care providers theoretical and skill basis for changing their behavior will be essential when designing effective implementation strategies for improving delivery and uptake of preconception care. So the following recommendations were forwarded for different concerned bodies to improve the uptake of preconception care among reproductive age groups.

FMOH

➤ Better to do national research on preconception care and related topics.

➤ Had better to incorporate preconception care alone and monitor for its implementation

Policy makers and Health Planner

➤ Should give focus in incorporate preconception care alone.

The Woreda health office and Health facilities in the area

➤ They should prepare in-service training for health care providers to improve their skill.

➤ The woreda health office should create awareness about the importance of preconception care through mobilize general public including both women's and men'sby collaborating with women development army and health extension workers.

➤ They should strengthen the existing service provision and develop new mechanisms to develop service utilization.

➤ Should assimilate a preconception care service with integrated and sustainable supplies and encouraging health care providers to properly deliver the service.

Health service providers in the area

➤ Should advise all reproductive age groups about the importance andbenefit of preconception care both at community and facility level.

Health extension workers

➢ They should have to facilitate and give health education for all reproductive age groups to attend the service.

Researchers

➢ To do further studies on related topics with other study design.

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ANNEX

Annex I. Participant Information sheet and consent form
Jimma University, Institute of Health Sciences,
College of health sciences,
School of nursing and midwifery

Questionnaires to assessto assess utilization of Preconception Care and associated factors among reproductive age groupwomen in Debre Birhan town, North Shewa, Ethiopia, 2017.

General Information for study participants

My name is————. We are conducting a study on utilization of preconception care and associated factors in Debre Berhan Town. Today I come to visit you at your home to collect data related on preconception care. You have been selected for the interview by means of systemic sampling techniques selection process. I will be asking you certain questions which are thought to be important. The interview will take about 30-40 minutes. We want to assure you that your answers will be strictly kept secret. We will also do not keep a record of your name or address. Participation in this survey is voluntary and you have the right to refuse participation at any time or not to respond to questions that you are not willing to answer. However, your honest answers to these questions will help us in identifying determinant factors of preconception care and improve the service in the future. We would appreciate your help in responding to these questions.

Are you willing to participate in the study? Yes………. No………… If you say "yes" sign below

Consent form

I have understood the purpose of the study is to collect information regarding preconception care. I have read the above information, or it has been read to me and I am clear with all aspect of the study and got satisfaction .So I consent voluntarily in to participation. I have also understood that at any time I have a full right to withdraw from the study at any time.

Signature of the participant_____ Date ___/_____/_____.

Signature of the data collector_____date_____/_____/_____.

Contact Address: Principal investigator, phone 0910901201, E-mail tesfitimnt@gmail.com.

Thank you so much!

Annex II: Questionnaire in English version

Questionnaires to assess Utilization of Preconception Care and Associated Factors among Reproductive Age groupWomen in DebreBirhanTown, North Shewa, Ethiopia, 2017.

001. Selected Household having women age 15-49 years 1= yes_____2=no_____

002. Are you living in this town >6months. 1= yes_____2=no_____

003-.study area: - Kebele_____house number_____

005. Questionnaire Code_____

006. Date of interview   dd_____/mm_____/2017

007.   Name of data collector _____ sign_____

007. Name of Supervisor _____ check survey & sign here_____

Part I. Socio demographic characteristics

Sr no	Questions	Alternative choice	Codes	Skip
101	What is your age in completed years?	_____Years		
102	What is the highest grade you have completed?	1. No formal education 2. Primary education 3. Secondary education 4. Above Secondary education		
103	What is your religion?	1. Orthodox 2. Muslim 3. Protestant 4.Catholic 5. Other_____		
104	What is your marital status?	1. Married 2.Single 3.Divorced 4.Widowed		
105	To which ethnic group do you belong?	1. Amhara 2.Oromo 2. Gurage 4.Tigray 5. Other specify_____		
106	What is your occupation?	1. Housewife 2. Govt. employee 3. market trade vendor 4. student 5. Daily laborer 6. Other (Specify)_____		
107	How much is your total household income per Month from all sources? Including your husband/partner monthly income.	1. Birr_____ 2. Don't know		

47

108	What is your husband's education?	1. No formal education 2. Primary education 3. Secondary education 4. Above Secondary education		
109	What is the main occupation of your husband?	1. Govt. employee 2. market trade vendor 3. Daily laborer 4.Student 6. Other (Specify)……………..		
110	What is your total family size?	....		

