

## **College of Health Science**

### **Department of Public Health**

PREVALENCE OF SHORT INTERPREGNANCY INTERVAL AND ITS ASSOCIATED  
FACTORS AMONG PREGNANT MOTHERS IN MERSA TOWN, ETHIOPIA 2024

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## DECLARATION

This is to certify that the thesis entitled “**Prevalence of Short Interpregnancy Interval and Its Associated Factors Among Pregnant Mothers in Mersa Town, Ethiopia 2024**”, submitted in partial fulfillment of the requirements for the degree of Master of Science in General Master of Public Health in Woldia University, is a record of original work carried out by me and has never been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during this investigation have been duly acknowledged.

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I hereby certify that I have supervised, read, and evaluated this thesis titled “**Prevalence of Short Interpregnancy Interval and Its Associated Factors Among Pregnant Mothers in Mersa Town, Ethiopia 2024.**” by Hussein Setu prepared under my guidance. I recommend the thesis be submitted for oral defense.

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## **College of Health Science**

### **Department of Public Health**

#### **Approval of thesis for defense result**

As members of the board of examiners, we examined this thesis entitled “**Prevalence of Short Interpregnancy Interval and Its Associated Factors Among Pregnant Mothers in Mersa Town, Ethiopia 2024.**” By Hussein Setu: We hereby certify that the thesis is accepted for fulfilling the requirements for the award of the degree of “General Master of Public Health”.

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## **ACRONYM AND ABBREVIATION**

ANC: Antenatal Care

AOR: Adjusted Odds Ratio

CI: Confidence Interval

EBF: exclusive breast feeding

FGD: Focus Group Discussion

FP: Family Planning

HTSP: Healthy Timing and Spacing of Pregnancy

IPI: Inter-Pregnancy Interval

USAID: United State Agency for International Development

VBAC: Vaginal Birth after Cesarean section

WHO: World Health Organization

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## ABSTRACT

**Background:** Short inter-pregnancy interval (< 24 months) has a negative effect on perinatal outcomes such as congenital anomalies, developmental delay, preterm birth, low birth weight and neonatal death and maternal complications like preeclampsia, anemia, cervical insufficiency, antepartum hemorrhage and premature rupture of membrane. However, there is paucity of evidences on the prevalence of short inter-pregnancy interval and its determinant factors in in study area.

**Objective:** To assess the prevalence of short inter-pregnancy interval and its associated factors among pregnant mothers in Mersa town, North wollo zone, Ethiopia, 2024.

**Methods:** A community based cross-sectional study was conducted in Mersa town, North Wollo zone, North East Ethiopia from July 15/2024 up to September 15/2024 G.C. A total of 345 pregnant mothers were included. SPSS software version 25 was used to enter and analyze the data. A binary logistic regression model was computed to identify the associated factors. Variables with a P-value less than or equal to 0.25 in bivariable analysis were subjected to multi-variable analysis. An adjusted odd ratio with a two-sided p-value of  $p < 0.05$  with a 95% CI were statistically significant. Finally, the results were presented using text, graphs, and tables.

**Results:** The overall prevalence of short inter-pregnancy interval (<24 months) among pregnant women was 157 (45.5%) with 95% CI: 37.8 to 48.4%. Being over 30 years of age at first birth (AOR = 2.50; 95% CI: 2.12–6.01), non-use of modern contraceptive (AOR = 4.05; 95% CI: 3.82–10.34), duration of breastfeeding for less than 12 months (AOR = 3.64; 95% CI: 1.43–4.56), unintended pregnancy (AOR=4.51; 95% CI: (2.48-6.14), no formal education (AOR=4.44 (1.20-9.10) and sex of child being female (AOR = 0.022 ; 95% CI: 0.008– 0.055) were independently associated factors with short inter-pregnancy interval

**Conclusion:** Despite ongoing public health interventions in Ethiopia, the prevalence of short inter-pregnancy intervals observed in this study remained high. To address this challenge, enhancing the uptake of modern contraceptives and strengthening health education efforts at both health facility and community levels could play a crucial role.

**Key words:** *Short Interpregnancy Interval, Maternal Health, Associated Factors, pregnancy, Mersa Town*

# 1. INTRODUCTION

## 1.1. Background

Inter-pregnancy interval is the time between birth and the beginning of next conception. Short inter-pregnancy interval is when the interval between the delivery date of the preceding live birth and the conception of date of the index birth is less than 24 months [1]. Healthy timing and spacing of pregnancy (HTSP) are an intervention to help women and families delay or space their pregnancies to achieve the healthiest outcomes for women, newborns, infants, and children within the context of free and informed choice, taking into account fertility intentions and desired family size [2] . Currently, in developing countries more than 200 million women want either to space or limit pregnancies and yet they lack access to family planning (FP) options [3] .

Inter-pregnancy interval (IPI) offers an important period which allows the parturient to recover from the effects of pregnancy and to be in optimum health before the next pregnancy [4]. Short inter-pregnancy interval (IPI) has been linked to adverse pregnancy outcomes. In the past, the United States Agency for International Development (USAID) had recommended a three- to five-year gap between pregnancies, while the World Health Organization (WHO) and other international authorities had advised at least two to three years. Numerous nations and regional initiatives asked the WHO to do a more thorough analysis of the data and offer recommendations in light of the discrepancy [1, 4]. As a result, the report from the 2005 WHO Technical Consultation and Scientific Review of Birth Spacing recommends waiting at least 2-years after a live birth and 6 months after miscarriage or induced termination before conception of another pregnancy [1].

Some studies in Ethiopia have indicated that short IPI is associated with preterm birth and stillbirth. Maternal nutrition and folate depletion, cervical insufficiency, and vertical transmission of unresolved infections are the mechanisms that have been proposed as explanations for the associations observed between adverse maternal, perinatal and childhood outcomes and short IPI[1, 5] . Ethiopia is still behind the global FP and fertility targets. Children born after intervals of less than 24 months are considered at a higher risk for child mortality and under-nutrition, and mothers with those intervals are at a higher risk of birth complications [5] .

## 1.2. Statement of the problem

Short inter-pregnancy intervals (SIPs) are associated with adverse maternal and infant health outcomes. Short birth to pregnancy interval is known to have a negative effect on perinatal, neonatal and child health outcomes like: preterm birth, low birth weight, perinatal death, still birth, intellectual disability and developmental delay and has also maternal health outcomes such as: nutritional depletion, anemia, cervical insufficiency, antepartum hemorrhage, premature rupture of membrane and eclampsia [6, 7]. A systematic review and meta-analysis published in *The Lancet Global Health* (2017) found that inter-pregnancy intervals of less than 18 months were associated with a 32% increased risk of low birth weight compared to intervals of 18–24 months [8]. In another study conducted in the United States, women with inter-pregnancy intervals of less than 6 months were twice as likely to deliver low birth weight infants compared to those with intervals of 18–24 months [9]. A study conducted in Bahir Dar, Ethiopia, showed that women who had Short inter-pregnancy intervals of less than 24 months were 2.67 times more likely delivering low birth weight infant compared to the interval 24 and above [7].

