



**SAINT PAULOS HOSPITAL MILLENIUM MEDICAL COLLEGE**  
**DEPARTMENT OF OBSTETRICS AND GYNECOLOGY**

**IMMEDIATE POST PARTUM INTRAUTERINE CONTRACEPTIVE DEVICE  
UTILIZATION AND ITS ASSOCIATED FACTORS AMONG MOTHERS  
WHO GAVE BIRTH IN SELECTED PUBLIC HOSPITALS, ADDIS ABABA,  
ETHIOPIA, 2023.**

**BY: BEREKET W/CHERKOS (OBSGYN RIV)**

**A THESIS TO BE SUBMITTED TO SAINT PAULOS MILLENIUM  
MEDICAL COLLEGE DEPARTMENT OF OBSTETRICS AND  
GYNECOLOGY FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE SPECIALITY CERTIFICATE IN OBSTETRICS AND  
GYNECOLOGY.**

**SEPTEMBER, 2023**

**ADDIS ABABA, ETHIOPIA**



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## ABBREVIATIONS AND ACRONYMS

|               |                                           |
|---------------|-------------------------------------------|
| <b>ANC</b>    | Antenatal Care                            |
| <b>AOR</b>    | Adjusted Odd Ratio                        |
| <b>CL</b>     | Cesarean Delivery                         |
| <b>CS</b>     | Confidence Interval                       |
| <b>EDHS</b>   | Ethiopia Demographic and Health Survey    |
| <b>ETB</b>    | Ethiopian Birr                            |
| <b>IPFP</b>   | Immediate Post-partum Family Planning     |
| <b>IPPIUD</b> | Immediate Postpartum Intra uterine Device |
| <b>IUCD</b>   | Intra Uterine Contraceptive Device        |
| <b>SD</b>     | Standard Deviation                        |
| <b>SPSS</b>   | Statistical Package for Social Sciences   |

## Abstract

**Introduction:** Immediate post-partum intrauterine contraceptive device is inserted intra uterine device immediately following the delivery of placenta to 48 hrs. of vaginal or cesarean of delivery. Postpartum unintended pregnancy is an important public health challenge in Ethiopia. There is paucity of studies conducted on utilization of post-partum intra uterine contraceptive devices in low resource setting and it is an emerging services.

**Objective:** Assessment of immediate postpartum intra uterine device utilization and its associated factor among mothers who gave birth in selected public hospital, Addis Ababa, Ethiopia, 2023

**Methods:** Institution based cross sectional study design was conducted to assess the immediate postpartum intra uterine device utilization and its associated factors. Interviewee administered data collection method was deployed. Data were entered in to epi-data version 4.2 and analysis was performed by using SPSS version 24. To assess the relationship between each independent variables and dependent variable bivariate and multivariable logistic regression analysis was used. The adjusted odd ratio used to measure the strength of association at 95% CI, and if  $p < 0.05$ , statistical significance was declared. Texts, tables, graphs and charts used in representation of the research findings.

**Result:** In this study, the response rate was 95.1% (n= 309). The level of immediate post-partum intrauterine contraceptive device (IPPIUCD) was (17.79 %) [95% CI: 13.59, 22.01]. Age group of 27 – 29 years [AOR = 7.9, 95% CI : (1.9, 33.2)], age group of  $\geq 30$  [AOR = 6.6 , 95% CI : (1.3, 33.4)], husband support [AOR = 4.07, 95% CI: (1.60, 10.32)], counseling on PPIUCD [AOR = 3.91, 95% CI: (1.63, 9.36)], and favorable attitude [AOR=8.14, 95% CI: (3.06, 21.49)] were factors significantly associated with utilization of IPPIUCD.

**Conclusion and Recommendation:** IPPIUCD is relatively higher among women's who gave birth in selected hospitals compared to other previous studies. Older age, husband support, counseling on PPIUCD, and positive attitude were significantly associated with IPPIUCD utilization. Therefore, creating a favorable attitude towards IPPIUCD, promoting husband support and consolidating counselling service on IPPIUCD in health care facilities could be useful strategies to increase the level of IPPIUCD utilization among women who gave birth in hospitals.

**Keywords:** Utilization, knowledge, attitude, Family planning, postpartum, IUCD, Ethiopia

# 1. INTRODUCTION

## 1.1 Background

Contraception is an intentional prevention of conception through various device methods for different reasons (1). Globally, it is estimated that 214 million women of reproductive age in low-income countries want to avoid pregnancy but are not using a modern contraceptive (2). For the wellbeing of women and family women has the right to plan a family size and use contraceptive (3). Intrauterine contraceptive devices are convenient, long term; reversible means of contraceptive among those are immediate post-partum intrauterine contraceptive device inserted immediately following the delivery of placenta to 48 hrs. of vaginal or cesarean of delivery (4).

