

ARSI UNIVERSITY

COLLEGE OF HEALTH SCIENCES DEPARTMENT OF MIDWIFERY



**COMPARISON OF SHORT BIRTH INTERVAL PRACTICES AND
ASSOCIATED FACTORS AMONG HEALTH PROFESSIONALS AND
NON-HEALTH PROFESSIONAL CIVIL SERVANTS WOMEN IN
ASELLA TOWN, SOUTHEAST ETHIOPIA**

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**A THESIS REPORT SUBMITTED TO THE DEPARTMENT OF
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JANUARY, 2025

ASELLA, ETHIOPIA

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Acronyms and Abbreviation

AOR _____ Adjusted Odd Ratio

ANC _____ Antenatal Care

CI _____ Confidence Interval

COR _____ Crude Odd Ratio

EDHS _____ Ethiopia Demographic Health Survey

SBI _____ Short Birth Interval

SPSS _____ Statistical Package of Social Science

SSA _____ Sub Sahara Africa

VIF _____ Variance Inflation Factors

WHO _____ World Health Organization

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Abstract

Introduction: Birth interval is the time period between two successive births. There is a limited study on short birth interval among civil servants in Ethiopia.

Objective: To compare magnitude of short birth interval practice and its associated factors among health professional and non-health professional civil servant women in Asella town Southeast Ethiopia from October 12, 2024 to November 12, 2024.

Methods: A comparative cross-sectional study was conducted using a simple random sampling technique to select 418 women civil servants. Data was collected using a pre-tested structured questionnaire, and entered using Epi data 4.6 and analyzed using SPSS 25. A binary logistic regression model was used to identify the association factors. AOR with a 95% CI were estimated strength of associations, and significance was declared at a p -value < 0.05 .

Results: The magnitude of short birth interval of non-health professional was 35.6% (95% CI: 29-42.1%) compared to 31.9% (95% CI: 25.6-38.3%) for health professional and no difference in statistically significant. Having a female preceding child (AOR=2.30, 95% CI: 1.16-4.54), having parity two (AOR=3.01, 95% CI: 1.10-8.21) and not using contraceptives (AOR=2.13, 95% CI: 1.06-4.27) were factors associated with short birth intervals among female health professionals. Being age 25-34 (AR=2.73, 95% CI: 1.29, 5.79), having a female preceding child (AOR=2.07, 95% CI: 1.07-3.98), not using contraceptives (AOR=2.43, 95% CI: 1.10-5.37), and breastfeeding for less than 12 months (AOR=2.75, 95% CI: 1.05-7.21) were associated with short birth intervals among female non-health professionals.

Conclusion and recommendation: The study shows that the magnitude of short birth interval practices was higher among in non-health professional compared to health professional women. Having a female preceding child, having two parities, and not using contraceptives were significantly associated factors among female health professionals, whereas maternal age 25-34 years, having a female preceding child, not using contraceptives, and having a duration of breastfeeding less than 12 months were significantly associated factors of short birth intervals among female non-health professionals. Therefore, awareness about modern contraceptive utilization and the importance of breastfeeding as a birth spacing mechanism are recommended.

Keywords: Short birth interval, Civil servants, Health professional, Ethiopia

1.Introduction

1.1 . Background

Birth interval refers to the time period between two successive births, it the duration between the end of one pregnancy and the beginning of the next pregnancy. A short birth interval (SBI), in particular, is defined as a period of fewer than 24 months between birth and the next pregnancy, or a period of less than 33 months between two consecutive births (1).

The World Health Organization advises a gestational gap of at least 33 months between two subsequent live births (2). The World Health Organization (WHO) recommend that individuals and couples should wait for at least 2–3 years between births in order to reduce the risk of adverse maternal and child health outcomes(3).

Optimal birth intervals benefit for mothers and children by allowing the mother to recover from the previous pregnancy and childbirth, reducing the risk of maternal mortality and morbidity, enabling the child to reach an optimal age for birth and reducing the risk of low birth weight and other adverse pregnancy outcomes, and providing women with a reasonable amount of time to plan and prepare for the next pregnancy, thereby reducing the risk of unintended pregnancies and improving family planning outcomes (4).

Globally, 57% of births take place less than 36 months apart (5). In Asia-Pacific region the pooled prevalence of short birth interval was 33.8% (6), The prevalence of short birth intervals in sub- Saharan Africa was 46.85% where as in Ethiopia the prevalence of short birth interval was 49.53% (7).

According to secondary data extracted from Min-Ethiopian Demographic Health Survey (M-EDHS) 2019 reports the median birth interval in Ethiopia was 35.8 months(8). Ethiopia, one of the most populous nations in Africa, has a total fertility rate of 4.6 children per woman (9). The control of fertility within a nation's population is significantly influenced by the spacing of births. Even though family planning is now more widely used, short birth intervals are still a worry for Ethiopians because of things like religion, inadequate breastfeeding, unintended pregnancies, and contraceptive non-use (10).

1.2 . Statement of the problem

Maternal and perinatal mortality rates are extremely high in low- and middle-income countries due to short birth intervals (SBI) (11). The short intervals between pregnancies in certain countries with low or moderate incomes can result in poor maternal and newborn health outcomes due to high fertility rates in those countries. (12).

SBI have been linked to a number of unfavorable health outcomes, such as small for gestational age, low birth weight, and premature birth. Children born in SBI are also reported to have greater rates of newborn and infant death. Mothers who become pregnant soon after giving birth are also reported to be more susceptible to maternal morbidities like pre-eclampsia, hypertension, and preterm membrane rupture (13–15). A short birth interval can also have negative effects on the family's finances, mental health, and psychological well-being of the mothers (16–18).

An estimated 15 million preterm births and over 20 million low birth weight births occur each year worldwide; of these, 48% (9.84 million) are born in Southeast Asia and 24% (4.92 million) in sub-Saharan Africa (SSA) (19). In Ethiopia, each year 23,100 children die as a direct result of preterm problems, while 377,000 newborns are delivered prematurely (20).

A number of factors, such as inadequate use of contraception, religious barriers, unintended pregnancy, inadequate breastfeeding, giving birth to a female child, home delivery, prolonged breastfeeding, child mortality, young mother age, maternal illiteracy, and a lack of exposure to various media for health-related information, have been associated to an increased risk of experiencing a short birth interval (21–24).

The Ministry of Health in Ethiopia has implemented a number of initiatives to improve the interval between births. The main objectives of these strategies are to increase awareness of the benefits of spacing births, increase access to family planning services, especially long-acting reversible contraceptive methods, integrate family planning services into maternal and child health programs, and provide postpartum family planning services to women immediately after childbirth (25). A mother needs knowledge regarding these in order to practice them and that depends on the mother's education, her access to information regarding the impact of short birth interval, and its consequence effect on her life, fetal

wellbeing and Socio economic crises. Non-health professional mothers are generally not well educated about the issue and difficulty in accessing appropriate information regarding birth interval as compared to their health professional counterparts. Moreover, previous studies conducted in Ethiopia focused on short birth intervals among the general population without considering the differences; Hence, this study will be taken up to compare the magnitude of short birth interval and the factors associated with among health professional and non-health professional civil servant women in Asella town. However, there is a limited study assessed the magnitude of short birth intervals specifically by comparing female health professionals with non-health professional civil servants. Therefore, the aim of this study was to compare the magnitude and associated factors of short birth intervals among health professionals and non-health professional female civil servants in Asella town, Southeast Ethiopia

1.3. Significance of the study

The study's findings on short birth interval among female civil servants are particularly relevant to the existing gap in research on this topic. Currently, there is a limited evidence on the magnitude of short birth interval among female civil servants, making this study's results a valuable contribution to the field.

The result will provide important information for health care providers and health facility managers to design appropriate interventions suitable for their clients that will play credible role for mothers to optimize their birth interval.

The results of this investigation help the Asella Town Health Office, program managers and health care planners in understanding the birth interval condition in the study and creating appropriate interventions that will benefit their clients and enable mothers to maximize their birth interval.

The study's findings have significant implications for policy, particularly in the context of reproductive health and family planning. The results suggest that female civil servants are at risk of experiencing short birth intervals, which can have negative consequences for their health and well-being.

The study's findings also highlight the need for further research on this topic. Future studies could explore the specific factors that contribute to short birth intervals among female civil servants, as well as the impact of these intervals on their health and well-being. Additionally, studies could investigate the effectiveness of different interventions aimed at reducing short birth intervals among this population.

2. Literature Review

2.1. Magnitude of short birth interval

A study conducted in Bangladesh showed that the prevalence of short birth interval was 26%(26). A study conducted in Pakistan showed that the prevalence of short birth interval was 22.9% (22).

A Nigerian Demographic and Health Survey 2018 showed that the proportions of short birth interval in rural and urban Nigeria were 20.7% and 20.3% respectively (27). A study conducted in North Central Burkina Faso indicated that short birth interval was 27.1%(28). A study conducted in East Africa indicated that the prevalence of short birth interval was 16.99%(29). A study conducted in Uganda showed that prevalence of short birth intervals was 52.4%(30). A study conducted in Southwestern Uganda showed that the magnitude of short birth interval was 33% (31).

A secondary data extracted from the Ethiopian Demographic and Health Survey (mini EDHS 2019) showed that the prevalence of short birth interval was 62.89%(32). A study conducted among mothers in Dabat district, Northwest Ethiopia indicated that the magnitude of short birth interval was 30.59%(33). A conducted in Tselemti district Northern Ethiopia among women of child bearing age reported that overall prevalence of short birth interval among women of child bearing age was 23.3%(24). A study conducted in Arba Minch Southern Ethiopia among women of reproductive age indicated that the prevalence of short birth intervals was 43% (21).

A community based cross sectional study conducted among women of child bearing age in Serbo town, Southwest Ethiopia showed that the prevalence of short birth interval was 59.9%(34). A study conducted in Mieso Agro-pastoralist district, Eastern Ethiopia revealed that the prevalence of short birth interval was 56%(35). A study conducted among child-bearing age women in the Gedeb Hasasa district, West Arsi zone showed that the prevalence of the short birth interval was 50.4% (36).