Short birth intervals, particularly those less than 24 months, place newborns and their mothers at increased health risk. According to EDHS 2016 one in three births (32%) occur within 24-35 months [10]. Unintended pregnancies are often associated with short between-birth intervals, which can have deadly consequences for infants and children. In Ethiopia over the past 15 years, the use of contraceptive rate increased from 6% in 2000 to 35% in 2016 and fertility rate decreased from 5.5 in 2000 to 4.6 in 2016 [11]. Despite these all progress, Ethiopia is still behind the global family planning and fertility targets [11, 12].

Closely spaced pregnancies might not give a mother enough time to recover from pregnancy before moving on to the next. For example, pregnancy and breast feeding can deplete mother's stores of nutrients particularly folate and iron. If a woman become pregnant before replacing those stores, it could affect her health as well as her child's health. Inflammation of the genital tract that develops during pregnancy and doesn't completely heal before the next pregnancy could also play a role [13]. Beyond the health and survival implications of high levels of closely spaced and unintended births, high fertility rates accelerate population growth and undermining development efforts across all sectors. Closely spaced births have a potentially devastating impact on both the individual and the society. This pattern, combined with high levels of unplanned fertility, makes

it difficult for women to become productive members of society, thereby limiting their contribution to economic development [14]. In Ethiopia, maternal and child health is a priority, but specific data on short IPI in smaller towns like Mersa are limited.

Short interpregnancy intervals are a significant public health concern due to their association with adverse maternal and neonatal outcomes. Despite the critical role of localized data in addressing this issue, there is limited evidence on the prevalence and factors influencing short interpregnancy intervals in smaller towns like Mersa, Ethiopia. This study fills that gap, providing essential insights for targeted interventions and improved maternal and child health outcomes in the region. Therefore, this study assesses the prevalence and associated factors of short inter-pregnancy interval among pregnant women live in Mersa town.

### **1.3. Significance of the study**

It is expected that the result of this study will help as an important input for any possible intervention. The finding of this study will also inform local decision makers to design appropriate intervention strategies to improve optimal birth spacing by women of reproductive age and hence reducing adverse maternal and neonatal outcomes in the study area. In addition, the result will provide important information to local health care providers, community-based health extension workers, civil organizations, and facility managers to design appropriate interventions suitable to their clients at facility and community level that can play an indispensable role in convincing mothers to optimize their birth interval. It will also provide additional information for further study.

Preventing the negative outcomes associated with short interpregnancy intervals (SIPI) can significantly reduce healthcare costs. Effective interventions targeting SIPI help minimize expenses related to preterm births, low birth weight, and maternal complications. Additionally, understanding the factors contributing to SIPI, such as sociodemographic status, educational level, and cultural practices, enables the identification of at-risk populations, allowing for more focused and efficient healthcare strategies.

## **2. LITERATURE REVIEW**

### **2.1. Prevalence of short inter-pregnancy interval**

A community-based study conducted in Tanzania showed that 48.4% of pregnancies follow short inter-pregnancy interval below the World Health Organization (WHO) recommendation of 24 months before attempting next pregnancy [15]. A retrospective cohort study conducted in Tanzania revealed that 19.4% of women were experienced short inter-pregnancy interval [16]. A cross-sectional study conducted in Nigeria revealed that 65.9% of women had a short inter-pregnancy interval [4]. The prevalence of short inter-pregnancy interval among pregnant women in Selangor was 48 % [17]. A study in Bahirdar, Felegehiwot hospital found that 28.5% of women had a pregnancy interval of less than 24 months [18].

Between February 9 to March 9, 2020, a community-based cross-sectional survey was carried out in Debre Berhan town, North Shewa zone, Northern Ethiopia. The results indicated that 40.9% of pregnant women had a short inter-pregnancy interval (<24 months) [19]. In another similar study conducted in Bahidar, Felegehiwot Hospital was 28.5% (20). Another study conducted in United States showed that the prevalence of short inter pregnancy interval was 35% [20].

### **2.2. Factors associated with short inter-pregnancy interval**

#### **2.2.1 Socio-demographic factors**

Maternal age was significantly associated with short IPI from a study conducted in Tanzania and US [15, 20]. A study conducted in US indicated that births to women initiating childbearing before age 30 years were significantly 25% less likely to have shorter inter-pregnancy intervals than births to women aged 30 years and older at first birth [20]. Similarly, a study conducted in Michigan, USA indicated that births to women initiating childbearing before age 24 years were 45% less likely to have shorter inter-pregnancy intervals than births to women aged 30-35 years at first birth [21]. It has also been found that women who were between the age of 25 to 31 had highest rate of short inter-pregnancy interval [18]. However, a study conducted in Tanzania showed that women who initiate childbearing before the age of 20 years were 2.3 times more likely to have short IPI as compared to women who initiate childbearing at the age of 25-30 years [15].

The place where the respondent resides also determine the inter pregnancy interval. A study conducted in Bahir Dar felegehiwot hospital showed that short inter-pregnancy interval was higher

among urban residents [15]. Similarly, the study conducted in Nigeria among ANC attendees showed that women who reside in rural setting associated with 50% odd of delaying pregnancy for more than one year [22].

A short inter-pregnancy interval may negatively affect the socioeconomic situation and the socioeconomic status of individual may also be the determining factor for short inter-pregnancy interval [1]. Women who were socioeconomically disadvantaged were more likely to experience short birth interval ((AOR 1.42, 1.22-1.65) [23].

Short inter-pregnancy interval was associated with educational level of the mother. Women who were secondary and above in their educational status had an increased likelihood of short birth interval [16, 17, 23]. In contrast, from the study done in US and Tanzania short inter-pregnancy interval were higher among women with low educational level, low-income level [15, 24].

Regarding the marital status of women, short inter-pregnancy interval was higher among births to married as compared to single women [15, 17]. In contrast the study conducted in Nigeria showed that women who were married were associated with fifty percent odd of delaying pregnancy for more than one year [23].

Occupational status of the respondent was a determining factor in different studies. From the study conducted in Tanzania and British Colombia short inter-pregnancy interval is high among employed [16, 25]. In contrast, the study in Tanzania on adherence to WHO recommendation of inter-birth interval found that non-adherent to WHO recommendation of inter-birth interval were high among women who had no job [15].

### **2.2.2. Reproductive History**

Pregnancy intention was associated with short inter pregnancy interval. A study conducted in United States showed that pregnancies which were reported as mistimed and unwanted pregnancies were more likely had short inter-pregnancy interval compared to pregnancies that were reported as intended with ORs 4.3 and 1.8 respectively [17]. A study in Selangor also indicated that unintended pregnancy with AOR 2.875, 95%CI: 1.878, 4.400 were associated with short interpregnancy interval [17, 26]. Similarly, a study in Arbaminch and Tselemti revealed that the odds of experiencing short birth interval were higher for mothers who did not have pregnancy plan and desire for their last child than those who had a plan and desire to get pregnant [27, 28].

Parity was a determining factor for short inter-pregnancy interval in different study. A study conducted in rural Bangladesh showed that women who had three or above children were less likely to experience a short birth interval compared to women who gave their second birth. Having 7 of four or more children was associated with 72% decrease in the odds of a short birth interval compared to a parity of one at the start of the birth interval [29]. Similarly, the study conducted in Selangor showed that women with parity of more than three were 3 times less likely to had short inter-pregnancy interval than women who had less three children [15]. A study in Nigeria also indicated that women who had less than four children were more likely to experience short interpregnancy interval [1, 4]. A study in south east of Nigeria among ANC attendee in Abakaliki tertiary hospital indicated that women with parity more than four were less likely to experience short interpregnancy interval [22].