Part II. Past Obstetric and gynecologic History

201	What is the total number of pregnancies in your life time?	……………………		
202	What is the total number of live births? (parity)	……………………		
203	Have you ever had history of spontaneous abortion?	1. Yes 2. No		
204	Have you ever had history of still birth?	1. Yes 2. No		
205	Have you ever had history of preterm birth?	1. Yes 2. No		
206	Have you ever had history of congenital abnormality?	1. Yes 2. No		
207	Have you ever had history of neonatal death?	1. Yes 2. No		
208	Have you ever had history of contraceptive use?	1. Yes 2. No		

Part III. Knowledge based Questions

301	Have you heard of preconception care service before?	1. Yes 2. No		If no skip to question no. 305
302	What is your initial source of information?	1. Health workers 2.School 3. Mass media 4.Friends and family 5. Others………………..		
303	Do you know the services that are rendered at preconception care service?	1.Yes 2. No		If yes answer question no.304
304	What kinds of preconception care service do you know?	1. HIV testing and counseling 2. STI screening and treatment 3. Infertility/sub-fertility treatment 4. Nutrition 5. Ferrous supplementation 6. Immunization 7.cessation of alcohol 8. cessation of cigarette smoking 9. Other (indicate)……………		
305	For whom do you think preconception care is needed?	1. For men, only 2. For women, only 3. For men and women 4. Don't know		
306	For whom do you think Preconception care is important?	1. For baby, only 2. For mother, only 3. For baby and mother 4. Don't know		
307	Do you think that preconception care will benefit the couples?	1. Yes 2. No		If yesrespond to question no.308?
308	Do you mention some of the benefits?	1.It is need to have safe pregnancy 2.It is beneficent to promote the health of future children 3.Improved maternal health 3. Reduce unplanned pregnancies and abortions 4. Economic benefits to the family and the community 5. Other (indicate)……………		

Part IV. Questions related to practice of preconception care

401	Have you ever had a preconceptual screening prior to conception?	1. Yes 2. No	If Yes respond to question no.402?
402	What kind of services do you get prior to your conception?	1. HIV testing and counseling 2. STI screening and treatment 3. Infertility/sub-fertility treatment 4. Nutrition 5. Ferrous supplementation 6. Immunization 7.Advice on cessation of alcohol 8. Advice on cessation of cigarette smoking 9. Other (indicate)……………	
403	Did you encountered challenges while in service for preconceptional screening?	1. Yes 2. No	If yes answer question no.404
404	What are the challenges you faced during preconceptional screening?	1.negligence from health care providers 2. services are not integrated 3. consumption of extended time 4. lack of privacy assurance 5.shortages of materials and supplies 6. Other (indicate)……………	
405	If you don't have a preconceptual screening why do you think is that?	1. Because, I didn't know as there was such a service 2. Health care providers didn't told me to have the service 3. I'm not certain that preconception will benefit me 4. Due to lack of integrated preconceptional care 5. Other (indicate)……………	
406	Do you have support from your husband for preconception care?	1. Yes 2. No	If no go to question no 407
407	Why do you think is the reason for his refusal towards care?	1. due to lack of knowledge on how the service benefits couples	

		2. attitudinal trouble	
		3. he looks that, time spent for prenatal care as a wastage	
		4. fear of wrong outlooks in the community	
		5. Other (indicate)………………….	