2.2. Factors associated with short birth interval

2.2.1. Socio-demographic factors

A study conducted among reproductive age mothers in Uganda, East Africa, Ethiopia, Serbo town, Southwest Ethiopia and Mieso Agro-pastoralist district, Eastern Ethiopia showed that maternal age was significantly associated with short birth intervals(29,32,34,35).

A study conducted among reproductive age mothers in Ethiopia, in Dabat district Northwest Ethiopia, Arba Minch District Southern Ethiopia, Serbo town Jimma Zone Southwest Ethiopia and Mieso Agro-pastoralist district Eastern Ethiopia indicated that maternal educational status was statistically significant with short birth interval (21,32–35,37).

A study conducted among reproductive age mothers in Ethiopia, Arba Minch District Southern Ethiopia, Serbo town, Jimma Zone Southwest Ethiopia, Mieso Agro-pastoralist district Eastern Ethiopia and Gedeb Hasasa district of the West Arsi zone showed that preceding child being female was independent predictors of short birth interval(32,34–37).

A study conducted among mothers in Dabat district Northwest Ethiopia, Mieso Agro-pastoralist district, Eastern Ethiopia and Gedeb Hasasa district of the West Arsi zone indicated that husband occupation was statistically significant factors (34–36).

A study conducted among child-bearing age women in the Gedeb Hasasa district of the West Arsi zone showed that being a rural resident was the determinants of short birth interval (36).

2.2.2. Obstetrics related factors

A secondary data extracted from the 2018 Nigeria Demographic and Health Survey showed that the number of children ever born was significantly associated with short birth interval in rural and urban Nigeria (27). A secondary data extracted from Ethiopian Demographic and Health Survey (mini EDHS 2019) among reproductive age women in Ethiopia the ideal number of children was found to be significantly associated with short birth intervals(32).

A study conducted among women with antecedent cesarean deliveries at a tertiary hospital, Southwestern Uganda showed that delivery of a still birth at an antecedent delivery and unplanned pregnancy were the factors significantly associated with short interbirth interval(31). A study conducted among multiparous women in Mieso Agro-pastoralist

district, Eastern Ethiopia revealed that death of the index, was significantly associated with short birth interval (35). A study conducted among child-bearing age women in the Gedeb Hasasa district of the West Arsi zone showed that previous child alive was the determinant of short birth interval (36).

A study conducted among mothers in Dabat district, Amhara Regional state, Northwest Ethiopia indicated that women with history of abortion was statistically significant with short birth interval (33). A study conducted among women with antecedent cesarean deliveries at a tertiary hospital, Southwestern Uganda showed that unplanned pregnancy was the factors significantly associated with short interbirth interval(31). A study conducted in Tselemti district Northern Ethiopia among women of child bearing age reported that not having desire to had the last child was factor associated with short birth interval(24).

A study conducted among reproductive-age women in East Africa indicated that women with multiparous had higher odds of having short birth interval (29). A study conducted in Arba Minch Southern Ethiopia among women of reproductive age indicated that parity three and above was significantly associated with short birth intervals(21).

2.2.3. Health service utilization related factors

A secondary data extracted from the 2018 Nigeria Demographic and Health Survey showed that number of ANC visits was significantly associated with short birth interval in rural and urban Nigeria (27).

A study conducted among women attending young child clinic in Yumbe Hospital, Uganda showed that not using contraceptives was factor associated with short birth intervals(30). A study conducted among women with antecedent cesarean deliveries at a tertiary hospital, Southwestern Uganda showed that non-use of family planning was the factor significantly associated with short interbirth interval(31).A study conducted among reproductive-age women in East Africa indicated that women with unmet family planning needs had higher odds of having short birth interval (29).

A study conducted in Tselemti district Northern Ethiopia among women of child bearing age reported that non-use of contraceptive was factor associated with short birth interval(24). A

study conducted among Reproductive Age Mothers in Arba Minch District, Ethiopia showed that not use modern contraceptive was independent predictor of short birth interval(37). A study conducted among multiparous women in Mieso Agro-pastoralist district, Eastern Ethiopia revealed that no use of modern contraceptive was significantly associated with short birth interval (35). A study conducted among women of child bearing age in Serbo town, Southwest Ethiopia showed that not using of modern contraceptives was factor associated with the with short birth interval (34). The study conducted among married women of childbearing age living in Dodota Woreda, Arsi Zone showed that not using family planning was independent predictor of short birth interval (38).

2.2.4. Breastfeeding related factors

A study conducted in Tselemti district Northern Ethiopia among women of child bearing age reported that sub-optimum breastfeeding was factor associated with short birth interval(24). A study conducted among Reproductive Age Mothers in Arba Minch District, Ethiopia showed that duration of breast feeding for less than 24 months was independent predictor of short birth interval(37).

A study conducted in Mieso Agro-pastoralist district, Eastern Ethiopia revealed that breastfeeding of the index child <24 months was significantly associated with short birth interval (35). A study conducted among women of child bearing age in Serbo town, Southwest Ethiopia showed that short duration of breastfeeding less than 24 months was factor associated with the with short birth interval (34). The study conducted among married women of childbearing age living in Dodota Woreda, Arsi Zone showed that breast- feeding of index child for less than 24 months was independent predictor of short birth interval (38).

2.3. Conceptual framework

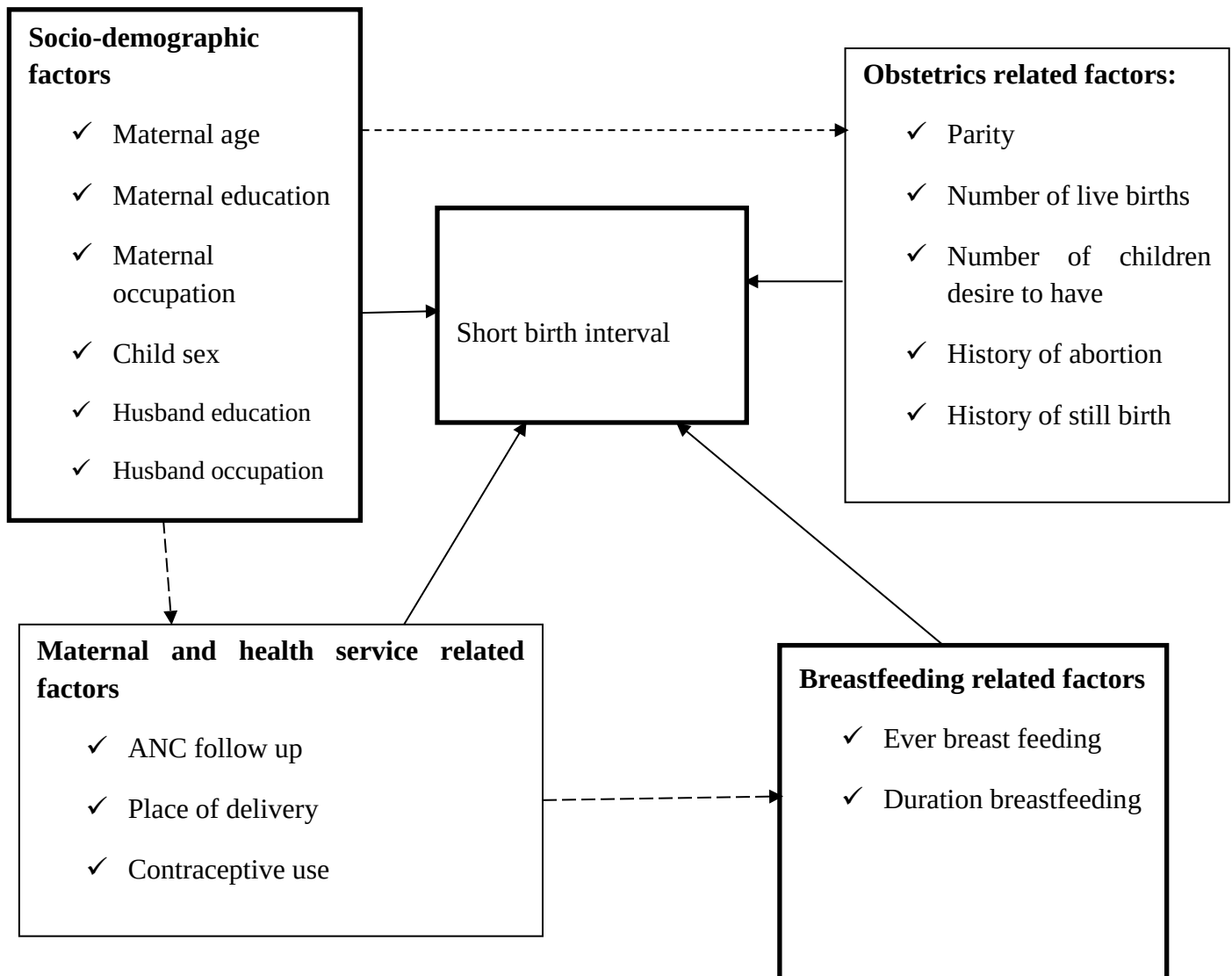


Figure 1: Conceptual frame work of factors associated with short birth interval adapted from different literatures (21,23,38–40).

3. Objectives

3.1. General objective

To compare magnitude of short birth interval practices and its associated factors among health professional and non-health professional civil servant women in Asella town Oromia Region, Ethiopia, 2024.

3.2. Specific objectives

To compare the magnitude of short birth interval practices among health professional and non-health professional civil servant women in Asella town Oromia Region, Ethiopia, 2024.

To identify factors associated with short birth interval practices among health professional and non-health professional civil servant women in Asella town Oromia Region, Ethiopia, 2024.