Immediate post-partum intra uterine contraceptive device (IPPIUCD) is one of the contraceptive methods, which is very effective, reliable safe, non-hormonal, reversible, long acting contraceptive and cannot interfere breast feeding. Immediate postpartum family planning (IPFP) could improve maternal and new born health by prevent un intended and closely spaced pregnancy and prevent maternal death by 30% and one of the IPFP is intrauterine device (IUD) (5).

Majority of women have does not have awareness about IPPIUD service and to increase the awareness and opportunity World Health Organization (WHO) recommend about the benefits of family planning information other than social media are during ante natal care at each visit, immediately after birth and during post-partum care(6). World Health Organization recommends spacing pregnancies by at least 24 months (7). However, unmet need for family planning is high in the postpartum period, ranging from 32 to 62% in low and middle- income countries (8, 9). The immediate postpartum period is an ideal time for PPIUCD when women are highly motivated to accept family planning methods (9).

In Ethiopia PPIUCD intervention on selected public health facility is started on 2014 even if it is not widely utilized (7). In low income countries including Ethiopia there is an increase emphasize of ANC follow up and increase institutional delivery have the opportunity to increase the access of awareness about IPFP and could increase the number of immediate postpartum intra uterine device utilization (10).

Despite these advantages, there was limited acceptance of knowledge on the post-partum Intra Uterine contraceptive device (PPIUCD) in Ethiopia. Moreover, utilization of IPPIUCD is not well-practiced in Ethiopia including the study setting, Addis Ababa due to different reasons. Hence, this study aimed to determine level of utilization and associated factors of IPPIUCD at public hospitals of Addis Ababa.

## **1.2 Statements of the problem**

Maternal death is the most and the worst tragedy death in the world and considered as individual tragedy and human right violation (11). Globally maternal related mortality is high and around 42% of death occur during labor and delivery and it is unacceptable and unfair and most of them are occur in developing countries (12). Majority of the countries that have high maternal mortality are low income countries and sub-Saharan Africa including Ethiopia(13). According to EDHS 2016 maternal mortality was estimated 412 death in 100,000 live birth and 22% married women were unmet need for family planning and modern method of family planning use prevalence was 35% and according mini to EDHS 2019, 41% of married women whose age are between 15-45 age use modern contraceptive methods, it has good progress even if that is not enough (14).

Worldwide in 2019 44% of reproductive age women use modern family planning and the numbers of women desiring modern family planning method were increased, they were 1.9 billion reproductive women (15-45) among them 1.1billion women have need family planning and 842 million are using contraceptive methods and the rests are unmet need (15).

The study done in Nepal reported the prevalence of IPPIUD utilization as it was 5.4% (16). Other study done in Rwanda showed that the prevalence of postpartum intrauterine device was 28.1% (6) and another study done in Tanzania a prevalence of 10.4% IPPIUCD utilization (17).

Few studies done Ethiopia reported the level of IPPIUCD utilization and it ranges from less than 1(18) to 26. 6% (1). For example, a study done in west Gojjam revealed that the prevalence of postpartum intra uterine device was 4.07% (19). According mini EDHS 2019 the prevalence rate of intra uterine device users was 2% (20). Another study in Adama, Ethiopia also reported a prevalence of 22.1% IPPIUCD utilization(21). In general immediate postpartum intra uterine device utilization is very low and there is no adequate concern for IPPIUD. The possible reasons for low

level of utilization might be lack of awareness and falsely rumors about postpartum intrauterine device and others.

Evidences identified that different factors were statically significant with the use immediate postpartum intrauterine contraceptive devices among women. Among those factors; level of education, parity (22), Counseling about IPPIUCD, Attitude, plan to have another child, and birth intervals (23), age, knowledge and needing of birth spacing (19) are the common determinants for PPIUCD utilization among mothers.

Lack of provision and low use of postpartum intra uterine could contribute to the occurrence of unintended pregnancy because most mothers do not return health institution for postnatal service after gave birth. Hence, utilization of IPPIUCD is as an ideal option for such mothers and others too. However, utilization of IPPIUCD is too low and predictors are not well documented in Ethiopia particularly in the study setting. Even though there are few studies done on IPPIUCD in Ethiopia, their findings are not consistent both in the level of utilization and the determinants. Assessing the magnitude of IPPIUCD utilization and its determinants in health care facilities providing relatively high delivery service and having PPIUCD access is very imperative. It will provide updated information for action and policy makers and for the researchers to estimate the pooled prevalence of IPPIUCD and to outline significant determinants.