Part V. Questions related preexisting medical conditions

501	Do you have any preexisting chronic medical condition?	1. Yes 2. No		If **yes** respond to question no.502?
502	Which type of chronic medical condition do you have?	1. Hypertension 2. Diabetes mellitus 3. Asthma 4. HIV/AIDS 5. Epilepsy 6. Other (indicate)…………………		
503	Did you consider participating in preconception counseling before you become pregnant from your provider?	1.Yes 2. No		If yes answer question no.504
504	Which type of preconception counseling do you receive?	1. Maintaining optimal weight control 2. maintaining a regular exercise program 3. maximizing diabetes mellitus control 4. ceasing tobacco, alcohol, and drug use 5. change or cessation of medication 6. Other (indicate)…………………		

Part VI. Health facility related questions

601	Availability of health facility? (health center, hospital)	1. Yes 2. No		If yes respond to question no.602?
602	Is there Adequate medication?	1. Yes 2. No 3. don't know		
603	Is there Adequate laboratory services?	1. Yes 2. No 3. don't know		
604	Approximately how many hours / km does it take to reach the nearby health facility?	_____km or _____walking hours		
605	Is it Available room for delivery of preconception care alone?	1.Yes 2. No 3. don't know		

I want to thank you for taking the time to meet with me today. My name is _____ and I would like to talk to you about utilization of preconception care and associate factors among reproductive age women in DebreBirhan town. The interview will take less than an hour. I will be taping the session because I don't want to miss any of your ideas. Although I will be taking some notes during the session, I can't possibly write fast enough to get it all down. Because we're on tape, please be sure to speak up so that we don't miss your ideas. All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time. Are there any questions about what I have just explained?

Are you willing to participate in this interview? Yes………. No…………
If you say "yes" sign below

Consent form

I have understood the purpose of the study is to collect information regarding preconception care. I have read the above information, or it has been read to me and I am clear with all aspect of the study and got satisfaction .So I consent voluntarily in to participation. I have also understood that at any time I have a full right to withdraw from the interview at any time.

Signature of the participant_____ Date ___/_____/_____.

Signature of the data collector_____date_____/_____/_____.

Contact Address: Principal investigator, phone 0910901201, E-mailtesfitimnt@gmail.com.

Thank you so much!

Part I: Questions related to preconception care and associated factors

1. How do you understand preconception care?

   A. Whose responsibility is providing preconception care?

   B. to whom do you think the service is given?

2. What things do you think difficult in providing pcc?

3. What do you think about them?

4. How the current situation could be improved?

❖ **Is there anything more you would like to add?**

I'll be analyzing the information you and others gave me and submitting a final result to your organization. I'll be happy to send you a copy at that time, if you are interested.

Thank you for your time

Signature of the data collector…………………date…………………

Annex III: Amharic version Participant Information sheet and consent form

ጅማ ዩኒቨርስቲ የጤና ሳይንስ ተቋም

የጤና ሳይንስ ኮሌጅ

የነርሲንግና ሚድዋይፈሪ ትምህርት ቤት

በአማራ ክልል በሰሜን ሸዋ ዞን በደብረብርሀን ከተማ የቅድመ እርግዝና ምርመራ አገልግሎት አጠቃቀምና ተያያዥነት ያላቸው ጉዳዮችን ለማጥናት የተዘጋጀ መጠይቅ ፡፡