4. Methods and Materials

4.1. Study setting and period

The study was conducted in Asella town, Southeast Ethiopia, among women health professionals and non-health professionals' civil servants. Asella town is located 175 km away from Addis Ababa, the capital of Ethiopia with latitude and longitude of 7°57'N 39°7'E and an elevation of 2430 meters. The town have one government referral hospital, two private hospital, two health centers and 24 medium clinics. In Asella town there were 14 merged sectors with a total of 896 female civil servants who have at least two children; among this, 687 were eligible women in 2024 (41). According to the Asella town health office, the total population of the town by the year 2024 was estimated to be 196,410, and out of them, 36590 were women in reproductive age. The town administration has a total of 252 female health professionals and 435 non-health professional women of different disciplines. The health care services were delivered with one government referral hospital and two health centers (42).

4.2. Study design

A comparative cross-sectional study of the short birth interval survey was conducted among health professionals and non-health professional civil servant women in Asella town.

4.3. Source population

All female health professionals and non-health professional civil servants working in sectors under Asella town administration who had at least two consecutive live births and whose last birth is within the last five years prior to the data collection period.

4.4. Study population

All women health professional and non-health professional civil servants working in selected sectors under Asella town administration who had at least two consecutive live births and whose last birth is within the last five years during data collection period.

Inclusion criteria: - All women servant women who had at least two consecutive live births and whose last birth is within the last five years prior to the data collection period. Women who were working at least for six months in the current working area were included in the study.

Exclusion criteria: - Women with history of any type of abortion and still birth in between the two last births were excluded. In addition, women who were on leave of any type during the data collection period were excluded from the study.

4.5. Sample size determination

For the first objective, sample size was determined by using two population proportion formulas by considering the following assumptions:

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

$Z\beta=0.84$ (statistical power of 80%)

$P_1=50\%$, proportion of birth interval among health professional female civil servants

$P_2=59.9\%$, proportion of short birth interval among non-health professional female civil servants from study conducted in Serbo town, 2019 (34).

$$n = \frac{(Z_{\alpha/2} + z\beta)^2 [p_1(1 - p_1) + p_2(1 - p_2)]}{(p_1 - p_2)^2}$$

$$n = \frac{(1.96 + 0.84)^2 [0.5(1 - 0.5) + 0.599(1 - 0.599)]}{(0.50 - 0.599)^2}$$

$$n = 392$$

For the second objective, the sample size was determined using Epi Info version 7.2.5 by consideration of the following assumptions: confidence level = 95%, power = 80%, and ratio 1:1.

Table 1: Sample size calculation for factors associated with short birth interval among child bearing age mothers from Sirbo town study by statcalc epi info

SN	Variables	% outcome in nonexposed group (P1)	% outcome in exposed group (P2)	OR	sample size	Reference
1	Married at age < 18 years	21.42	38.29	2.27	252	(34)
2	not using modern contraceptive	24.60	45.74	2.58	178	
3	Breastfeed their child < 24 months were	7.93	25	3.87	170	

By comparing the first and second objectives the maximum sample size was 392 from the first objective then by considering 10% non- response rate, the final sample size was 432 (216 each).

4.6. Sampling procedure

A simple random sampling method was used to identify study subjects after sectors in the town stratified into health sector and non-health sector. The list of all sectors in Asella town was used as a sampling frame. Then, from the stratum of 13 non-health sectors 7 were selected by lottery method and 1 health sector was selected for the study. In the second stage, list of female's civil servant was taken from each sector human resource departments then the eligible study participants were identified. A sampling frame was prepared by registering all the identified eligible health professional and non-health professional women selected in the sector. Then, the sample size was proportionally allocated to each study sector. Finally, the study participants were selected by simple random sampling based on their numbers in each sector (Figure1)

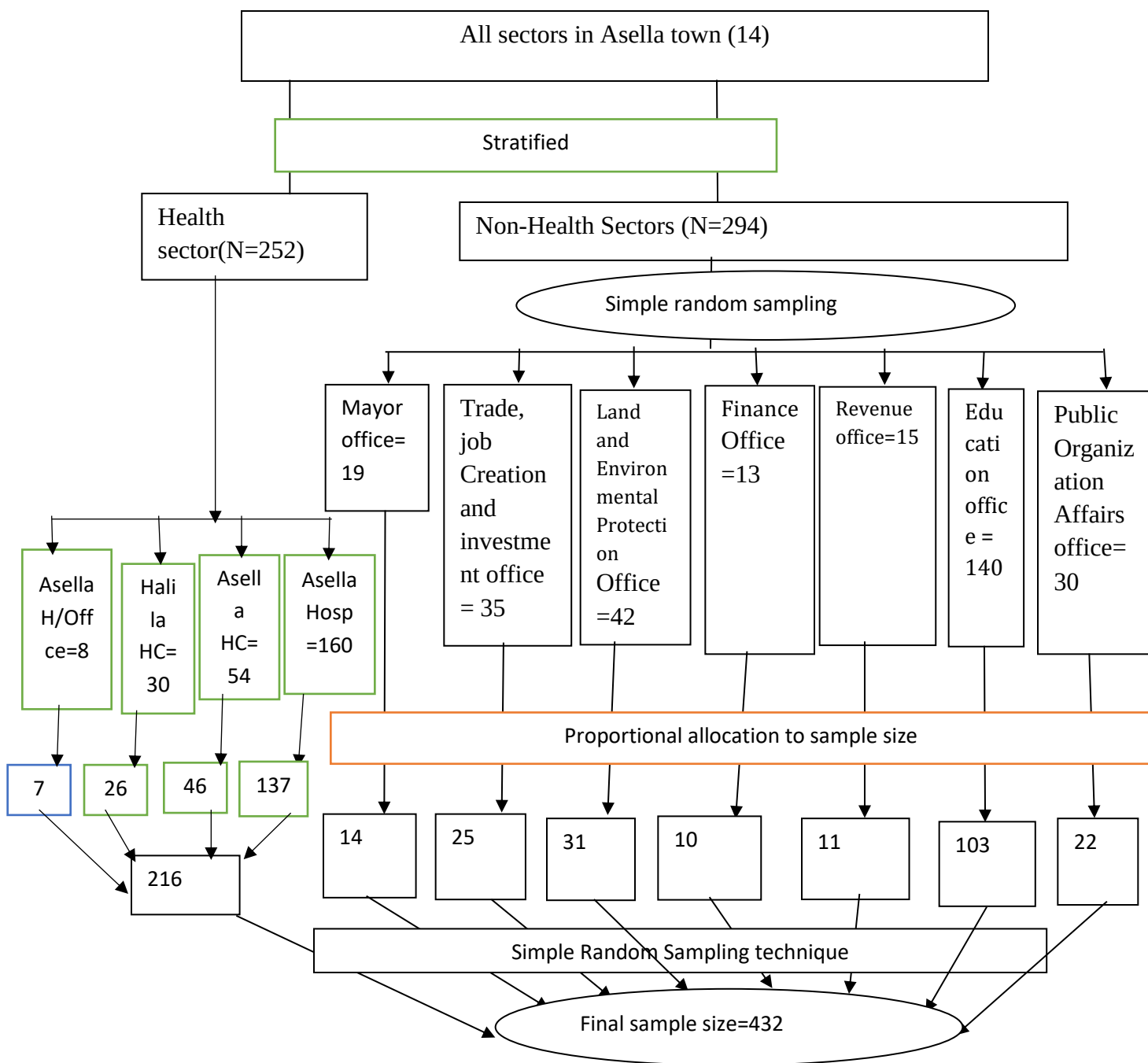


Figure 2: Schematic diagram showing sampling procedure for short birth interval and its associated factors among health professional and non-health professional civil servants' women in Asella town Southeast Ethiopia, 2024

4.7. Variables of the study

Dependent variable

Short birth interval (Yes/No)

Independent variables

Socio- demographic factors: Age, mother`s educational level, husband`s education level, mother`s occupation, husband`s occupation, monthly income, religion, ethnicity and marital status.

Obstetrics related factors: Gravida, parity, history of abortion, history of still birth, planned pregnancy and family size

Maternal and health service related factors: ANC follow up, place of delivery, mode of delivery and contraceptive use and maternal knowledge

Breast feeding related factors: Ever breast feeding, duration of breast feeding and exclusive breast feeding

4.8. Operational definitions

Short birth interval was defined if birth interval between two consecutive live births occurred at <33 months based on WHO recommendation (2). If the birth interval between two consecutive live births occurred less than 33 months, it was considered "yes." coded 1." Otherwise, it was considered "no." coded "0."

4.9. Data collection tools and procedures

Data was collected by using structured questionnaire adapted from a review of related literature (43,44). The questionnaires have information on variables such as socio-demographic characteristics, obstetric-related factors, birth spacing practice, breastfeeding, and health service-related factors. Data was collected by three female diploma midwives based on their experience with data collection. Two master-holder supervisors who have experience in data collection and supervision were selected. Data was collected by interviewing respondents face-to-face.

4.10. Data quality assurance

The questionnaire was initially prepared in English and then translated into Afaan Oromo and Amharic language. Before conducting the actual study, the tool was pretested on 5% of the sample size in the Hetosa district, which is 25 km away from the study setting, and possible modification and adjustment were done. Training was given for data collectors and supervisors by the principal investigator for one day regarding the objective of the study, the data collection tool, and ways of data collection. Supervision was done by the principal investigator and supervisor. The completeness and consistency of the collected data were checked on a daily basis by supervisors.

4.11. Data processing and analysis

Data was entered into Epi-data version 4.6 and exported to SPSS version 26 for cleaning and analysis. Descriptive statistical analysis was used to compute the frequency and percentage for independent and dependent variables. A chi-square test was computed for categorical data to compare short birth intervals between health-professional and non-health-professional mothers. A binary logistic regression model was used to identify the association between independent and dependent variables. Bivariate analysis was done to select candidate variables for multivariable analysis. A multicollinearity test was checked for all independent candidate variables for their correlation, and the maximum variance inflation factor was 1.120. Variables with a p-value <0.25 in the bivariate analysis were transferred to the multivariable analysis to control for possible confounders. Adjusted Odds Ratio (AOR) along with 95% Confidence Interval (CI) was estimated to measure the strength of the association. The level of statistical significance was declared at a p-value less than 0.05. The fitness of the model was checked for health professionals and non-health professionals, female, by using the Hosmer-Lemeshow goodness of fit test, which gave p-values of 0.723 and 0.666, respectively.