Women with an inter-pregnancy interval of 12–18 months had significantly lower odds of preeclampsia–eclampsia with an adjusted OR 0.71, 95% CI 0.54–0.94. The risk of gestational diabetes was also significantly increased among women with an inter-pregnancy interval of 0–5 months (adjusted OR 1.35, 95% CI 1.02–1.80) [25].

The sex of previous child was a determining factor to short inter-pregnancy interval. The study in Arbaminch revealed that mothers who gave female birth previously significantly associated with short inter-pregnancy interval [30] . Women who had no male child also were three times more likely to experience short inter-pregnancy interval from the study conducted in Nigeria [4].

A study conducted in rural Bangladesh showed that previous adverse pregnancy outcome were determinants of short birth interval with AOR 2.10, 1.83-2.40.

The likelihood of a short birth interval decreased by 5% for every year that a woman's first pregnancy was delayed (AOR 0.95, 0.92- 0.98) [31]. Previous history of infertility, perinatal death in the previous conception and irregular menstruation (AOR 2.172, 95% CI: 1.401, 3.368) were associated with short interpregnancy interval [4, 22, 25].

The rate of caesarean section was higher among short inter-pregnancy interval cases than long inter-pregnancy cases. Obstetric complications like obstructed labor, prolonged rupture of membrane and uterine rupture were higher among women with short inter-pregnancy interval [18]. Short or lack of exclusive breastfeeding were associated with short inter-pregnancy interval [4].

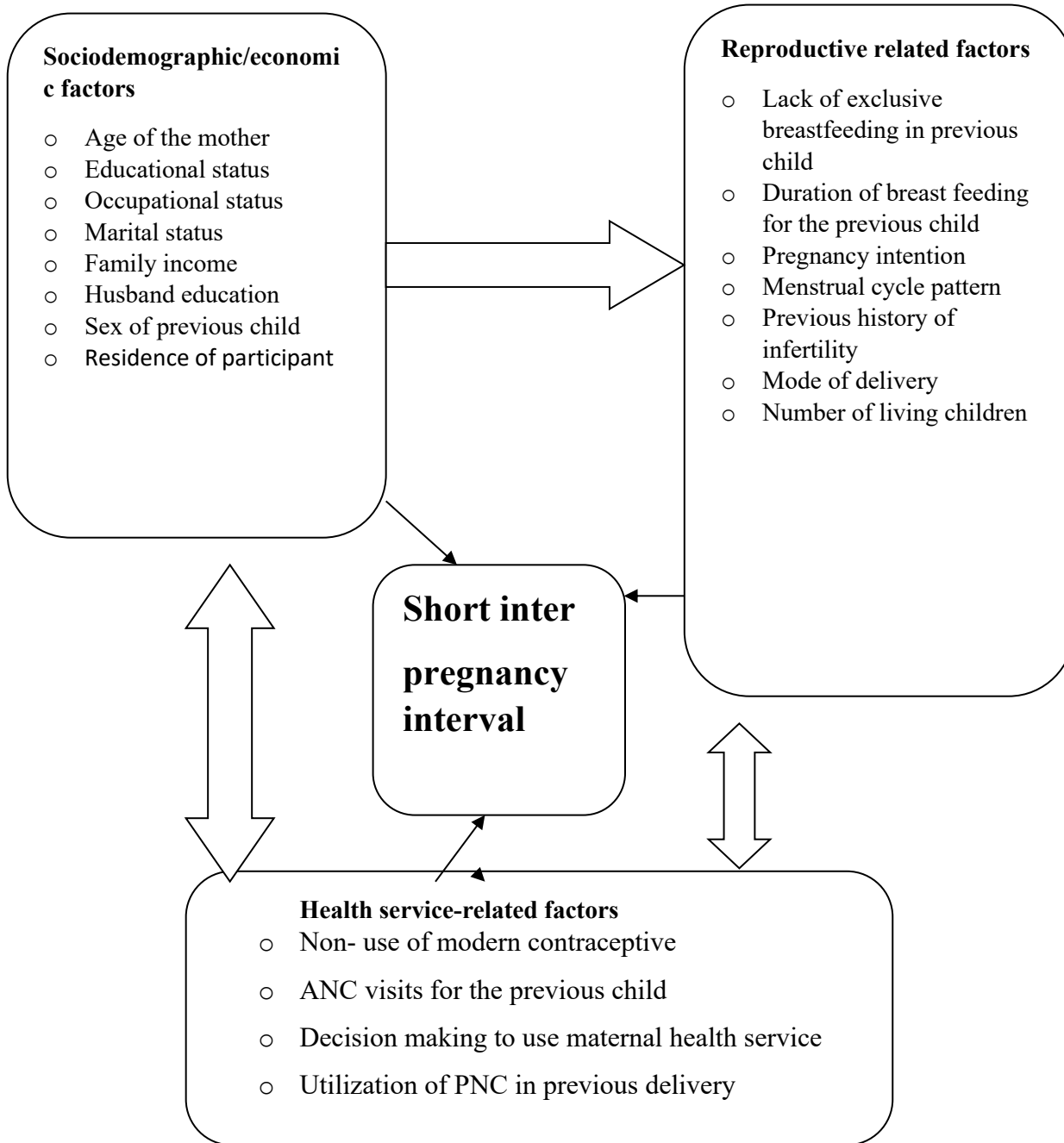
Similarly, the study in Nigeria among ANC attendees showed that the likelihood of having short inter-birth interval was 49 times among women who breast fed their last child for less than 24 months as compared to women who breast fed their child for more than 24 months [22]. Exclusive breastfeeding improves both infant survival and lengthens the interval between pregnancies due to lactational amenorrhea. However, the risk of conception increases as the breastfeeding decreases or when the menstruation resumes. This indicates that mothers should not wait to start using contraceptives until the return of their menstrual period to prevent unwanted pregnancies and enabling mothers to adhere with the recommended optimal birth spacing [28].

### **2.2.3. Health service-related factors**

Short inter-pregnancy interval was associated with contraceptive utilization in different studies. The study conducted in Nigeria showed that women who did not use contraceptive were 57 more likely to have short inter-pregnancy interval [28]. Similarly, the study conducted in Tselemti, Arbaminch and Nigeria revealed that mothers who did not use modern contraceptive method before getting pregnant with the last child were more likely to experience short birth or interpregnancy interval as compared to those who used it [28, 30] [28]. Contraceptive failure and short duration of postpartum amenorrhea also showed significant association with short IPI [30]. The odds of experiencing short birth interval were about 3 times higher for mothers who did not attend ANC [30] .

### 2.3 Conceptual framework

Studies in different parts of the world reviewed that short inter-pregnancy interval were affected by different factors which was adopted from the different literature review of previous studies [5, 17, 32].



### **3.OBJECTIVES**

#### **3.1. General Objective**

To assess the prevalence of short inter-pregnancy interval and its associated factors among pregnant mother in Mersa town, North wollo zone, Ethiopia, 2024.

#### **3.2. Specific objectives**

- To determine the prevalence of a short inter-pregnancy interval among pregnant mothers in Mersa town, North wollo zone, Ethiopia, 2024.
- To identify factors associated with a short inter-pregnancy interval among pregnant mothers in Mersa town, North wollo zone, Ethiopia, 2024.