ጤና ይስጥልኝ፡-------------------- እባላለሁ፡፡ በደብረብርሀን ከተማ በመዉለጃ የእድሜ ክልል ዉስጥ ባሉ ሴቶች የቅድመ እርግዝና ምርመራ አገልግሎት አጠቃቀምና ተያያዥነት ያላቸው ጉዳዮች ላይ እየተካሄደ ባለው ሳይንሳዊ ጥናት ውስጥ የጥናቱ ቡድን አባል በመሆን በመስራት ላይ እገኛለሁ፡፡ ዛሬ እዚህ በመኖሪያ ቤትዎ የተገኘሁት ይህን ጉዳይ በተመለከተ መረጃ ለመሰብሰብ ሲሆን እርስዎም ለዚህ ቃል መጠየቅ በዕጣ ተመርጠዋል፡፡ለዚህ ዓላማ ሲባል የተዘጋጁትን ጥቂት ጥያቄዎች በመመለስ እርሶም እንዲተባበሩን እንጠይቃለን፡፡በአጠቃላይ መጠይቁ ከ 30-40 ደቂቃ በላይ እንደማይወስድ እገልጽልዎታለሁ፡፡የሚሰጡት መልስ በሚስጥርነት የሚያዝ ሲሆን ስም ሆነ አድራሻ ተመዘግቦ አይያዝም፡፡በጥናቱ የመሳተፍ መብትዎ የተጠበቀ ሲሆን እንዲሁም በማንኛውም ጊዜ አለመሳተፍና መልስ ሊሰጡባቸው የማይፈልጉት ጥያቄዎች ካሉ አለመመለስ ይችላሉ፡፡ሆኖም የሚሰጡት እውነተኛ መልስ በቅድመ እርግዝና ምርመራ አገልግሎት ዙሪያ ያሉ ዋናዋና እንቅፋቶችን ለማወቅና አገልግሎቱን የበለጠ ለማሻሻል ትልቅ ጠቀሜታ እንዳለው ላረጋግጥልዎት እወዳለሁ፡፡ በመጨረሻምለሚሰጡት መልስ ከልብ አመሰግናለሁ ፡፡

በዚህ ጥናት ላይ ለመሳተፍ ፍቃደኛነዋት 1=አዎ--------- 2=አይደለሁም

ፍቃደኛ ከሆኑ እባክዎን ቀጥሎ ያለዉን ስምምነት በፈርማዎ ያረጋግጡ፡፡

ስምምነት፡- የጥናቱ አላማ የቅድመ እርግዝና ምርመራ አገልግሎት አጠቃቀምን በተመለከተ መረጃን መሰብሰብ መሆኑን ካነበብኩ / ከተነበበልኝ በኋላ ተረድቼ ለመሳተፍ ፈቅጃለሁ፡፡ በማንኛውም ጊዜ ተሳትፎዬን ለማቋረጥ ሙሉ መብቴ የተጠበቀ መሆኑን ተረድቻለሁ፡፡

የተሳታፊው ፊርማ ------------------------ ቀን ------------------

የመረጃ ሰብሳቢዉ ፊርማ -------------------ቀን ------------------

አድራሻ፡ የጥናቱ ባለቤት ስልክ ቁጥር 0910901201 ኢሜል tesfitimnt@gmail.com እናመሰግናለን፡፡

Annex IV:Amharic version of the questionnaire

በአማራ ክልል በሰሜን ሸዋ ዞን በደብረብርሀን ከተማ የቅድመ እርግዝና ምርመራ አገልግሎት አጠቃቀምና ተያያዥነት ያላቸው ጉዳዮችን ለማጥናት የተዘጋጀ መጠይቅ።