4.12. Ethical considerations

The actual data collection was started after ethical clearance was obtained from the Ethical Review Committee of Arsi University College of Health Science. A formal letter of cooperation was taken to each organization from the Asella town health office. Participants were informed about purposes, procedures, potential risks, benefits, voluntary participation, the right to refuse participation, or withdraw from the study at any time they want, and then verbal consent will be obtained. Confidentiality was maintained throughout the study by omitting the name of the interviewee on the questionnaire, and information provided by them was kept confidential and used only for research purposes.

4.13. Dissemination of results

The findings of the study will be submitted to Arsi University College of Health Science department of midwifery in partial fulfillment of the requirements for the degree of Master of Maternity and Reproductive Health. The result will be submitted to the Asella town public health facility. Also, it will be planned to be presented for different seminars, conferences, and town meeting levels and published in a peer-reviewed journal.

5. Results

5.1 Socio-demographic characteristics of health professionals and non-health professionals

A total of 418 civil servants' women (210 health professional and 208 non-health professional) were participated in this study, with a response rate of 96.8%. The median age of the health professional and non-health professional was 33 years with IQR 29-38 and 34 years with IQR 30-37, respectively. Regarding study participants ages, 122 (58.1%) of health professionals and 122 (56.3%) of non-health professionals were found within the age range of 25-34. Regarding to the educational status, 122 (58.1%) of health professionals and 110 (52.9%) of non-health professionals had degrees by education. One hundred eighty-six (88.6%) of health professionals and 189 (90.9%) of non-health professionals were Oromo by ethnicity. Concerning family size, 186 (88.6%) of health professionals and 172 (82.7%) of non-health professionals had above four family members (Table 2).

Table 2 Socio-demographic characteristics of female health professional and non-health professional in Asella town, Southeast Ethiopia, 2024.

Variables	Health profession(n=210) Frequency (%)	Non-health profession(n=208) Frequency (%)	Over all Frequency (%)
Age			
25-34	122(58.1)	117(56.2)	239(57.2)
35-44	88(41.9)	91(43.8)	179(42.8)
Family size			
<4	24(11.4)	36(17.3)	60(14.4)
>=4	186(88.6)	172(82.7)	358(85.6)
Education status			
Certificate	9(4.3)	7(3.4)	16(3.8)
Diploma	43(20.5)	62(29.8)	105(25.1)
Degree	122(58.1)	110(52.9)	232(55.5)
Master and above	36(17.1)	29(13.9)	65(15.6)
Religion			
Orthodox	85(40.5)	78(37.5)	163(38.9)
Protestant	55(26.2)	39(18.8)	94(22.5)
Muslim	70(33.3)	91(43.8)	161(38.5)
Ethnicity			
Oromo	165(78.6)	184(88.5)	349(83.4)
Amhara	23(11)	19(9.1)	42(10.1)
Others**	22(10.4)	5(2.4)	27(6.5)
Marital status			
Married	195(92.9)	193(92.8)	388(92.8)
Others*	15(7.1)	15(7.2)	30(7.2)
Husband occupation			
Trader	45(21.4)	39(18.8)	84(20.1)
Non-government organization	22(10.5)	32(15.4)	54(12.9)
Civil servant	143(68.1)	137(65.9)	280(67)
Husband education			
Primary education	15(7.1)	25(12)	40(9.6)
Secondary and above	195(92.9)	183(88)	378(90.4)
Sex of preceding child			
Female	99(47.1)	100(48.1)	199(47.6)
Male	111(52.9)	108(51.9)	219(52.4)
Sex of last child			
Female	112(53.3)	111(53.4)	223(53.3)
Male	98(46.7)	97(46.6)	195(46.7)
Salary in ETB birr			
<6193	23(11)	52(25)	75(18)
6193-7071	84(40)	70(33.7)	154(36.8)
>7071	103(49)	86(41.3)	189(45.2)

*Single, divorced and widowed; ETB: Ethiopia birr; **: Gurage, Silte and Tigre

5.2 Obstetrics related characteristics of health professionals and non-health professionals

One hundred sixteen (55.2%) of health professionals and 92 (44.2%) non-health professionals had two parity. One hundred fourteen (54.3%) of health professionals and 92 (44.2%) of non-health professionals had children. Regarding history of child death, 8 (3.8%) of health professionals and 13 (6.3%) of non-health professionals had a history of child death. About 18 (8.6%) of health professionals and 9 (4.3%) of non-health professionals had a history of stillbirth (see table 3).

Table 3 Obstetrics related factors of women health professional and non-health professional in Asella town, Southeast Ethiopia, 2024.

Variables	Health profession(n=210) Frequency (%)	Non-health profession(n=208) Frequency (%)	Over all Frequency (%)
Parity			
2	116(55.2)	92(44.2)	208(49.8)
3	55(26.2)	45(21.6)	100(23.9)
>=4	39(18.6)	71(34.1)	110(26.3)
Number of children			
2	114(54.3)	92(44.2)	206(49.3)
3-4	85(40.5)	88(42.3)	173(41.4)
>4	11(5.2)	28(13.5)	39(9.3)
History of child death			
Yes	8(3.8)	13(6.3)	21(5)
No	202(96.2)	195(93.8)	397(95)
History of still birth			
Yes	18(8.6)	9(4.3)	27(6.5)
No	192(91.4)	199(95.7)	391(93.5)
History of abortion			
Yes	17(8.1)	19(9.1)	36(8.6)
No	193(91.9)	189(90.9)	382(91.4)
Planned pregnancy			
Yes	150(71.4)	149(71.6)	299(71.5)
No	60(28.6)	59(28.4)	119(28.5)

5.3 Maternal health service and breastfeeding related factors of health professionals and non-health professionals

Concerning ANC follow-up, 210 (100%) of health professionals and 208 (100%) of non-health professionals attended antenatal care for their last pregnancy. About 210 (100%) of health professionals and 202 (97.1%) of non-health professionals gave birth at a health facility. Regarding mode of delivery, 149 (71%) of health professionals and 157 (75.5%) of non-health professionals had spontaneous vaginal deliveries (table 4).

Table 4 Maternal health service and breastfeeding related factors of women health professional and non-health professional in Asella town, Southeast Ethiopia, 2024.

Variables	Health professional Frequency (%)	Non-health professional Frequency (%)	Over all Frequency (%)
History of ANC			
Yes	210(100)	208(100)	418(100%)
No	0(0)	0(0)	0(0)
Place of delivery for preceding child			
Health facility	210(100)	202(97.1)	412(98.6)
Home	0(0)	6(2.9)	6(1.4)
Mode of delivery for preceding child			
Spontaneous vaginal delivery	149(71)	157(75.5)	306(73.2)
Caesarian section	61(29)	51(24.5)	112(26.8)
Received FP after preceding child			
No	72(34.3)	42(20.2)	114(27.3)
Yes	138(65.7)	166(79.8)	304(72.7)
EBF			
No	139(66.2)	131(63)	270(64.6)
Yes	71(33.8)	77(37)	148(35.4)
Duration of breastfeeding			
<12 month	13(6.2)	31(14.9)	44(10.5)
12-23 month	66(31.4)	64(30.8)	130(31.1)
24 and above	131(62.4)	113(54.3)	244(58.4)

ANC: Antenatal care; FP: Family planning; EBF: Exclusive breastfeeding

5.4 Magnitude of short birth interval among women health professional and non-health professional civil servants

The overall the magnitude of short birth interval was 33.7 % (95% CI: 29.2-38.3%). The magnitude of short birth interval of non-health professional was 35.6% (95% CI: 29-42.1%) compared to 31.9% (95% CI: 25.6-38.3%) for health professional and no difference in statistically significant ($\chi^2=14.42(1)$, $p=0.427$). (Figure 3).

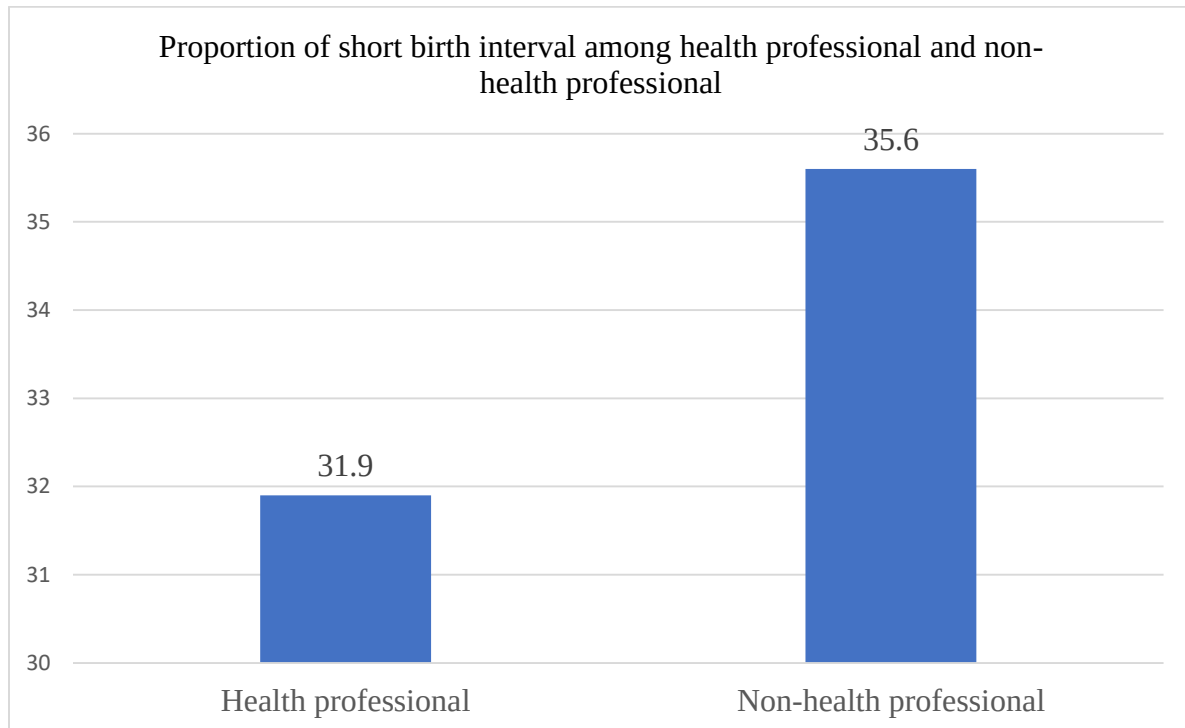


Figure 3 Magnitude of short birth interval among women health professional and non-health professional in Asella town, Southeast Ethiopia, 2024.