## **4. METHOD AND MATERIALS**

### **4.1. Study design, area, and period**

A community based cross-sectional study was conducted in Mersa town, North Wollo zone, North East Ethiopia from July 15/2024 up to September 15/2024 G.C. The town is located 490 km from Addis Ababa, and it has 4 kebeles, approximately comprising 1,000 households. The total number of populations in the town is 41,253 (Mersa town administration unpublished report). In the town there are seven private clinic, 1 Hospital, one health center, 10 pharmacies, and one private specialty clinic. In the health centers and hospitals of Ethiopia, midwives are the primary point of care for all pregnancies

### **4.2. Source population**

All pregnant mother in Mersa town were our source population.

### **4.3. Study population**

Pregnant women who gave birth at least once (uniparous) and live in Mersa town were our study population.

### **4.4. Eligibility criteria**

#### **4.4.1 Inclusion criteria**

Pregnant women residing in Mersa town during the study period and who had at least one live birth were included in this study.

#### **4.4.2 Exclusion criteria**

Women who had miscarriage/abortion immediately before the current pregnancy were excluded from the study.

#### 4.5. Sample size determination

The minimum sample size (n) was calculated using a single population proportion formula by taking prevalence of 28.5% of women who had short inter- pregnancy interval among post-partum women who gave birth in Felegehiwot teaching hospital in Bahir Dar University [18] with 0.05 margin of error (d) and 95% confidence interval

Where n= minimum sample size required for the study

$Z_{\alpha/2}$  = 1.96, (95% confidence interval)

P = proportion of the problem (0.285)

d = margin of error (5%)

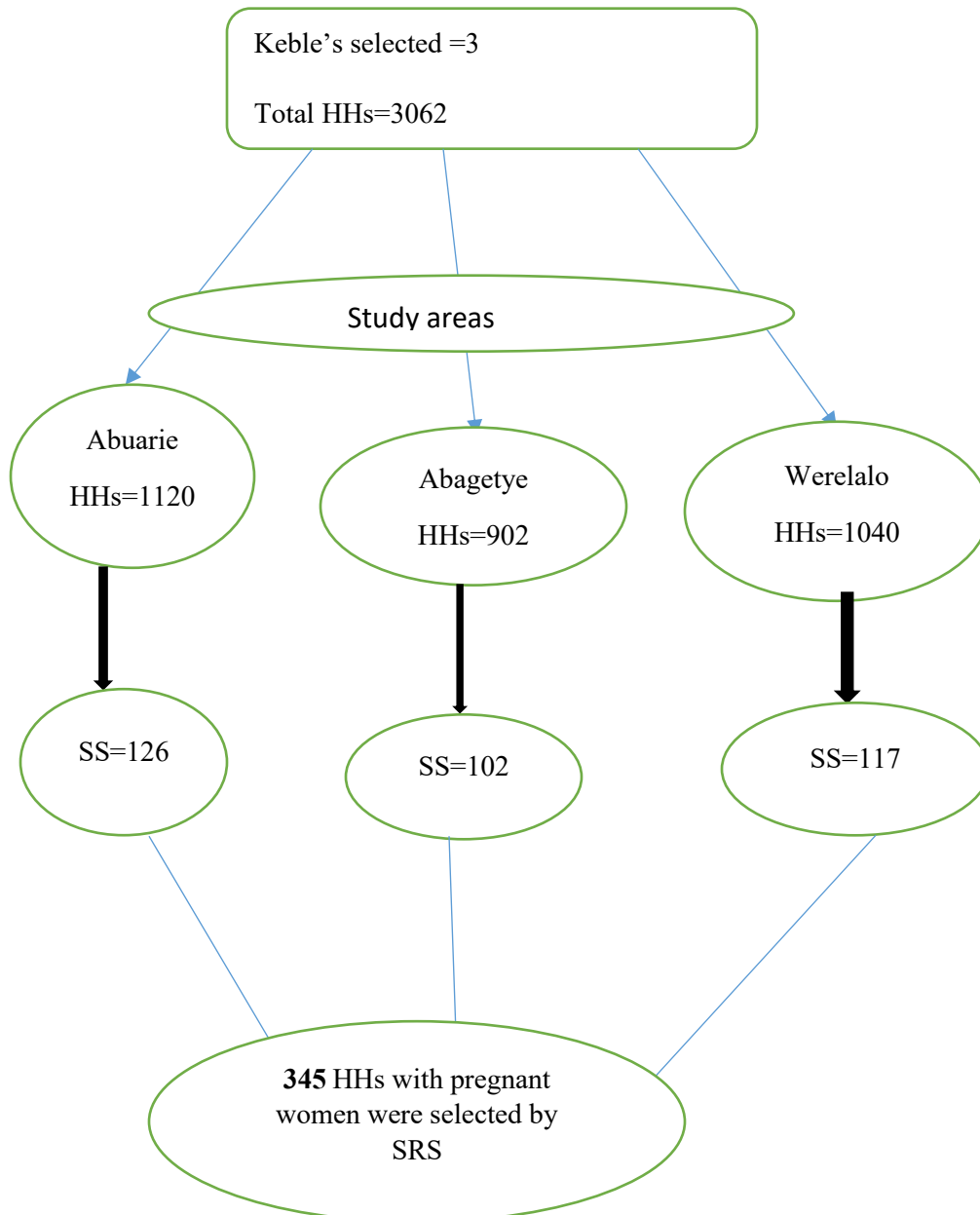
$$n = Z_{\alpha/2}^2 p (1-p) / d^2 = (1.96)^2 (0.285) (1-0.285) / (0.05)^2 = \mathbf{313}$$

Finally, by considering a 10% (32 subjects) non-response rate, the final sample size was determined as: **345**

#### 4.6. Sampling technique and procedure

Simple random sampling technique was used to select the kebeles and the participants. Among the 4 kebeles, 3 kebeles were randomly selected. Then the sample size was proportionally allocated to those 3 kebeles. The family folders maintained by Health Extension Workers (HEWs) in each kebele served as the sampling frame to compile a list of pregnant women. The principal investigator generated random numbers using a computer and provided the printed results to the data collectors for participant selection. Then, the data collectors were visited the household of the study participants to conduct the interview.

**Figure 1:** schematic presentation of sampling procedures, in selected Mersa town ,2024



## **4.7. Study variables**

### **4.7.1. Dependent variable**

- Short inter-pregnancy interval

### **4.7.1. Independent variable:**

- Socio-demographic variables (age of mother, educational status, occupational status, marital status, family income, husband education, sex of previous child)
- Reproductive history (lack of exclusive breastfeeding for the index child, duration of breast feeding for the index child, pregnancy intention, menstrual cycle pattern, previous perinatal (neonatal) death, previous history of infertility, mode of delivery)
- Health service-related factors (non-use of modern contraceptive, ANC visit for the index child, decision making to use maternal health service)

## **4.8. Data collection procedure**

A structured questionnaire, administered by an interviewer, was developed after reviewing relevant literature. Initially created in English, the questionnaire was then translated into Amharic, the local language, and subsequently translated back into English to ensure consistency. It included questions on socio-demographic characteristics, reproductive health, and access to health services. The pretest was conducted on 17 respondents (5% of the sample) from Girana kebele. After a two-day training session, three diploma midwives collected data through home visits. For women unavailable during the initial visit, two to three follow-up visits were made. The data collected was reviewed for completeness and consistency daily. Ongoing supervision and monitoring were conducted by assigned supervisors and the principal investigator

## **4.9. Measurement of short inter-pregnancy interval**

Inter-pregnancy interval was defined as the time in completed months from the date of live birth of the previous child to the beginning of the current pregnancy. Date of birth of the last (previous child) was obtained from self-report of the women. Similarly, the beginning of the current pregnancy was calculated using the self-reported last normal menstrual period (LNMP). Most participants knew the date of birth of the previous child and date of conception of the current

pregnancy. However, in case of the participants who did not know the specific date of conception, the mid-date of the month was taken as the birth date of previous child or date of conception for the current pregnancy. Therefore, inter-pregnancy interval was calculated by subtracting the date of birth of the last child (previous child) from the date of conception of the current pregnancy (IPI= date of conception (LMP) in months – date of birth of the previous child in months). So, short inter-pregnancy interval will be defined as an interval less than 24 months.