Therefore, this study aimed to determine the utilization of IPPIUD and associated factors among mothers who gave birth at public hospital of Addis Ababa, Ethiopia in 2023.

### **1.3 Significant of the study**

Intrauterine device (IUD) insertion during the postpartum period is an ideal method for some women because it does not interfere with breastfeeding, is convenient for both women and their health care providers, and allows women to obtain safe, long-acting, highly effective contraception while they are already in the medical system. In Ethiopia, the utilization of IUCD was low compared to other family planning methods.

According to the EDHS 2016, < 1% of modern family planning users use an immediate post-partum intrauterine contraceptive device. The PPIUD is almost absent from the contraceptive method mix and the immediate postpartum intrauterine device utilization trends in Ethiopia very low.

Consequently, postpartum unintended pregnancy and unmet need are a public health challenge in Ethiopia.

On the other hand, the Ethiopian Ministry of Health has an intention to increase utilization of IUCD. Scaling up IPPIUD utilization could prevent both the maternal and child death. However, utilization of IPPIUCD is not well-practiced in Ethiopia mainly in the study area due to different reasons.

Assessing the magnitude of IPPIUCD utilization and its determinants in health care facilities providing high delivery service and having PPIUCD access is very imperative. It will have its role in avoiding unnecessary rumors, creating awareness and improving the uses of IPPIUD and gradually prevents induced abortion, maternal and childbirth.

Hence, this study aimed to determine utilization and associated factors of IPPIUCD at selected public hospitals of Addis Ababa. The finding of this study will assist for policy makers to design appropriate evidence-based strategies for better utilization of IPPIUCD and for future researchers to estimate the pooled prevalence of IPPIUCD.

The finding of this study will have its contribution to increase maternal health and child health by decreasing unintended pregnancy.

## **2. Literature review**

### **2.1 Utilization of IPPIUD**

According to Ethiopian demographic health survey (EDHS-16 ) the contraceptive prevalence rate (CPR) for married women whose age between 15-49years in Ethiopia was 36% with 35% and 1% modern and traditional methods respectively of this only 2% women were use intrauterine device (14).

The mini EDHS -19 CPR was 42% which is somewhat increase as compared EDHS- 16 but still the utilization of intrauterine device the same(20). This might be there poor attitude and knowledge about intra uterine device

The utilization of IPPIUD helps to ensure women birth space mothers remain without unintended pregnancy by low cost, low complication that is free from hormonal contraceptive side effect and less time.

According to America journal of obstetrics and gynecology on programme of immediate postpartum intra uterine device and implant outcome prospective analysis revealed that 93% of post-partum women were received their preferred contraceptive device and 27% were IPPIUD users

Study conducted in Tanzania showed that the prevalence of PPLAFP was 10.5% (17).

Study conduct in Rwanda showed that the prevalence of immediate postpartum intra uterine device was 28.1% and mothers who gave birth spontaneous vaginal delivery was three times more likely use IPPIUD (AOR, 3.62395% CL 2.017-6.0507) than cesarean delivery (6).

According to study done in Gojjam the prevalence of IPPIUD was 4.02 %( 95%CL: 1.65, 5.24) (19). Other facility based cross sectional study done Sidama region showed that the prevalence of utilization was 21.6% (24).

Other cross sectional study conducted in Gamo Gofa zone the acceptance of IPPIUD was 35.6% 95%CI: 31-39.6) (4).

## **2.2. Socio demographic factors**

According to cross sectional observation study done in India majority (53.4%) postpartum user were 14-25 years of age (25).

A study conducted on factors influencing utilization of family planning services among female of reproductive age (15-45 years) in Nigeria showed that nearly all participants (99%) had heard about family planning services and knowledgeable about methods of contraception and (48.4%) knew all methods of contraception and first learnt about family planning methods in the hospital (35.8%)(26).

A Study conducted in Rwanda showed that women who had one child had more two times likely to use IPPIUD (AOR=2.265, 95%CI: 1.47-3.16) as compared to primigravida mother (6). A systematic review of 12 articles from Ethiopia showed that age (OR = 4.8, 95% CI, 2.3-10.04), good knowledge (OR = 4.16, 95% CI, 1.65-10.49), counseling (OR = 3.05, 95%CI, 1.41-6.63), husband support (OR = 11.48, 95% CI, 6.05-21.79) and awareness about IUCD (OR = 3.86, 95% CI, 1.46-10.2) were positively associated with utilization of postpartum intrauterine contraception device (27).