5.5 Factors associated with short birth interval among female health professional civil servants

In the bivariable logistic regression analysis, maternal age, husband occupation, sex of the preceding child, parity, history of stillbirth, mode of delivery, contraceptive use between the last two births, and duration of breastfeeding were considered as candidates for multivariate analysis at a p-value of <0.25 . In the multivariable logistic regression analysis, having a female child, parity, and not using contraceptives between the last two births were found to be significantly associated factors of short birth intervals among female health professionals at a p-value of <0.05 . The odds of a short birth interval were 2.30 times higher among

women who have a female preceding child compared to those who have a male preceding child (AOR = 2.30, 95% CI: 1.16-4.54). Women whose parity two were 3.01 times higher odds of short birth interval compared to women parity four and above (AOR=3.01, 95% CI: 1.10-8.21). Women who did not use contraceptives between the last two births had 2.13 higher odds of having a short birth interval when compared to women who used contraceptives (AOR=2.13, 95% CI: 1.06-4.27) (table 5).

Table 5 Bivariable and multivariable analysis for short birth interval among women health professional in Asella town, Southeast Ethiopia, 2024 (n=210).

Variables	Short birth interval		COR (95%CI)	AOR (95%CI)
	Yes	No		
Maternal age				
25-34	47	75	2.13(1.14,3.95)	1.90(0.96,3.78)
35-44	20	68	1	1
Husband occupation				
Merchant	19	26	1.64(0.82,3.27)	2.04(0.90,4.59)
Non-government organization	4	18	0.50(0.16,1.56)	0.77(0.21,2.79)
Civil servant	44	99	1	1
Sex of preceding child				
Female	45	62	2.67(1.45,4.90)	2.30(1.16,4.54) *
Male	22	81	1	1
Parity				
2	43	73	2.69(1.09,6.62)	3.01(1.10,8.21) *
3	17	38	2.04(0.75,5.54)	2.58(0.84,7.93)
>=4	7	32	1	1
History of still birth				
Yes	10	8	2.96(1.11,7.88)	2.25(0.75,6.78)
No	57	135	1	1
Mode of delivery for preceding child				
Spontaneous vaginal delivery	53	96	1.85(0.93,3.67)	2.04(0.94,4.43)
Caesarian section	14	47	1	1
Received family planning after preceding child				
No	32	40	2.35(1.28,4.30)	2.13(1.06,4.27) *
Yes	35	103	1	1
Duration of breastfeeding				
<12	5	6	2.09(0.66,6.65)	1.79(0.51,6.29)
12-23	23	43	1.30(0.69,2.46)	1.31(0.64,2.70)
24 and above	39	94	1	1

*: P-value <0.05,1: reference of the variable, CI: Confidence Interval, COR: Crude Odds Ratio, AOR: Adjusted Odds Ratio

5.6 Factors associated with short birth interval among women non-health professional civil servants

In the bivariable logistic regression analysis, maternal age, husband education, family size, parity, sex of the preceding child, contraceptive use between the last two births, duration of breastfeeding, and exclusive breastfeeding were candidates for multivariable analysis at a p-value of <0.25 . In the multivariable logistic regression analysis, maternal age, sex of the preceding child, contraceptive use between the last two births, and duration of breastfeeding were found to be significantly associated factors of short birth interval among female non-health professionals at p-value <0.05 . The odds of short birth interval were 2.73 times higher among women aged 25-34 compared to mothers in the age groups of 35-44 years (AOR=2.73, 95% CI: 1.29, 5.79). Women who have a female preceding child have 2.07 higher odds of short birth intervals compared to those who have a male preceding child (AOR = 2.07, 95% CI: 1.07-3.98). Women who didn't use contraceptives between two children were 2.43 times more likely to have a short birth interval as compared to those who used contraceptives (AOR = 2.43, 95% CI: 1.10-5.37). Women who breastfed for less than 12 months had 2.75 higher odds of having a short birth interval when compared to women breastfeeding for 24 months and above (AOR = 2.75, 95% CI: 1.05-7.21) (table 6).

Table 6 Bivariable and multivariable analysis for short birth interval among women non-health professional in Asella town, Southeast Ethiopia, 2024 (n=208).

Variables	Short birth interval		COR (95%CI)	AOR (95%CI)
	Yes	No		
Maternal age				
25-34 years	49	68	1.90(1.05,3.42)	2.73(1.29,5.79) *
>=35 years	25	66	1	1
Family size				
<4	17	19	1.80(0.87,3.73)	1.30(0.55,3.05)
>=4	57	115	1	1
Husband occupation				
Merchant	20	19	2.22(1.08,4.58)	1.85(0.81,4.21)
Non-government organization	10	22	0.96(0.41,2.20)	1.15(0.45,2.93)
Civil servant	44	93	1	1
Sex of preceding child				
Female	46	55	2.36(1.31,4.22)	2.07(1.07,3.98) *
Male	28	79	1	1
Parity				
2	42	50	2.29(1.18,4.47)	1.40(0.62,3.14)
3	13	32	1.11(0.48,2.55)	1.06(0.42,2.68)
>=4	19	52	1	1
Contraceptive use				
No	21	20	2.41(1.21,4.80)	2.43(1.10,5.37) *
Yes	53	114	1	1
Duration of breastfeeding				
<12	16	15	2.82(1.24,6.38)	2.75(1.05,7.21) *
12-23	27	37	1.93(1.01,3.68)	1.98(0.96,4.08)
24 and above	31	82	1	1
Exclusive breastfeeding				
No	54	77	1.99(1.07,3.70)	1.87(0.94,3.73)
Yes	20	57	1	1

*=P-value <0.05, 1 = reference of the variable, CI=Confidence Interval, COR=Crude Odds Ratio, AOR=Adjusted Odds Ratio

5.7 Factors associated with short birth interval among women civil servants

In the bivariable logistic regression analysis, maternal age, husband occupation, family size, parity, sex of the preceding child, contraceptive use between the last two births, duration of breastfeeding, and mode of delivery were candidates for multivariable analysis at a p-value of <0.25 . In the multivariable logistic regression analysis, maternal age, sex of the preceding child, mode of delivery, contraceptive use between the last two births, and duration of breastfeeding were found to be significantly associated factors of short birth interval among civil servants' women at p-value <0.05 . The women whose age was 25-34 years were 2.73 times more likely to practice short birth intervals compared to mothers in the age groups of 35-44 years (AOR=2.27, 95% CI: 1.40, 3.67). Women who have a female preceding child have 2.13 times more practice with short birth intervals when compared to those who have a male preceding child (AOR=2.13, 95% CI: 1.35-3.35). Women who didn't use contraceptives between two children were 2.21 times more likely to have a short birth interval as compared to those who used contraceptives (AOR = 2.21, 95% CI: 1.35, 3.63). Women who give birth through vaginal delivery were 2.12 times more likely to have a short birth interval compared to women who give birth by cesarean section (AOR=2.12, 95% CI:1.24, 3.64). Women who breastfed for less than 12 months had 2.72 higher odds of having a short birth interval when compared to women breastfeeding for 24 months and above (AOR = 2.72, 95% CI: 1.32-5.60) (table 7).

Table 7 Bivariable and multivariable analysis for overall short birth interval among women civil servants in Asella town, Southeast Ethiopia, 2024 (n=418).

Variables	Short birth interval		COR (95%CI)	AOR (95%CI)
	Yes	No		
Age				
25-34	96	143	1.99(1.30,3.05)	2.27(1.40,3.67) *
35-44	45	134	1	1
Family size				
<4	25	35	1.49(0.85,2.60)	1.28(0.69,2.39)
>=4	116	242	1	1
Husband occupation				
Trader	39	45	1.89(1.15,3.11)	1.8(1.07,3.21)
Non-government organization	14	40	0.76(0.39,1.47)	0.90 (0.44,1.85)
Civil servant	88	192	1	1
Sex of preceding child				
Female	91	117	2.48(1.63,3.78)	2.13(1.35,3.35) *
Male	50	160	1	1
Parity				
2	85	123	2.23(1.32,3.75)	1.76(0.99,3.15)
3	30	70	1.38(0.75,2.55)	1.32(0.67,2.58)
>=4	26	84	1	1
Mode of delivery				
Spontaneous vaginal delivery	112	194	1.65(1.02,2.67)	2.12(1.24,3.64) *
Caesarion section	29	83	1	1
FP use				
No	54	60	2.24(1.44,3.49)	2.21(1.35,3.63) *
Yes	87	217	1	1
Duration of BF				
<12	22	22	2.53(1.32,4.87)	2.72(1.32,5.60) *
12-23	50	80	1.58(1.01,2.48)	1.75(1.06,2.87)
24 and above	69	175	1	1

*=P-value <0.05, 1 = reference of the variable, CI=Confidence Interval, COR=Crude Odds Ratio, AOR=Adjusted Odds Ratio

6. Discussion

Various studies of short birth intervals have been stressed all over the world by various health organizations and community-based programs and approaches. The present study was carried out to compare health professionals and non-health professionals to know which has better short birth interval practices and also to know other sociodemographic factors influencing the practices as suggested by WHO. The overall the magnitude of short birth interval was 33.7 % (95% CI: 29.2-38.3%). The magnitude of short birth interval among health professionals was 31.9% (95% CI: 25.6-38.3%) where as in non-health professionals 35.6% (95% CI: 29-42.1%).