#### **4.10. Data quality assurance**

The questionnaire was reviewed and pre-tested on 5% of the study population in a comparable group from a different health center not included in the study. All data collect from respondents was checked for completeness, clarity and consistency by the principal investigator and supervisor immediately at the end of each data collection days. Any misunderstanding or ambiguity before data analysis by data editing and checking, during data collection by supervision and feedback giving was cleared. Revisits of two to three times were made for some eligible respondents who were not available at the time of the survey. Training was given to the data collectors.

#### **4.11. Data processing and analysis**

Data was coded and entered using Epi-Data version 4.6. For further analysis data was exported to SPSS version 25. Descriptive statistics of different variables were presented by frequency and percentage using tables and pie charts. Multicollinearity was checked using the variance inflation factor (VIF) and standard error (SE) and variables with a SE >2 or a VIF >10 was dropped. A binary logistic regression test was used to compute COR with its 95% interval to test the associations between dependent and independent variables. Variables with a p-value less than 0.25 in bivariate analysis were entered into multivariable logistic regressions to determine factors independently associated with maternal satisfaction. The variables found to be  $P < 0.05$  was considered as statistical significance

#### **4.12. Operational definition**

**Inter-pregnancy interval:** Defined as the time in completed months from the date of live birth of the previous child to the beginning of the current pregnancy

**ANC utilization:** ANC follow up in previous child at least two times (visit).

**Previous history of infertility:** no pregnancy at least for consecutive one years without the use of contraceptive before.

#### **Pregnancy intention:**

**Intended:** is defined as mothers who responded that they wanted to become pregnant sooner or then, just before they got pregnant with their baby (34).

**Unintended:** defined as mothers who responded that they wanted to become pregnant later or not then or any time in the future, just before they got pregnant with their baby (34).

#### **4.13. Ethical consideration**

Ethical clearance was obtained from the Ethical Review board of the Woldia University. Then permission letter from Mersa town health office and Mersa town administration office was obtained. Written informed consent was obtained from participants, who were informed of their right to withdraw or stop the interview at any time if they chose not to participate. The study's benefits were explained to each participant. No personal identifiers were included in the questionnaire, and the data was used solely for the study to ensure confidentiality. Assessing short interpregnancy intervals is essential for improving maternal and child health and guiding healthcare policies and programs

#### **4.14. Plan for dissemination of the findings**

The result of this study will be submitted to Woldia University. Department of public health and other concerned bodies, including the Woldia health bureau, and Mersa town health office. Furthermore, it will be recognized by the scientific community through conference presentations and publication in reputable journals

## 5. RESULTS

### 5.1. Socio-Demographic Characteristics of the Study Participants

A total of 345 pregnant women was included in the study yielding a response rate of 100%. The age of the participants ranged from 20 to 42 with the mean age ( $\pm$ SD) of 28.5 ( $\pm$ 4.5) years. Of the study participants, around half (52.2%) were between the age of 25 to 29 years. Ninety-one (26.4%) of the participants had attended college and above in their educational status, and 270 (78.3%) were orthodox Christians by religion (**Table 1**).

**Table 1:** Socio-demographic characteristics of the study participants, Mersa town, Amhara region, Ethiopia, 2024.

Characteristics	Categories	Frequency (n%)
Current maternal age	20-24 years	29 (8.4)
	25-29 years	180 (52.2)
	30-34 years	77 (22.3)
	35-39 years	42 (12.2)
	$\geq 40$ years	17 (4.8)
Maternal age at first birth	$\leq 30$ years	288 (83.5)
	$>30$ years	57 (16.5)
Age at first marriage of mothers	$< 18$ years	125 (36.2)
	$\geq 18$ years	220 (63.8)
Religion	Orthodox	270 (78.3)
	Muslim	27 (7.8)
	Protestant	30 (8.7)
	Catholic	13 (3.8)
	Others	5 (1.4)
Current maternal occupational status	Self employed	51 (14.8)
	Private employed	60 (17.4)
	Government employed	74 (21.4)
	House wife	72 (20.9)
	Student	58 (16.8)

	Others	30 (8.7)
<b>Husband's occupation</b>	Unemployed	70 (20.3)
	Self employed	94 (27.2)
	Private employed	84 (24.3)
	Government employed	97 (28.1)
<b>husbands' education</b>	No formal education	98 (28.4)
	Primary education	87 (25.2)
	Secondary education	78 (22.6)
	College and above	82 (23.8)
<b>Educational status of mothers</b>	No formal education	150 (43.5)
	Primary education	41 (11.9)
	Secondary education	63 (18.3)
	College and above	91 (26.4)
<b>Household monthly income</b>	< 1000 ETB	18 (5.2)
	1000-2999 ETB	53 (15.4)
	3000-4999 ETB	66 (19.1)
	> 5000 ETB	208 (60.3)
<b>Marital status</b>	Orthodox	270 (78.3)
	Muslim	27 (7.8)
	Protestant	30 (8.7)
	Catholic	13 (3.8)
	Others	5 (1.4)

## 5.2. Reproductive and Health Service-Related Factors of the Study Participants

One hundred forty (40.6%) of the participants did not use modern contraceptive before the current pregnancy, and 76 (22%) participants had an unintended pregnancy. Three hundred eleven (90.1%) of the study participants had antenatal care (ANC) follow up by skilled attendants during the pregnancy of the index child. Similarly, thirty-four (9.9%) of the participants provided breastfeeding of their index child for only less than 12 months. One hundred sixty (46.4%) of participants received health related information through mass media. ((Table 2)

**Table 2:** Reproductive and health service-related factors of pregnant women in Mersa town, Amhara region, Ethiopia, 2024

Variables	Categories	Frequency (%)
Use of contraceptive before the current pregnancy	Yes	205 (59.4)
	No	140 (40.6)
Types of contraceptive methods	Implanon	152 (44.1)
	IUCD	37 (10.7)
	Oral pills	54 (15.7)
	Dipo Provera	97 (28.1)
	Barrier methods	5 (1.4)
ANC visit for the index child	Yes	311 (90.1)
	No	34 (9.9)
Frequency of ANC visit	One	22 (6.4)
	Two	40 (11.6)
	Three	80 (23.2)
	Four and above	203 (58.8)
Exclusive breastfeeding for the index child	< 2 months	56 (16.2)
	2-3 months	61 (17.7)
	4-5 months	39 (11.3)
	6-7 months	189 (54.8)
	< 12 months	34 (9.9)
	13-23 months	94 (27.2)