A study conducted on factors influencing the utilization of the intra-uterine contraceptive device among women in Addis Ababa showed that intra uterine contraceptive device (IUCD) uptake was slightly higher among women aged 31 years and younger than those aged 31 years and older. Approximately 67% respondents had one to three children, and 24% had no children. The rest of the respondents (9.1%) had four or more children. The result indicates that women with two or more children used IUCD more than women with fewer or no children. This suggests that the number of children was an important determining factor for the use of IUCD by women. In relation to the level of education, 119 (32.5%) respondents completed high school, 116 (31.7%) completed only primary school, 99 (27%) had either a college diploma or degree, and 32 (8.7%) were illiterate. A direct positive relationship was noted between level of education and IUCD uptake. Family planning clients with tertiary level education were observed to use IUCD more than those with lower levels of education (28).

## **2.3. Reproductive and Obstetric related factors**

According research done in India the proportion of acceptance of postpartum intrauterine device was higher in caesarean delivery than vaginal delivery 59.2% vs. 40.8% respectively (29). The other comparative follow up study done India showed that among the total IPPIUD insertion 58.8% were

after cesarean section delivery and spontaneous expulsion were 5.3% (30). On the contrary study in Rwanda revealed that women who had spontaneous vaginal delivery had more likely to take up IPPIUD (AOR, 2.62395% CL 2.017- 6.0507) as compared to caesarean delivery (6).

Other cross sectional study done in southern nation nationality ,in Gamo Gofa zone multiparous women had more likely to IPPIUD(AOR 2.33 95%CI:1.29-4.2) than prime porous (4) which is in line with study done in Nigeria (31).

A study conducted in southern Ethiopia, Hadiya zone, Hossana town to determine postpartum modern contraceptive use and associated factors showed that resumption of sex [AOR = 4.20; 95% CI; 1.533–11.517], menses resumption [AOR = 8.48; 95% CI; 3.072–23.228] and duration postpartum period [AOR = 0.26; 95% CI; 0.107–0.644] had significant association with postpartum modern contraceptive use(32).

### **3.4 Family planning related factors**

A study conducted in Turkey, which revealed that IUCDs are the most commonly used modern contraceptive method in which out of 681 of the participants, 22.5% were using IUCD (33).

A study conducted in Uganda on showed that utilization of IUCD is low compared to other family planning methods (34).

According to research conducted in North Shoa zone revealed that immediate postpartum family planning utilization was 21.3%, of them IPPIUD was accounted 13.1% and mother who planned the current pregnancy was more likely to use IPPFP utilization (AOR 3.175,95CI:1.06-9.48)as compared to those have mothers unplanned pregnancy (35).

According to South Africa obstetrics and gynecology journals, 40% expressed concern about the discomfort during insertion, 33.3% believed that the IUCD could cause cancer, and 32.0% believed that normal sexual behavior was interfered with by the system 77.3% of the participants received the information they had about the IUCD from the clinic during teaching and therapy sessions (36).

According to research conducted in Rwanda mothers who counsel in ante natal care more likely to use IPPIUD (AOR, 2.07 95%CI: 1.01-4.02), that of those are not had any counseling. This study is in line with study done Gamo Gofa zone and west Gojjam (AOR 8.38 95%CL:4.85-14.48)(3) and (AOR 2.76 95%CL: 2.76: 1.79, 7.58) (35) respectively . This study also revealed spousal involvement during counseling has significant factors for utilization of IPPIUD (AOR 2.59,95%CI: 1.48-4.49)(6).

### 3.5. Conceptual frame work

This conceptual framework is developed by the researcher based on the review and synthesis of concepts from different works of literature sources.