The proportion of short birth interval among women health professional was consistent with study findings from Bangladesh 26% (45), Burkina Faso 27.1% (28), Southwest Uganda 33% (31) and Northwest Ethiopia 30.59% (33) and the magnitude of short birth interval among women non-health professional also in line with study conducted in Southwest Uganda 33% (31) and Northwest Ethiopia 30.59% (33).

However, the magnitude of short birth interval among women health professional and non-health professional was higher than study conducted in Pakistan 22.9% (22), Nigeria 20.7%(27), East Africa 16.9% (29) and Northern Ethiopia 23.3% (24). This difference might be due to the study may have used a different methodology or sample population, which can also contribute to the difference in findings.

The magnitude of short birth interval among women health professional and non-health professional was lower than study conducted in SSA 46.85% (46), Uganda 52.4% (30), Ethiopia 62.89% (32), Arba Minch Southern Ethiopia 43% (21), Mieso district Eastern Ethiopia 56% (35) and Gedeb Hasasa, Southeast Ethiopia 50.4% (47). This difference might be due to difference in study population, sample size, occupational status and study period.

Health professional and non- health professional women who have female preceding child were higher odds of short birth interval when compared to those who have male preceding child. This finding was supported by study conducted in Arba Minich Southern Ethiopia (37), Serbo town Jimma Southwest Ethiopia (34), Gedeb Asasa, Southeast Ethiopia (47) and

Dodota, Southeast Ethiopia (38). This could be due to the parent and community's preference to have male children rather than to have female children.

Health professional women whose parity two were higher odds of short birth interval compared to women parity four and above. This finding was consistent with the findings from East Africa (29) and Arba Minich Southern Ethiopia (21). The possible justification may be due to mothers with few parities may feel a sense of emotional fulfillment and satisfaction after having a child, leading to a desire to have another child soon after. Furthermore, women with parity two may also be more likely to have a higher level of fertility awareness and may be more likely to experience a sense of urgency to have another child, which can also contribute to shorter birth intervals

Health professional and non- health professional women who did not use contraceptives between the last two births had higher odds of short birth intervals when compared to women who used contraception. This finding similar with study conducted in Southwest Uganda (31), East Africa (29), Uganda (30), Northern Ethiopia, Arba Minich Southern Ethiopia (37), Mieso, Eastern Ethiopia (35), Serbo town Southwest Ethiopia (34) and Dodota district Southeast Ethiopia (38). This possible reason may be due to women without the use of contraceptives may not have had a clear understanding of their fertility and menstrual cycles, leading to a higher likelihood of unintended pregnancies and a shorter birth interval.

The odds of short birth intervals were higher among non-health professional women aged 25-34 compared to women in the age groups of 35-44 years. This finding is in line with the findings of Uganda (30), East Africa (29) and Ethiopia(32). The reason might be that younger age women may be more likely to have a shorter birth interval due to social and cultural expectations and norms around family size and spacing.

Non-health professional women who breastfed for less than 12 months had higher odds of short birth intervals when compared to mothers' who breastfed for 24 months and above. This finding is supported with study done in Arba Minich Southern Ethiopia (37), Mieso, Eastern Ethiopia (35), Serbo town Jimma Southwest Ethiopia (34), and Dodota district Southeast Ethiopia (38). This could be due to the effect of breastfeeding which results in

lactational amenorrhea, extends postpartum infertility by suppressing ovulation and reducing the chance of conception through hormonal effect.

7. Strength and Limitation of study

The strength of this study is using comparative study which used to compare outcomes across different populations. This study also had some limitations, due to its cross-sectional nature, whereby it may not explain the temporal relationship between dependent and independent variables. The recall bias may underestimate or overestimate the study findings (e.g., asking women to remember the duration of breastfeeding).

8. Conclusion and Recommendation

Conclusion

The study shows that the magnitude of short birth interval practices was higher among in non-health professional than health professional women. In this study, having female preceding child, having parity two and not contraceptive use between the last two births were found to be significantly associated factors of short birth interval among women health professionals, whereas maternal age 25-34 years, sex of preceding child, not contraceptive use between the last two births and duration of breastfeeding were found to be significantly associated factors of short birth interval among women non-health professionals.

Recommendation

For health professionals

- ❖ Provide tailored counseling to women, especially civil servants, on the risks associated with short birth intervals and the importance of optimal birth spacing for maternal and child health. Emphasize the benefits of contraceptive use and provide accurate information about family planning methods to address misconceptions and improve uptake.
- ❖ Healthcare providers should strength counseling government employees on promoting optimal breastfeeding duration to reduce birth spacing.
- ❖ Health professionals should provide information for women with parity two and age less than 35 years on the importance of spacing between births and the benefits of delaying childbearing.
- ❖ Health care providers creating awareness for women by health education to avoid sex preference which lead to short inter birth interval expose them to adverse birth outcomes.

For Asella town Health office

- ❖ Health office should strength family planning service for civil servants in order to increase the birth intervals.
- ❖ Health office should strength counseling government employees on promoting optimal breastfeeding duration to reduce birth spacing.

For researcher

- Further research that uses strong designs is needed to identify the effect of occupational status on the short birth interval.

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10. Annexes

Annex 1: English version Information Sheet and Consent Form

My name is _____ I am working as a data collector for the study being conducted in this Sector by Sr Adanech Gizaw who is studying for his master degree at Arsi University, the College of Health Science, Department of Midwifery. I kindly request you to lend me your attention to explain you about the study to be conducted in this Sector.

The study title: To assess magnitude of short birth interval and its associated factors among health professional and non-health professional civil servants' women in Asella town Southeast Ethiopia, 2024

Purpose of the study: The principal aim of this study is to write a thesis as a partial fulfillment for a Master's program in Maternity and Reproductive Health for the principal investigator. Moreover, the findings of this study were used as an input for the district health managers and other stakeholders to identify determinants of birth interval that hinder the optimal birth intervals in the civil servants.

Procedure and duration: I will interview you using questionnaire which provide me with required information. The interview will take about 20-25 minutes for each subject, so I kindly request you to permit me to collect this data.

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

Confidentiality: Any information you give will be kept confidential and won't be accessible to any third party. Your name won't be mentioned anywhere. The information you give is only used for research purpose.

Right: Participation for the study is fully voluntary. You have the right to participate or not to participate in the study. You have the right to withdraw from the study at any time.

Contact address: If there are any questions or enquires any time about the study or the procedures, please contact Principal investigator: Adanech Gizawu on mobile phone: 0913469297

Do you agree to participate in this study?

Yes, continue No, thank you!

Annex II: English version questionnaires

Questionnaire for assessment short birth interval and its associated factors among health professional and non-health professional civil servants' women in Asella town Southeast Ethiopia, 2024.

Instruction: Please indicate the response by circling the number of respondent choice or by writing the response in the space provided accordingly.

Code No: _____ Name of sector _____

Name of the data collector _____ Date _____

SECTION 1: Socio Demographic Characteristics

S/N	Question	Response	Skip
101	How old are you?	_____	
102	Family size	_____	
103	What is your level of education?	1. Certificate and below 2. Diploma 3. Degree 4. Master and above	
104	What is your religion?	1. Orthodox 2. Protestant 3. Muslim 4. Catholic 5. Wakefata 6. Others (specify) _____	
105	Which ethnic group do you belong to?	1. Oromo 2. Amhara 3. Gurage 4. Tigre	

		5.Silte 6. Others (specify)----	
106	What is your current occupational status?	1.Health professionals' employee 2.Non-health professional employee	
107	What is your current marital status?	1.Single 2.Married 3.Divorced 4.Widowed	
108	What is your husband current occupation?	1.. Non-government organization 2. Civil servant 3. Daily labourer 4. Trader 5. Farmer 7. Other (Specify) -----	
109	What is your Husband education level?	1.No formal education 2. Primary education 3. Secondary education and above	
110	What is the sex of your preceding child?	1.Male 2.Female	
111	What is the sex of your last of child?	1.Male 2.Female	
112	How much is your current salary (per month)?	_____	

SECTION-2: Obstetrics Related Factors

SN	QUESTION	RESPONSE	Skip
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SN	QUESTION	RESPONSE	Skip
201	How many pregnancies have you ever had, including abortion and stillbirth?	_____	
202	How many live births have you ever gave?	_____	
203	How many children do you have now?	_____	
204	Do you have history of children died?	1.Yes 2.No	
205	Do you have previous history of still birth?	1.Yes 2.No	
206	Do you have previous history of abortion?	1.Yes 2.No	
207	How many total children do you want to have?	_____	
208	Who decide the number of children you want to have?	1. Myself only 2. Husband only 3. Both	
209	Is pregnancy of your last child planned?	1.Yes 2.No	

Part III Health service related factors

SN	QUESTION	RESPONSE	Skip
301	Did you have Antenatal care follow up during preceding child pregnancy?	1.Yes 2.No	
302	Where did you gave birth of your preceding child?	1.Health facility 2.Home	
303	What is mode of delivery for your	1.Cesarion section	

SN	QUESTION	RESPONSE	Skip
	preceding child?	2. Spontaneous vaginal delivery	
304	Have you ever used contraceptive between child?	1.Yes 2.No	

Part IV Breast feeding practice

Code	Question	Response	Skip
401	Did you breast feed your preceding child?	1.Yes 2.No	
402	For how long did you breast feed your preceding child?	____months	
403	For how long you give breastfeeding only for your preceding child?	____months	

Part VI Birth spacing

Code	Question	Response	Skip
501	Age of your preceding child (in complete months)	____months	
502	Age of your last child (in complete months)	____months	
503	Did you discuss with your husband about birth spacing during preceding child?	1.Yes 2.No	

Annex III: - Consent form and Information sheet (Afan Oromo version)

Maqaan koo_____ jedhama qorannoo hojjatoota mootumma kana keessatti gaggeeffamaa jiruuf Sr Adaanech Gizaawuun Yuunivarsiitii Arsii, Kolleejjii Saayinsii Fayyaa, Kutaa Deessistootaatti digirii lammaffaa barachaa jiruuf ragaa walitti qabaa ta'ee hojjechaa jira. Waa'ee qorannoo hojjatoota mootumma keessatti gaggeeffamuu qabu akka isiniif ibsuuf xiyyeeffannoo keessan akka naaf liqeessitan kabajaan isin gaafadha.