001፡ የተመረጠው መኖሪያ ቤት ውስጥ እዴሜቻቸው ከ 15-49 አመት የሚሆኑ ሴቶች 1=አለ-----------2= የለም-------

002፡ በዚህ ከተማ ከስድስት ወር በላይ ኖረዋል 1=አዎ---------2=አልኖርኩም

003፡ የተሳታፊ መኖሪያ ቦታ ቀበሌ----------የቤት ቁጥር----------

004፡ የመጠይቁ ቁጥር-----------------------

005፡ የጠያቂዉ ስም-------------------------------   ፊርማ-------------------

006፡ የተቆጣጣሪዉ ስም-----------------------------------   ፊርማ-------------------

007፡ የመጠይቁ ቀን --------------------

ክፍል አንድ፡ ስለ ግል ና ማህበራዊ ጉዳዮች የሚመለከቱ ጥያቄዎች

ተ. ቁ	ጥያቄ	ምርጫዎች	መለያ	ይለፍ
101	እድሜሽ ስንት ነው?	ዓመት		
102	ከፍተኛ የትምህርት ደረጃሽ ስንት ነው?	1. መደበኛ ትምህርት ያልተማረች 2. አንደኛ ደረጃ ት/ት 3. ሁለተኛ ደረጃ ት/ት 4. ከሁለተኛ ደረጃ ት/ት በላይ		
103	የየትኛው ሃይማኖት ተከተይነሽ?	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ካለ ይጠቀስ…………		
104	የጋብቻ ሁኔታሽ ምን ይመስላል?	1.ያገባች 2. ያላገባች 3. አግብታ የፈታች 4. ባሏ የሞተባት 5. ሌላ ካለይጠቀስ…………….		
105	ብሄርሽ ምንድ ነው?	1. አማራ 2. ኦሮሞ 3. ጉራጌ 4. ትግሬ 5. ሌላ ካለ ይጠቀስ		
106	ስራሽ ምንድን ነዉ?	1. የቤት እመቤት 2. የመንግስት ሰተራኛ		

			3. ንግድ 4. የቀን ሰራተኛ 5. ተማሪ 6. ሌላ ከሆነ ይጠቀስ............		
107	በወር የምታገኙት ጠቅላላ ገብያችሁ የባለቤትሽን ጨምሮ ስንት ነው?	1. ....ብር 2. አላውቅም..................		
108	የባለቤትሽ የትምህርት ደረጃ ስንት ነው?	1. መደበኛ ትምህርት ያልተማረች 2. አንደኛ ደረጃ ት/ት 3. ሁለተኛ ደረጃ ት/ት 4. ከሁለተኛ ደረጃ ት/ት በላይ		
109	በአሁን ጊዜ የባለቤትሽ ስራ ምንድ ነው?	1. የመንግስት ሰተራኛ 2. ንግድ 3. የቀን ሰራተኛ 4. ተማሪ 5. ሌላ ከሆነ ይጠቀስ............		
110	የቤተሰብ ብዛት?	....		

ክፍል ሁለት፡የዕርግዝናእናየወሊድሁኔታ

201	በአጠቃላይ ምን ያህል ጊዜ አርግዘዉ ያውቃሉ?	………………	
202	በአጠቃላይ ምን ያህል ልጅ ወልደዋል?	…………	
203	በእርግዝና ጊዜዎት ውስጥ በራሱ ዉርጃ አ.ጋጥሞዎት ያዉቃል?	1.አዎ 2.አያዉቅም	
204	በወሊድ ጊዜ ህይወቱ ያለፈ ልጅ አ.ጋጥሞዎት ያዉቃል?	1. አዎ 2. አያዉቅም	
205	በእርግዝና ጊዜዎት ውስጥ ከቀኑ ቀድሞ የተወለደ ልጅ አለዎት?	1.አዎ 2. የለኝም	
206	በእርግዝና ጊዜዎት ውስጥ የአፈጣጠር ችግር ኖሮበት የተወለደ ልጅ አለ?	1.አዎ 2. የለም	
207	ከወለዱ በኋላ በአንድ ወር ጊዜ ዉስጥ የሞተብዎ ልጅ አለ ?	1.አዎ 2. የለም	
208	የእርግዝና መከላከያ ወስደዉ ያዉቃሉ?	1.አዎ 2.አላዉቅም	