<b>Total duration of breastfeeding for the index child</b>	24 and above months	217 (62.9)
<b>Pregnancy intention</b>	Intended	269 (78.0)
	Unintended	76 (22)
<b>Survival status of the index child</b>	Alive	334 (96.8)
	Dead	11 (3.2)
<b>Sex of the index child</b>	Male	163 (47.2)
	Female	182 (52.8)
<b>Menstrual cycle pattern</b>	Regular	197 (57.1)
	Irregular	148 (42.9)
<b>History of infertility</b>	Yes	18 (5.2)
	No	327 (94.8)
<b>Maternal health service decider</b>	Self	39 (11.3)
	Both wife and husband	162 (47)
	Only husband	144 (41.7)
<b>Mode of delivery of the index child</b>	Vaginal	299 (86.7)
	Cesarean section	46 (13.3)
<b>Source of information on health-related issue</b>	Mass media	160 (46.4)
	Health professionals	102 (29.6)
	Friends and relatives	61 (17.7)
	No information	22 (6.4)

### **5.3. Prevalence of Short Inter-Pregnancy Interval**

The prevalence of short inter-pregnancy interval (< 24 months) of this study was 157 (45.5%) with 95% CI: 37.8 to 48.4%. Among the short interpregnancy intervals, 28 (9.5%) experienced a very short interpregnancy interval (less than 12months).

### **5.4. Factors Associated with Short Inter-Pregnancy Interval**

Bivariable and multivariable logistic regression analyses were carried out to determine the association between the explanatory variables and short inter-pregnancy interval. Hence, based on the p-value (< 0.25) of the bivariable analysis, current maternal age, age at first birth, unintended pregnancy, non-use of modern contraceptive before the current pregnancy, duration of breastfeeding, sex of the index child, educational status of mothers and survival status of the index child were selected as candidate variables to be included in the final model. However, the result of multivariable analysis confirmed that age at first birth, unintended pregnancy, non-use of modern contraceptive before the current pregnancy, and duration of breastfeeding were independently associated with short inter-pregnancy interval. Multicollinearity was checked using a variance inflation factor and yielded a result of a result of <10 for all variables in the final model (**Table 3**).

**Table 3:** Bivariable and multivariable binary logistic regression analyses results of factors associated with short inter pregnancy interval among pregnant women in Mersa town, Amhara region, Ethiopia, 2024

Characteristics	Categories	Frequency (n, %)	Short inter-pregnancy interval		COR (CI: 95%)	AOR (CI: 95%)	p-value
			Yes (n, %)	No (n, %)			
Current maternal age	20-24 years	29 (8.4)	17 (58.6)	12 (43.4)	1.85 (0.83–4.12) *	1.85 (0.82–4.22)	0.3
	25-29 years	180 (52.2)	77 (42.7)	103 (57.3)	1	1	
	30-34 years	77 (22.3)	35 (45.4)	42 (54.6)	1.70 (0.72–4.035)	1.58 (0.64–3.88)	0.2
	35-39 years	42 (12.2)	17 (40.4)	25 (59.6)	2.053 (0.79–5.45)	1.94 (0.73–5.18)	0.7
	≥ 40 years	17 (4.8)	11 (64.7)	6 (35.3)	0.77 (0.22–2.67)	0.82 (0.23–2.92)	0.6
Maternal age at first birth	≤ 30 years	288 (83.5)	131 (45.4)	157 (54.6)	1		
	>30 years	57 (16.5)	26 (45.6)	31 (54.4)	1.01 (0.57–1.78) *	2.50 (2.12–6.01)	<0.001*
Use of contraceptive before the current pregnancy	Yes	205 (59.4)	93 (45.3)	112 (54.7)	1		
	No	140 (40.6)	64 (45.7)	76 (54.3)	0.98 (0.62–1.47) *	4.05 (3.82–10.34)	0.008*
Total duration of breastfeeding for the index child	< 12 months	34 (9.9)	17 (50)	17 (50)	0.85 (0.42-1.76) *	3.64 (1.43–4.56)	0.006*
	13-23 months	94 (27.2)	41 (43.6)	53 (56.4)	1.11 (0.67-1.79)	1.11 (0.67–1.84)	0.4
	24 and above months	217 (62.9)	99 (45.6)	118 (54.4)	1		

Pregnancy intention	Intended	269 (78.0)	127 (47.2)	141 (52.8)	1		
	Unintended	76 (22)	30 (39.4)	46 (60.6)	1.39 (0.83–2.34) *	4.51(2.48–6.14)	0.003*
Survival status of the index child	Alive	334 (96.8)	152 (45.5)	182 (54.5)	1		
	Dead	11 (3.2)	5 (45.4)	6 (54.6)	1.01 (0.30-3.83) *	1.01 (0.27–3.65)	0.1
Educational status of mothers	No formal education	150 (43.5)	71 (47.3)	79 (52.7)	0.65 (0.38–1.10) *	0.62 (0.36–1.07)	0.08
	Primary education	41 (11.9)	21 (51.2)	20 (48.8)	0.56 (0.27-1.19)	0.54 (0.24–1.18)	
	Secondary education	63 (18.3)	31 (49.2)	32 (50.8)	0.62 (0.33-1.18)	0.67 (0.34–1.32)	
	College and above	91 (26.4)	34 (37.3)	57 (62.7)	1		
Sex of the index child	Male	163 (47.2)	83 (50.9)	80 (49.1)	1		
	Female	182 (52.8)	74 (40.6)	108 (59.4)	1.51 (0.97–2.27) *	0.02 (0.01–0.05)	<0.001*

**Note:** \* = statically significant at p-value of  $\leq 0.05$ , COR = crude odds ratio, AOR = adjusted odds ratio

## 6. DISCUSSION

A short interpregnancy interval (SIPI), typically defined as less than 24 months between the end of one pregnancy and the conception of the next, is a significant factor influencing maternal and child health. It is linked to increased risks of adverse outcomes such as preterm birth, low birth weight, small-for-gestational-age infants, and maternal complications. Understanding the implications of SIPI is critical in addressing maternal and perinatal morbidity and mortality. Various factors, including socioeconomic challenges, limited access to contraception, and cultural or personal preferences, contribute to closely spaced pregnancies [33].

The overall prevalence of short inter-pregnancy interval (< 24 months) among pregnant women was 157 (45.5%). The factors independently associated with short inter-pregnancy interval were age at first birth, unintended pregnancy, non-use of modern contraceptive before the current pregnancy, and duration of breastfeeding. The prevalence in this study is higher than the studies in Bahidar, Felegehiwot Hospital [18], Tanzania [16], and the United States (US) [20] where about 28.5%, 19.4% and 35% of women had short inter-pregnancy interval respectively. This difference might be attributed to the cut off point for short inter-pregnancy interval. On the other hand, this finding is lower compared to the study conducted in Tanzania [15], Nigeria [4], united states and Selangor [17].where the prevalence of short inter-pregnancy interval is 48.4% ,65.9 % and 48% respectively. This difference might be attributed to the sample population and sociocultural practice.