Mata dureen qorannichaa: Yeroo da'umsaa gabaabaa fi wantoota kanaan walqabatan dubartoota hojjetoota mootummaa ogeessa fayyaa fi ogeessa fayyaa hin taane magaalaa Asella bara, 2024 adda baasuu dhaf

Kaayyoo qorannichaa: Kaayyoon qorannoo kanaa inni guddaan qorataa muummichaaf sagantaa Mastersii Fayyaa Da'umsaa fi Walhormaataatiif akka raawwii gartokkeetti barruu qorannoo (thesis) barreessuudha. Kana malees, argannoowwan qorannoo kanaa akka galtee hoggantoota fayyaa magaala fi qooda fudhattoota biroof murteessitootni yeroo dhalootaa hojjetoota mootummaa keessatti yeroo da'umsaa sirrii ta'e gufachiisan adda baasuuf itti fayyadamaniiru.

Hojimaataa fi yeroo: Gaaffii odeeffannoo barbaachisu naaf kennu fayyadamuun isin gaafadha. Gaaffii fi deebii tokkoon tokkoon barnootaaf gara daqiiqaa 20-25 waan fudhatuuf, odeeffannoo kana akkan walitti qabu akka naaf hayyamtan kabajaan isin gaafadha.

Balaa fi Faayidaa: Balaan qorannoo kana irratti hirmaachuu baayyee xiqqaadha, garuu yeroo keessan irraa daqiiqaa muraasa qofa fudhachuudha. Qorannoon kun hirmaachuuf kaffaltiin kallattiin hin jiraatu ture. Garuu argannoon qorannoo kanarraa argamu karoorsitoota fayyaa naannoo sanaaf odeeffannoo barbaachisaa ta'e mul'isuu mala.

Iccitii: Odeeffannoon ati kennitu kamiyyuu iccitii ta'ee kan eegamu yoo ta'u, qaama sadaffaa kamiifuu hin argamu. Maqaan kee bakka kamittiyyuu hin ka'u. Odeeffannoon ati kennitu qorannoof qofa kan ooludha.

Mirga: Qo'annichaaf hirmaannaan guutummaatti fedhiidhaan kan raawwatamudha. Qo'annoo irratti hirmaachuu fi hirmaachuu dhiisuu mirga qabda. Yeroo barbaaddetti qo'annoo keessaa ba'uuf mirga qabda.

Teessoo quunnamtii: Waa'ee qorannichaa ykn hojimaata yeroo kamiyyuu gaaffiin ykn gaaffii yoo jiraate qorataa muummee: Adanech Gizawu bilbila harkaa: 0913469297 qunnamaa

Qorannoo kana irratti hirmaachuuf walii galtuu?

A. Eeyyee itti fufi

B. Lakki galatoomi!

Annex IV: Afan Oromo Version Questionnaires

Gaaffii madaallii yeroo da'umsaa gabaabaa fi wantoota isaa wajjin walqabatan dubartoota hojjetoota mootummaa ogeessa fayyaa fi ogeessa fayyaa hin taane gidduutti magaalaa Asella, 2024.

Qajeelfama: Maaloo deebii kenname lakkoofsa filannoo deebii kennitootaa irratti naannessuudhaan ykn deebii kenname bakka kenname irratti haaluma kanaan barreessuudhaan agarsiisi.

Lakk koodii: _____ Maqaa seektara _____

Maqaa nama odeeffannoo walitti qabuu _____ Guyyaa _____

Kutaa 1ffaa: Odeffannoo haalaa hawaasummaa Dimoogiraafii

S/N	Gaaffii	Deebii	Utaalchisa
101	Umuriin kee meeqa?	_____	
102	Baay'ina maatii	_____	
103	Sadarkaan barnootaa keessan maali?	1. sartaificate fi isaa gadii 2. Dippiloomaa 3. Digirii 4. Maastaarii fi isaa ol	
104	Amantiin keessan maali?	1. Ortodoksii 2. Pirootestaantii 3. Muslima 4. Kaatolikii 5. Wakefata 6. kan biro _____	
105	Saba kam?	1. Oromoo 2. Amaara 3. Guragee	

		4. Tigree 5. Silxee 6. kan biro_____	
106	Haalli hojii keessan amma maali?	1. Hojjetaa ogeessota fayyaa 2. Hojjetaa ogeessa fayyaa hin taane	
107	Haalli gaa'ela keessanii amma maali?	1. Kan hin heerumne 2. kaan heruumtee 3. Kan waalihikan 4. Kan abban mana irraa du'ee	
108	Abbaan manaa kee amma hojiin isaa maali?	1. Dhaabbata miti mootummaa 2. Hojjetaa mootummaa 3. Hojjetaa guyyaa guyyaa 4. Daldalaa 5. Qonnaan bulaa 7. Kan biroo (Ibsi) -----	
109	Sadarkaan barnootaa Abbaan manaa kee maali?	1. Barnoota idilee hin qabu 2. Barnoota sadarkaa tokkoffaa 3. Barnoota sadarkaa lammaffaa fi isaa ol	
110	Saala mucaa keessan duraa maali?	1. Dhiira 2. Dubartii	
111	Saala mucaa kee isa dhumaa maali?	1. Dhiira 2. Dubartii	
112	Mindaan kee ammaa (ji'atti) meeqa?	_____	

KUTAA-2: Gaffilee Da'umsaan Walqabatan

SN	Gaaffii	Deebiiwwan	Utalchisa
201	Ulfa meeqa godhattee beektaa?	_____	
202	Daa'ima lubbuun jiru meeqa deessee beektaa?	_____	
203	Amma ijoollee meeqa qabda?	_____	
204	Daa'imman isiin jala du'an jiru?	1.Eeyyee 2.Lakki	
205	Asiin dura daa'ima lubbuu malee dhalatee jira?	1.Eeyyee 2.Lakki	
206	Ulfii isin irraa bahee jira	1.Eeyyee 2.Lakki	
207	Waliigalatti ijoollee meeqa qabaachuu barbaadda?	_____	
208	Lakkoofsa ijoollee qabaachuu barbaaddu eenyutu murteessa?	1. Ofii koo qofa 2. Abbaa manaa qofa 3. Lamaanuu	
209	Ulfii mucaa kee isa dhumaa itti yaaddan tahee?	1.Eeyyee 2.Lakki	

Kutaa 3ffaa: Qabxiilee tajaajila fayyaa wajjin walqabatan

SN	Gaffilee	Deebiiwwan	Utalchisa
301	Yeroo ulfa daa'imaa isaa kana duraa hordoffii kunuunsa dahumsa duraa qabdaa?	1.Eeyyee 2.Lakki	
302	Mucaa kee isa ka amma kana duraa eessatti deesse?	1.Dhaabbata fayyaa 2.Mana	

SN	Gaffilee	Deebiiwwan	Utalchisa
303	Da'ima isaa dura haala kaamin dessee?	1.Baqaqsan yaaludhan 2.Kara gadamessatin	
304	Daa'imni isa amma kana duraa jiru erga dhalattee booda karoora maatii fayyadamtee beektaa?	1.Eeyyee 2.Lakki	

Kutaa 4ffaa: Harma hoosisuu wajjin walqabatee

Code	Gaffilee	Deebiiwwan	Utalchisa
401	Mucaa keessan kan isa amma duraa jiru harma hoosisteerta?	1.Eeyyee 2.Lakki	
402	Mucaa keessan isa duraa yeroo hammamiif harma hoosistee?	Ji'a _____	
403	Yeroo hammamiif daa'ima keessan isaa duraa kana harma qoofa hoosiftan?	Ji'a _____	

Kutaa 5ffaa Gaffilee adda fageesan dahuu wajjin walqabatan

Code	Gaffilee	Deebiiwwan	Utalchisa
501	Umurii daa'ima keessan duraa (ji'oota guutuu)	Ji'a _____	
502	Umurii daa'ima keessan kan amma (ji'oota guutuu)	Ji'a _____	
503	Waa'ee ijollee addaan fageesan dahuu abbaa warraa kee waliin mari'atteetaa da'ima kessaan dura irratti?	1.Eeyyee 2.Lakki	

Hirmanna keessaniif galatooma!