ክፍልሦስት፡ተጠያቂዎች ስለቅድመ እርግዝና ምርመራ ያላቸዉን ግንዛቤ የሚመዝኑ ጥያቄዎች

301	ስለቅድመ እርግዝና ምርመራ ሰምተዉ ያዉቃሉ?	1. አዎ 2. አላዉቅም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 302 ይለፉ?
302	መልሰዎ አዎ ከሆነ ከየትሰሙ?	1. ከጤና ባለሙ.ያ 2. ከትምህት ቤት 3. ከመገናኛ ብዙሀን 4. ከንደና እና ቤተሰብ 5.ሌላ ካለ ይጠቀስ…………	
303	በቅድመ እርግዝና ምርመራ ጊዜ የሚሰጡ አገልግሎቶችን ያዉቃሉ?	1. አዎ 2. አላዉቅም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 304 ይለፉ?
304	መልስዎ አዎ ከሆነ ምን ምን የቅድመ እርግዝና ምርመራ አገልግሎቶችን ያዉቃሉ?	1. የኤች.አይ.ቪ ምርመራ እና ምክር አገልግሎት 2. የአባላዘር በሽታ ምርመራ እና ህክምና 3. የመሀንነት ምርመራ እና ህክምና 4. ስነ-ምግብ 5. አይረን ድጎማ 6. ክትባት 7. አልኮል መዉሰድ ማቆም 8. ሲጋራ ማጨስ ማቆም 9. ሌላ ካለ ይጠቀስ…………	
305	የቅድመ እርግዝና ምርመራ ለማንያስፈልጋል?	1. ለወንዶች ብቻ 2. ለሴቶች ብቻ 3. ለሁለቱም 4.አላዉቅም	
306	የቅድመ እርግዝና ምርመራ ለማን ይጠቅማል?	1.ለልጁ ብቻ 2. ለእናትየዋ ብቻ 3.ለሁለቱም4. አላዉቅም	
307	የቅድመ እርግዝና ምርመራ ጥንዶችን ይጠቅማል?	1.አዎ 2. አይጠቅምም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 308 ይለፉ?
308	መልስዎ አዎ ከሆነ ሊዘረዝሩልኝ ይችላሉ?	1. ምቹ የሆነ የእርግዝና ጊዜ እንዲኖር ያደርጋል 2. ለወደፊት ጤናማ ልጅ እንዲኖር ያደርጋል 3. የእናትየዋን የጤና ሁኔታ ያዳብራል 4. ያልተፈለገ እርግዝናን እና ዉርጃን ይቀንሳል 5. ለቤተሰቡና እና ለማህበረሰቡ ኢኮኖሚ ይጠቅማል	

| | | 5. ሌላ ካለ ይጠቀስ………... | |

ክፍል አራት፡ ቅድመ እርግዝና ምርመራ አጠቃቀም ላይ የተመረከዙ ጥያቄዎች

401	የቅድመ እርግዝና ምርመራ አድርገዉ ያዉቃሉ?	1. አዎ 2. አላዉቅም	መልስ አዎ ከሆነ ወደ ጥያቄ 402 ይለፉ?
402	ምን ዓይነት የእርግዝና ምርመራ አድርገዉ ያዉቃሉ?	1. የኤች.አይ.ቪ ምርመራ እና ምክር አገልግሎት 2. የአባላዘር በሽታ ምርመራ እና ህክምና 3. የመሀንነት ምርመራ እና ህክምና 4. ስነ-ምግብ 5. አይረን ድጎማ 6. ክትባት 7. አልኮል መዉሰድ ማቆም 8. ሲጋራ ማጨስ ማቆም 9. ሌላ ካለ ይጠቀስ………...	
402	የቅድመ እርግዝና ምርመራ አገልግሎት በተጠቀሙበት ወቅት ያጋጠመዎት ችግር ነበር?	1. አዎ 2. የለም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 403 ይለፉ?
403	በቅድመ እርግዝና ምርመራ አገልግሎት ወቅት ያጋጠመዎት ችግሮች ምን ምን ናቸዉ?	1. የጤና ባለሞያዎች ለአገልግሎት አሠጣጥ ዝንጉ መሆን 2. የሚሠጠዉ አገልግሎት የተሳለጠ አለ መሆን 3. በአገልግሎት አሠጣጥ ወቅት ሠዓት ማባከን 4. በአገልግሎቱ ምስጢራዊነትን አለመጠበቅ 5. የመገልገያ እቃዎች እጥረት መኖር 6. ሌላ ካለ ይጠቀስ………...	
404	የቅድመ እርግዝና ምርመራ አድርገዉ ካላዉቁ ለዚህ ምክንያቱ ምን ይመስልዎታል?	1. እንደዚህ አይነት መረጃ መኖሩን ስለማላዉቅ 2. የጤና ባለሙያዎች ይህን አገልግሎት እንድጠቀም ስላልነገሩኝ 3. የቅድመ እርግዝና ምርመራ አገልግሎት ይጠቅመኛል ብዬ	