In the present study, the odds of experiencing short inter-pregnancy interval were 2.5 times higher among women who started child bearing above the age of 30 years compared to those who start at 30 years of age and lower. This finding is consistent with the study done in Bahirdar (Felegehiwot hospital) [18] , and the US [20, 34] . This might be due to the intention to use the remaining fertility age efficiently before the woman reaches the stage of menopause. In line with the evidence from two studies done in Nigeria [35], the finding of this study revealed that women who did not use modern contraceptive before the current pregnancy had four times higher odds of experiencing short inter-pregnancy interval as compared to those who used it. This can be explained by the potential of modern contraceptive to prevent and extend pregnancy.

This study also found out unintended pregnancy to be associated with short inter-pregnancy interval. The odds of experiencing short inter-pregnancy interval were 4.5 times higher among women with unintended current pregnancy compared to their counterparts. This finding is congruent with the study conducted in the US [20] and Selangor [17]. This might be due to a woman who plan to be pregnant may follow the recommendation for child spacing and therefore end up with optimal inter-pregnancy interval. "Non-utilization and contraceptive failure are significant factors contributing to unintended pregnancies, which, in turn, may lead to shortened inter-pregnancy intervals." [36]. This study revealed that the odds of short inter-pregnancy interval was 3.6 times higher among women who breastfed their last child for less than 12 months compared to those who breastfed for 24 and above months. This finding is in line with the evidence from the study done in Nigeria [4]. It might be due to the fact that breastfeeding, particularly exclusive breastfeeding, can enhance infant survival while delaying the return of fertility by inducing lactational amenorrhea. This process is mediated by the suppression of the hypothalamic-pituitary-ovarian axis. Prolactin, a hormone elevated during breastfeeding, reduces gonadotropin-releasing hormone (GnRH) pulses, subsequently lowering levels of luteinizing hormone (LH) and follicle-stimulating hormone (FSH). This disruption prevents ovulation and extends postpartum amenorrhea. Effective breastfeeding practices, such as frequent and exclusive feeding, are crucial for maintaining this natural contraceptive effect, particularly within the first six months postpartum [37].

The sex of the previous child was also found to be strongly correlated with the birth interval in this study. Mothers with female pregnancies were more likely to have shorter birth intervals than those with male pregnancies. Similar findings have been reported in studies conducted in Manipur, Saudi Arabia, and Bangladesh [38, 39]. This can be explained by cultural and economic factors that influence reproductive decision-making. In some societies, having children, especially male children, is considered an economic asset for families. As a result, mothers may be less inclined to practice long-term breastfeeding or use modern contraceptives until they achieve their desired number of children.

## **7. CONCLUSION AND RECOMMENDATION**

### **6.1. Conclusions**

The World Health Organization (WHO) and the Ethiopian government have advised a 24-month waiting period before a woman attempts another pregnancy after giving birth. However, a recent study found that 45.5% of women became pregnant before reaching this recommended interval. Factors such as age at the first birth, parity, non-use of modern contraception, breastfeeding duration, and unintended pregnancies were all found to be significant contributors to shorter inter-pregnancy intervals. These findings highlight the importance of improving access to contraception and promoting optimal breastfeeding practices. Additionally, the study suggests that more research, particularly in rural areas with larger sample sizes, is needed to better understand the prevalence and determinants of short inter-pregnancy intervals

### **6.2. Recommendations**

The study revealed that 45.5% of mothers in the sample were still experiencing short birth intervals, despite the well-established benefits of optimal birth spacing in improving maternal and child health outcomes. To address this challenge, healthcare providers, including health extension workers, should prioritize comprehensive education on the importance of birth spacing. This information should be delivered at both healthcare facilities and within communities, utilizing various media channels. Additionally, the North Wollo Health Bureau must strengthen initiatives focused on promoting modern contraceptive use and improving maternal and child health. Zonal and district health officials, in collaboration with health extension workers, should ensure widespread awareness about the critical role of antenatal care and make family planning services easily accessible and cost-free for women in the region

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## APPENDIXES

### INFORMATION SHEET AND CONSENT FORM

Good morning, good afternoon, good evening (According to its convenience). I am ----- I came from Woldia University College of Health science, department of public health. I am here to gather information about Short inter-pregnancy interval, So I want to ask you some question. Would you mind if I take some minutes with you? Your name will not be included in the information, I promise to keep the confidentiality of your reply. It takes about 30 minutes to complete the interview. Though it seems long time the study helps to improve optimal birth spacing of women. As a result, I kindly request you to participate in genuinely answering the interview.

I agree to participate

☐

I don't agree to participate

☐

I have been briefly informed about the study and I clearly understood the objective. Since it doesn't affect my personal life/health, I don't need any remedy. Consequently, I hereby approve my consent to take part in the study as an interviewee with my signature.

Signature\_\_\_\_\_. Date\_\_\_\_\_

Questionnaire No

Date: \_\_\_\_\_

Kebele \_\_\_\_\_ Interviewer: \_\_\_\_\_

## **Annex 1- English Questionnaire**

☐ CIRCLE THE RESPONSE ☐ CONSIDER SKIP QUESTION

### **Part I- Socio- demographic and economic characteristics of respondents**

Questions Response Remark

1. What is your current age
2. Age at marriage
3. What was your age in your first birth
4. What is your current marital status

A= Single

B= Married

C= Divorced

D= Widowed

E= other, specify-----

5. What is your Religion?

A= Orthodox

B= Muslim

C= Protestant

D= Catholic

E= other (specify)

6. What is your educational status

A= no formal education

B= primary education

C= Secondary education

D= college and above

7. What is your current occupation?

A= Self employed

B= Private employee

C= Government employee

D= House wife

E=Student

H= Other

8. What is your husband education

A= no formal education

B= primary education

C= Secondary education

D= college and above

9. What is your Husbands Occupation

A= unemployed

B= Self employed

C= Private employee

D= Government employee

E = Others

10. House hold monthly income in ETB

Questions	Response	Remark
-----------	----------	--------

A. yes                      B. No

A. Implanon                  B. IUCD    C. Oral pills

D. Depo Provera        E. Barrier methods (condom, diaphragm.....) F. Other, specify-----

13. Have you attended ANC follow up in previous pregnancy?

14. If Q13, is yes how many visit (s)

#### D. Four and above

15. Duration of exclusive breast feeding in the previous birth

17. Who will decide to use maternal health services (to use contraceptive, ANC visit, delivery and child birth, child immunization, breast feeding....)?