Annex V: Amharic version Information Sheet and Consent Form

ስሜ _____ በዚህ ዘርፍ በሲር አዳነች ግዛውበአርሲ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ የአዋላጅ ትምህርት ክፍል ሁለተኛ ዲግሪያቸውን በመመርሻ ላይ ላለው ጥናት መረጃ ሰብሳቢ ሆኜ እየሰራሁ ነው። በዚህ ዘርፍ ስለሚካሄደው ጥናት ለእርስዎ ለማስረዳት ትኩረት እንድትሰጡ በትህትና እጠይቃለሁ። የጥናት ርዕስ፡ የአጭር ጊዜ የወሊድ ጊዜ ማጠን እና ተያያዥ ምክንያቶች በጤና ባለሙያ እና በጤና ባለሙያ ባልሆኑ የመንግስት ሰራተኞች ሴቶች በደቡብ ምስራቅ ኢትዮጵያ አሰላ ከተማ 2024

የጥናቱ አላማ የዚህ ጥናት ዋና አላማ በወሊድ እና በስነ-ተዋልዶ ጤና ለዋና መርመራ የማስተርስ መርሃ ግብር ከፊል ማለት አድርጎ ማፍኑ ነው። በተጨማሪም የዚህ ጥናት ግኝቶች በሲቪል ሰርቫንቱ ውስጥ ያለውን ጥሩ የወሊድ ጊዜን የማይደቡ የወሊድ ጊዜን የማይዘኑትን ለመለየት ለወረዳው ጤና አስተዳዳሪዎች እና ሌሎች ባለድርሻ አካላት በግብአትነት አገልግላለን። የአሰራር ሂደቱ እና የቆይታ ጊዜ፡ አስፈላጊ መረጃ የማስጠኝን ማጠይቅ በማጠቀም ቃለ ማጠይቅ እሰጥዎታለሁ። ቃለ ማጠይቁ ለእያንዳንዱ ርዕሰ ጉዳይ ከ20-25 ደቂቃ ይወስዳል። ስለዚህ ይህን መረጃ እንድትሰጡ በስብእ እንድትፈቅድልኝ በአክብሮት እጠይቃለሁ። ስጋት እና ጥቅማጥቅሞች፡ በዚህ ጥናት ውስጥ የመሳተፍ ዕድሉ በጣም አናሳ ነው፤ ነገር ግን ጊዜያችሁ ጥቂት ደቂቃዎችን ብቻ ነው የሚወስደው። በዚህ ጥናት ውስጥ ለመሳተፍ ምንም አይነት ቀጥተኛ ክፍያ አይኖርም። ነገር ግን የዚህ ጥናት ግኝቶች ለአካባቢው የጤና እቅድ አወጪዎች ጠቃሚ መረጃን ሊያሳዩ ይችላሉ። ሚኒስቴሩን ት፡ -የሰጠች ማንኛውም መረጃ በሚከተረ ይጠበቃል እና ለማንኛውም ሰነድ ወገን ተደራሽ አይሆንም። ስምህ የትም አይነ ሳም፡ የሰጠች መረጃ ለምርምር ዓላማ ብቻ ነው የሚውለው። ትክክል፡ ለጥናቱ ተሳትፎ ማለት በሙሉ በፈቃደኝነት ነው። በጥናቱ ውስጥ የመሳተፍ ወይም ያለመሳተፍ መብት አልዎት። በማንኛውም ጊዜ ከጥናቱ የሚወጡ መብት አልዎት። የማንኛ አድራሻ፡ - ስለጥናቱ ወይም አሰራሩ ምንም አይነት ጥያቄ ወይም ጊዜ የሚጠይቅ ከሆነ ዋና መርመራ ወይም ዘርፍ አዳነች ግዛውን በሞከረል ስልክ ቁጥር 0913469297 ያግኙ።

በዚህ ጥናት ለመሳተፍ ተስማምተዋል?

አዎ ይቀጥሉ

አይ አመክግናለሁ!

Annex VI: Amharic version questionnaires

አጭር የወሊድ ጊዜን ለመግ ም ም መግቢያ እና ተያያዥ ምክንያቶች በጤና ባለሙያ እና ጤና ነክ ያልሆኑ የመንግስት ሰራተኞች ሴቶች በደቡብ ምስራቅ ኢትዮጵያ አሰላ ከተማ 2024።
መመሪያ፡ እባክዎን ምላሽ ሰጪዎች የሚኖሩ ጦቶችን ቁጥር በመዝገብ ወይም ምላሹን በተጠቀሰው ቦታ ላይ በመጻፍ ያመልክቱ።

ኮድ ቁጥር፡ _____

የዘርፍ ስም _____ የሚገኝ ሰብሳቢው ስም _____
ቀን _____

ክፍል 1፡ ሶሻሎ ስነ-ሕዝብ ባህሪ

ተ/ቁ	ጥያቄ	ምላሽ	ዝላል
101	ስንት አመት ነው፤	_____	
102	የቤተሰብ መጠን	_____	
103	የትምህርት ደረጃዎ ስንት ነው?	1. የምክክር ወረቀት እና ከዚያ በታች 2. ዲፕሎማ 3. ዲግሪ 4. መስተር እና በላይ	
104	ሃይማኖትህ ምንድን ነው?	1. ኦርቶዶክስ 2. ፕሮቴስታንት 3. መስሊም 4. ካቶሊክ 5. ዋቄፋታ 6. ሌሎች (ይግለጹ) _____	
105	የየትኛው ብሄር ሰብአ ባል ነህ?	1. ኦሮሞ 2. አማራ	

		3. ጉራጌ 4. ትግሬ 5. ስልጤ 6. ሌሎች (ይግለጹ)----	
106	አሁን ያለህበት የመጭ ደረጃ ምን ያህል ነው?	1. የጤና ባለመጭዎች ሰራተኛ 2. የጤና ባለመጭ ያልሆነ ሰራተኛ	
107	አሁን ያለህበት የትዳር ሁኔታ ምን ያህል ነው?	1. ነጠላ 2. ያገባ 3. የተፋታ 4. መግለት	
108	ባልሽ አሁን ያለውስራ ምንድን ነው?	1. መንግሥታዊ ያልሆነ ድርጅት 2. የመንግስት ሰራተኛ 3. የቀን ሰራተኛ 4. ነጋዴ 5. ገበሬ 6. ሌላ (ይግለጹ) ----	
109	የእርስዎ ባል የትምህርት ደረጃ ስንት ነው?	1. ምንምመደብኛ ትምህርት 2. የመጀመሪያ ደረጃ ትምህርት 3. የሁለተኛ ደረጃ ትምህርት እና ከዚያ በላይ	
110	የቀድሞልጃችሁ ጾታ ምንድን ነው?	1. ወንድ 2. ሴት	
111	የመጨረሻ ልጅህ ጾታ ምንድን ነው?	1. ወንድ 2. ሴት	
112	የአሁኑ ደሞዝዎ ስንት ነው(በወር)?	_____	

ክፍል-2፡ ከሚፀን ህክምና ጋር የተያያዙ ምክንያቶች

ተ/ቁ	ጥያቄ	ምላሽ	ዝላል
201	ፅንሰ ማስወረድ እና መሞትን ጭሮ ምን ያህል እርግዝና አጋጥሞታል? ፅንሰ ማስወረድ እና መሞትን ጭሮ ምን ያህል እርግዝና አጋጥሞታል?	_____	
202	ምን ያህል በህይወት የተወለዱ ልጆች ወልዳችኋል?	_____	
203	አሁን ስንት ልጆች አሉህ?	_____	
204	የሞቱ ልጆች ታሪክ አለህ?	1. አዎ 2. አይ	
205	ከዚህ በፊት የመወለድ ታሪክ አለህ?	1. አዎ 2. አይ	
206	ከዚህ ቀደም የፅንሰ ማስወረድ ታሪክ አለህ?	1. አዎ 2. አይ	
207	ምን ያህል አጠቃላይ ልጆች መወለድ ይፈልጋሉ?	_____	
208	መወለድ የምትፈልጋቸውን ልጆች ቁጥር ማን ይወስናል?	1. ራሴ ብቻ 2. ባል ብቻ 3. ሁለቱም	
209	የሚፈጸሙ ልጅዎ እርግዝና የታቀደ ነው?	1. አዎ 2. አይ	

ክፍል III የጤና አገልግሎት ተዛማጅ ምክንያቶች

ተ/ቁ	ጥያቄ	ምላሽ	ዝላል
301	በቅድመልጅ እርግዝና ወቅት የቅድመወሊድ ክትትል ነበራችሁ?	1. አዎ 2. አይ	
302	የቅድመልጅህን የትነው የወለድከው?	1. የጤና ተቋም	

ተ/ቁ	ጥያቄ	ምላሽ	ዝላል
		2.ቤት	
303	ለቀድሞውልጅዎ የመውለድ ዘዴ ምን ድን ወ?	1.በአፕራሲዮን መውለድ 2. በማክፀን ወለዱ	
304	በልጅ ማከል የወሊድ ማላከያ ተጠቅሞታል ታወቃለህ?	1. አዎ 2.አይ	

ክፍል IV የጠት ማጥገን ልምድ

ተ/ቁ	ጥያቄ	ምላሽ	ዝላል
401	ያለፈውን ልጅዎን ጠት አጠቡት?	1. አዎ 2.አይ	
402	ያለፈውን ልጅዎን ለምን ያህል ጊዜ ጠት ያጠቡ ነበር?	___ወሮች	
403	ለቀድሞው ልጅዎ ጠት ማጥገን ለምን ያህል ጊዜ ይሰጣሉ?	___ወሮች	

ክፍል VI የወሊድ ክፍተት

ተ/ቁ	ጥያቄ	ምላሽ	ዝላል
501	ያለፈውልጅዎ ዕድሜ(በሙሉ ወራት)	___ወሮች	
502	የመጨረሻ ልጅህ ዕድሜ(በሙሉ ወራት)	___ወሮች	
503	ቀደም ባለውልጅ ወቅት ስለ ወሊድ ክፍተት ከባልዎ ጋር ተወያይተዋል?	1. አዎ 2.አይ	

Declaration of Investigator

I, the undersigned student of Master of Maternity and Reproductive Health, declare that this research thesis is my original work in partial fulfillment of the requirement for the degree of General Master of public health to my best knowledge.

Name of investigator: _____

Signature: _____ Date_____

Declaration of Advisors

We, the undersigned Advisors, declare that this research thesis is our original work in partial fulfillment of the requirement for the Masters of Maternity and Reproductive Health for the stated student above to our best knowledge. We confirmed that this thesis is ready for defense with our approval as the university advisor(s).

Date of Submission: _____

Name of primary Advisors:	Signatures	Date
1. _____	_____	_____

Name of secondary Advisors:	Signatures	Date
2. _____	_____	_____

Examining Board Approval

We, the undersigned Examining board, approved that this research thesis is original work with the basic scientific merits for partial fulfillment of the requirement for the degree of Master of Maternity and Reproductive Health for the stated student above to our best knowledge. We confirmed that this thesis is sufficient for the student's promotion to the higher level.

Name of External Examiner	Signatures	Date
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_____	_____	_____
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Name of Internal Examiner	Signatures	Date
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_____	_____	_____
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Name of Department Head	Signatures	Date
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