		4. የቅድመ እርግዝና ምርመራ አገልግሎት አሰጣጥ የተደራጆ አለመሆን 5. ሌላ ካለ ይጠቀስ............	
405	ለቅድመ እርግዝና ምርመራ አገልግሎት ከባለቤትዎ እገዛ ይደረግሎት ነበር?	1. አዎ 2. አልነበረም	መልስዎ አልነበረም ከሆነ ወደ ጥያቄ 408 ይለፉ?
406	ለዚህ ምክንያቱ ምን ይመስልዎታል?	1. የምርመራዉ ጥቅም ለጥንዶቹ ስለመሆኑ እዉቀት ያለመኖር 2. የአመለካከት ችግር 3. ለቅድመ እርግዝና ምርመራ የሚዉለዉን ሥዓት እንደ ጊዜ ማባከን ስለሚቆጥረዉ 4. በማህበረሰብ ዉስጥ ያለዉን የተሳሳተ አመለካከት ፍራቻ 5. ሌላ ካለ ይጠቀስ............	

ክፍል አምስት፡ ከእርግዝና ቀድሞ በነበሩ የጤና ችግሮች ጋር የተያያዙ ጥያቄዎች

501	በህኪም የተረጋገጠ የማይድን በሽታ አለብዎት?	1. አዎ 2. የለብኝም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 502 ይለፉ?
502	ምን ዓይነት በሽተ?	1. የደም ግፊት 2. ስኳር 3. አስም 4. ኤች.አይ.ቪ. ኤድስ 5. የሚጥል በሽታ 6. ሌላ ካለ ይጠቀስ............	
503	ከማርገዝዎ በፊት በቅድመ እርግዝና ወቅት ባለዉየምርመራ አገልግሎት እንዲሳተፉ በበለሙ ያ መረጃ ተሠጥቶዎት የዉቃል?	1. አዎ 2. አያዉቅም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 504 ይለፉ?
504	የትኛዉን የቅድመ እርግዝና ምርመራ አድርገዉ ያዉቃሉ?	1. የሰዉነት ክብደትን ማስተካከል 2. የሰዉነት እንቅስቃሴ ማድረግ 3. የስኳር መጠንን መቆጣጠር 4. ሲጋራ አልኮል ና እዕመጠቀም ማቆም 5. የምጠቀመዉን መዳኒት መቀየር ወይም ማቆም	

		6. ሌላ ካስ ይጠቀስ………….	

ክፍል ስድስት፡ ከጤና ተቋም አቅርቦት ጋር የተያያዙ ጥያቄዎች

601	በእቅቢያዎ የጤና ተቋም አለ? (ጤና ጣቢያ, ሆስፒታል)	1. አዎ 2. የለም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 602-606 ይመልሱ?
602	በቁ የመድሓኒት አቅርቦት አለ?	1. አዎ 2. የለም 3. አላዉቅም	
603	በቁ የላብራቶሪ አገልግሎት አለ?	1. አዎ 2. የለም 3. አላዉቅም	
605	የጤና ተቋሙ ከመኖሪያ ቤትዎ በግምት ስንት ሰዓት/ኪ.ሜ ይርቃል?	.... ኪ.ሜ .... ሰዓት በእግር ጉዞ	
606	በጤና ተቋማቱ ለቅድመ እርግዝና ምርመራ መስጫ ክፍል ይገኛል?	1. አዎ 2. የለም 3. አላዉቅም	