### A. self

B. both wife and husband

### C. only husband

### A. mass media

B. health professionals

C. friends and relatives

D. no information

19. How many children do you have before the current pregnancy?

20. Do you have a male child?

A. yes

B. No

21. Pregnancy intention

A. intended

B. mistimed

C. unwanted

D. mistimed and unwanted

22. What is the outcome of previous birth?

A. Alive

B. Dead

23. What was the sex of the previous birth?

A. female

B. male

24. Mode of delivery in the previous pregnancy

A. vaginal

B. cesarean section

25. Before pregnancy, was your menstrual cycle regular?

A. Yes

B. No

26. Do you have experience infertility in your life?

A. yes

B. No

27. The inter-pregnancy interval (between previous birth and current pregnancy, LNMP)

27.1 date of birth for the previous birth-----

27.2 LNMP-----

**Annex 2: Amharic questionnaire**

**የተሳታፊ መረጃ ገጽ እና የፈቃደኝነት ቅፅ**

ጤና ይስጥልኝ እንደምን አደርሽ/ዋልሽ? ስሜ \_\_\_\_\_ ይባላል: የመጣሉት ከደብረ-ብርሀን ዩኒቨርሲቲ ሢሒን የመጣሁበትም ምክንያት አቀራረብ መዉለድ በእርጉዝ እናቶች በሚል ለማስተርስ መመረቁ ጥናት ለሚካሄደው መረጃ በመሰብሰብ ላይ ከሚገኙ መረጃ ሰብሳቢዎች መካከል አንዱ ነኝ፡፡

አንተ/አንቺ ከዚህ በታች ያለውን የጥናቱን መግለጫ ተገንዝበው ፈቃደኛ ከሆኑ መረጃ በመስጠት የዚሁ ጥናት ተሳታፊ እንዲሆን/እንድትሆን ሳይንሳዊ በሆነ መንገድ ተመርጠዋል:

አቀራረብ መዉለድ በእርጉዝ እናቶች አስመልክቶ የተዘጋጀ መጠይቅ መጠይቁ የተካሄደበት ቀን-----  
የመጠይቁ መለያ ቁጥር -----

መጠይቁ የተካሄደበት ቦታ-----

የፈቃደኝነት ማወጃ የጥናቱ መግለጫ ተነበልኝ/ አንብቤ የጥናቱ አላማ፣ጥናቱ የሚወስደው ጊዜና ቅደም ተከተል፣ የጥናቱ ጉዳት እና ጥቅም ፣የጥናቱ ሚስጥራዊነት፣ የጥናቱ ተሳታፊ መብቶች፣ጥናቱን የሚያጠናው አድራሻ ተገንዝቤ አንዲሁም በመጠይቁ ወቅት በማንኛውም ሰአት ከጥናቱ መውጣት የጥናቱ ተሳታፊ ለመሆን ፈቃደኛ መሆኔን በፊርማዬ አረጋግጣለሁ፡፡ ፈቃደኛ አልሆንኩም----- የተሳታፊ ፈርማ \_\_\_\_\_  
\_\_\_\_\_ የመረጃ ሰብሳቢ ፊርማ \_\_\_\_\_ ቀን \_\_\_\_\_

## መግቢያ

አቀራረብ መዉለድ በእርጉዝ እናቶች አስመልክቶ የተዘጋጀ መጠይቅ

1. እድሜሽ ስንት ነው? -----

2. ስታገቢ እድሜሽ ስንት ነበር?

3. የመጀመሪያ ልጅሽን ስትወልድ እድሜሽ ስንት ነበር?

4. አሁን ያለሽበት የትዳር ሁነታ

A= ያላገባ B=ያገባ C= የፈታች D= ባል የሞተባት E= ሌላ ካለ ተናገረ-----

5. ሃይማኖትሽ ምንድን ነው? A. ኦርቶዶክስ B. ሙስሊም C. ፕሮቴስታንት D. ካቶሊክ E. ሌሎች/ላ-----

6. የትምህር ደረጃሽ?

A= ምንም ያልተማረች

B= 1ኛ ደረጃ የተማረ

C= 2ኛ ደረጃ የተማረ

D= ኮሌጅ እና ከዚያ በላይ

7. ስራሽ ምንድነው?

A= በግል የተሰማራ B= የግል መስሪያ ቤት C= የመንግስት ሰራተኛ

D= የቤት እመቤት E=ተማሪ

F= ሌላ ካለ ተናገረ-----

8. የባልሽ የትምህርት ደረጃ?

A= ምንም ያልተማረ B= 1ኛ ደረጃ የተማረ C= 2ኛ ደረጃ የተማረ D= ኮሌጅ እና ከዚያ በላይ

9. የባልሽ ስራ ምንድነው?

A= ያልተቀጠረ

B= በግል የተሰማራ C= የግል መስሪያ ቤት

D= የመንግስት ሰራተኛ

E =ሌላ ካለ ተናገረ-----

10. የቤተሰብ የወር ገቢ ምን ያህል ነው?-----

## II. የስነ-ተዋልዶ ጥያቄዎች

11. ከዚህ እርግዝና በፊት ዘመናዊ የወሊድ መቆጣጠሪያ ትጠቀሟል ነበር?

- A. አዎ                      B. አልጠቀምም

12. ለ11ኛው ጥያቄ አዎ ከሆነ መልስሽ የትኛውን አይነት?

- A. በክንድ ስር የሚቀመጥ                      B. በማህፀን ውስጥ የሚቀመጥ  
C. በአፍ የሚወጥ ኪኒን                      D. መርፊ  
E. ኮንዶም                      F. ሌላ ካለ ተናገረ-----

13. ለባለፈው ልጅሽ ቅድመ ወሊድ ክትትል ነበረሽ?

- A. አዎ                      B. የለኝም

14. ለ 13ኛው ጥያቄ አዎ ከሆነ መልስሽ፣ ስንት ጊዜ?

- A. አንድ                      B. ሁለት  
C. ሶስት                      D. አራትና ከዚያ በላይ

15. ለባለፈው ልጅሽ የእናት ጡት ወተት ብቻውን ምን ያህል ጊዜ አጠባሽው?

- A. ከስድስት ወር በታች                      B. ሰድስት ወር እና ከዚያ በላይ

16. የባለፈው ልጅሽ በጥቅሉ ለምን ያህል ጊዜ ጡት አጠባሽው? -----

17. በቤት ውስጥ የስነ-ተዋልዶ ጤና አገልግሎት እድትጠቀሟል ማን ነው የሚውስነው?

- A. ራሴ                      B. ሁለታችንም/ባልና ሚስት                      C. ባሌ ብቻ

18. ጤና ተኮር መረጃዎቼን (ለምሳሌ የቤተሰብ ምጣኔ፣ የወሊድ ክትትል.....) የምታገኘው ከየት ነው ?

- A. ከሚዲያ                      B. ከጤና ባለሙያዎች  
C. ከጓደኛ/ከዘመድ                      D. ምንም መረጃ የለኝም

19. ከአሁኑ እርግዝና በፊት ስንት ልጆች አሉሽ? -----

20. ወንድ ልጅ አለሽ?

A. አዎ

B. የለኝም

21. የእርግዝናዎ እሳቤ

A. የታሰበ/የታቀደ

B. ያለሰአቱ የተከሰተ

C. ያልተፈለገ

D. ያልተፈለገና ያለሰአቱ የተከሰተ

22. የባለፈው እርግዝና ውጤቱ ምንድነው?

A. በህይወት ያለ

B. የሞተ

23. የባለፈው ልጅ ፆታው ምንድነው?

A. ሴት

B. ወንድ

24. የባለፈውን ልጅ የወለድሽው በምን መንገድ ነው?

A. በማህጸን

B. በቀዶ ህክምና

25. ከማርገዝሽ በፊት የወር አበባሽ ግዜውን ጠብቆ ይመጣ ነበር?

A. አዎ

B. አይመጣም

26. ከአሁን በፊት መሃንነት አገጥሞሽ ያዉቃል?

A. አዎ

B. አያዉቅም

27. በባለፈው ልጅ እና በአሁኑ እርግዝና መካከል ያለው ጊዜ-----

27.1 የባለፈው ልጅሽ የወለድሽበት ቀን-----

27.2 የመጨረሻ የወር አበባሽ ያየሽበት ቀን-----