በደብረብርሀን ከተማ የእናቶች እና ስነ-ተዋልዶ ጤና ላይ ለሚሰሩ የጤና ባለሙያዎች ና አማሮኞ የተዘጋጀ የጥልቅ መጠይቅ መመሪያ

በቅድሚያ ጊዜዎን ሰጥተው ሊያገኙኝ ስለፈቀዱ አመሰግናለሁ፡፡....................እባላለሁ። በደብረብርሀን ከተማ በመዊለጃ የእድሜ ክልል ዉስጥ ባሉ ሴቶች የቅድመ እርግዝና ምርመራ አገልግሎት አጠቃቀምና ተያያዥነት ያላቸው ጉዳዮችን በተመለከተ ከእርስዎ ጋር ጥልቅ የሆነ ቃለመጠይቅ ለማድረግ እፈልጋለሁ፡፡ በአጠቃላይ ቃል መጠይቁ ከ አንድ ሰዓት በላይ እንደማይወስድ እገልጽልዎታለሁ፡፡የትኛውም ምላሽዎ እንዳያመልጠኝ ድምፃትንእቀዳለሁ፡፡እንዲሁም ማስታወሻ እወስዳለሁኝ፡፡የሚሰጡት መልስ ሚስጢራዊነቱ የተጠበቀነው። እንዲሁም የእርስዎ ምላሽ እንደሆነ የሚገልፅ ምንም አይነት መረጃ አይኖርም። የማይፈልጉትን ነገር ያለመናገርና በየትኛውም ሰዓት ቃለመጠይቁን የማቋረጥመብትዎ የተጠበቀ ነው።

ማብራሪያ በሰጠኋቸው ጉዳዮች ላይ ግልፅ ያልሆነ ነገር አለ?
በቃለመጠይቁ ላይ ለመሳተፍ ፍቃደኛነዎት?1=አዎ--------- 2=አይደለሁም---------
ፍቃደኛ ከሆኑ እባክዎን ቀጥሎያለዉን ስምምነት በፊርማዎ ያረጋግጡ፡፡

ስምምነት፡- የጥናቱ አላማ የቅድመ እርግዝና ምርመራ አገልግሎት አጠቃቀምን በተመለከተ መረጃን መስብሰብ መሆኑን ካነበብኩ / ከተነበበልኝ በኋላ ተረድቼ በቃል መጠይቁ ለመሳተፍ ፈቅጃለሁ፡፡ በማንኛውም ጊዜ ቃለመጠይቁን ለማቋረጥ ሙሉ መብቴ የተጠበቀ መሆኑን ተረድቻለሁ፡፡
የተሳታፊው ፊርማ ------------------------ ቀን ------------------
የመረጃ ሰብሳቢዉ ፊርማ --------------------ቀን ------------------
አድራሻ፡ የጥናቱ ባለቤት ስልክ ቁጥር 0910901201 ኢሜል
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እናመሰግናለን፡፡

ክፍል አንድ፡ ስለ ቅድመ እርግዝና ምርመራ አገልግሎትና ተያያዥነት ያላቸው ጉዳዮች ጋርየተያያዙጥያቄዎች

1. የቅድመ እርግዝና ምርመራ አገልግሎትንእንዴትይረዱታል?

   ሀ. አገልግሎቱን መስጠትየማንህላፊነትነው?

   ለ. አገልግሎቱስለማንመሰጠትአለበትብለዉያስባሉ?

2. የቅድመ እርግዝና ምርመራ አገልግሎትእንዳይሰጥየሚያደርጉዋናዋና እንቅፋቶች ምንድናቸዉብለዉያስባሉ?

3. እርስዎ ስለ እነዚህንእንቅፋቶች ምን ያስባሉ?

4. በእርስዎአስተሳሰብ አሁን ያለዉ ሁኔታ ለወደፊት እንዴት ይሻሻላል? የሚመለከተዉአካልእነዚህንጉዳዮችእንዴትመወጣትአለበትይላሉ? እርሶዎስ?

መጨመርየሚፈልጉትነገርአለ?

እርስዎና ሌሎችየሠጡኝንመረጃአጠናቅሬለመስሪያቤትዎየማቀርብይሆናል፡፡ፍላጎትዎከ ሆነግልባጩንየምልክሎትይሆናል።

ጊዜዎንስለሰጡኝአመሠግናለሁ።

መረጃሰብሳቢፊርማ--------------------ቀን ------------------

Declaration

I, the undersigned, maternitynursing student declare that this thesis is my original work and not done before for similar purpose. All participants of this study also are respected and acknowledged indeed.

Name of the student: _____

Date._____ Signature _____

APPROVAL OF THE FIRST ADVISOR

Name of the first advisor _____

Date _____ Signature _____

APPROVAL OF THE SECOND ADVISOR

Name of the second advisor: _____

Date_____ Signature _____