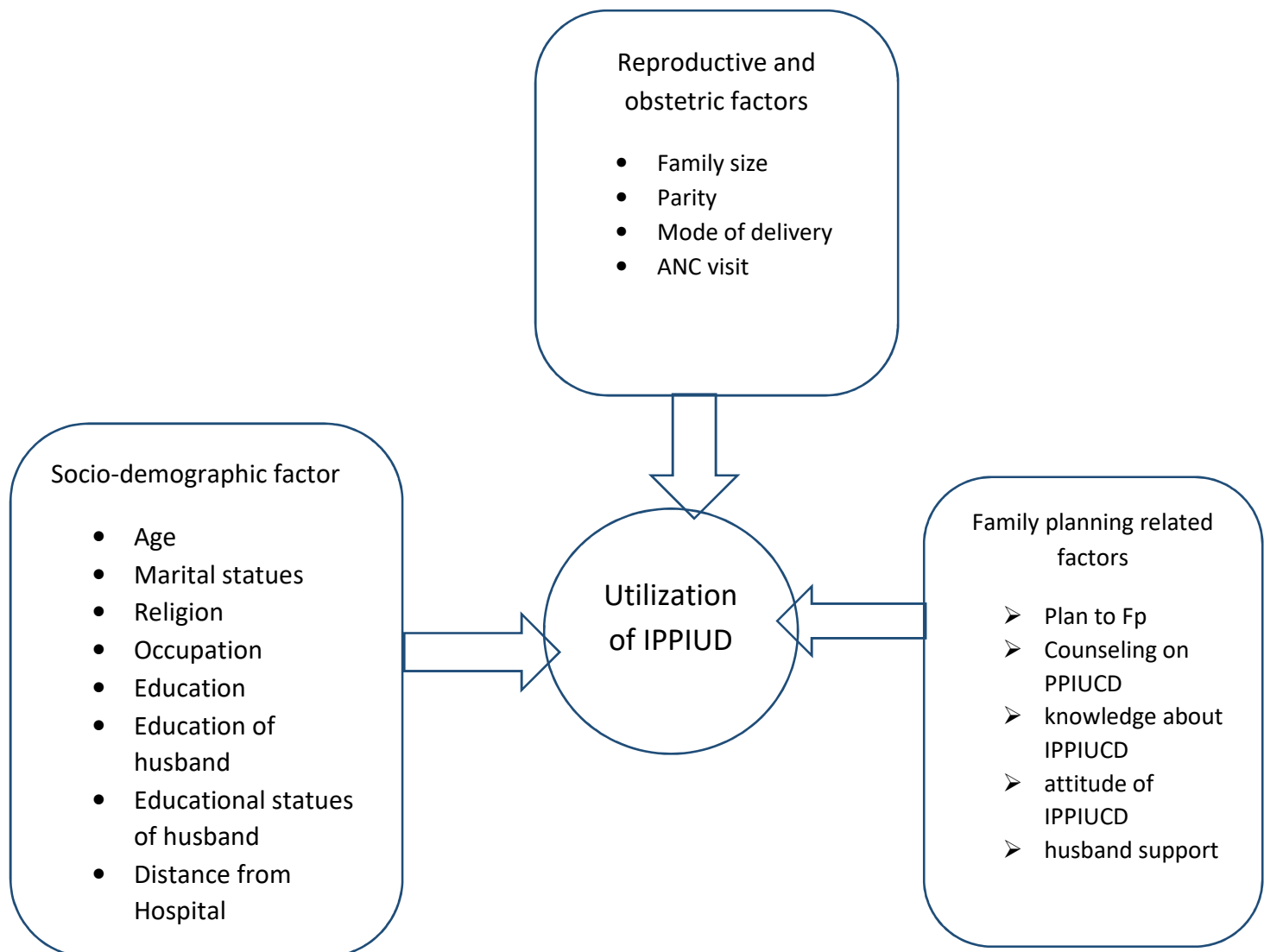


Figure 1: Conceptual frame work (self-developed after review of different literatures ) immediate post-partum intra uterine device utilization and its associated factors among mothers who give birth at selected public hospitals, Addis Ababa, Ethiopia 2023 (26, 34, 37-39)

### **3. Objective**

#### **3.1 General objective**

Assessment of Immediate postpartum intra uterine device utilization and its associated factor among mothers who gave birth in selected public hospitals, Addis Ababa Ethiopia 2023

#### **3.2 Specific objective**

- ✓ To determine the level of utilization of immediate postpartum intra uterine device in selected public hospitals of Addis Ababa
- ✓ To identify factors that affects the utilization of IPPIUD in selected public hospitals of Addis Ababa.

## **4. Methods**

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

This study was conducted in selected public hospitals, Addis Ababa, Ethiopia from January 15 to February 15, 2023

Addis Ababa is the capital city of Ethiopia. The city has 11 sub-cities and located at the geographical center of the country. As per the world population review the metro area population of Addis Ababa in 2021 was 5,006,000, a 4.42% increase from 2020. Out of these female population accounted 52%. Women of reproductive age group among the total population are 947,855 (40).

Addis Ababa City Administration has six public hospitals distributed throughout 11 sub cities which are administered and supervised by Addis Ababa City Administration Health office. The public hospitals in the city are, Zewditu Memorial Hospital (ZMH), Menilik II Memorial Hospital (MMH), Ras-Desta Memorial Hospital (RDMH), Yekatite-12 Hospital (YH), Tirunesh Beijing Hospital (TBH) , and Gandhi Memorial Hospital (GMH)

### **4.2. Study design**

Institution based cross sectional study was used

### **4.3. Source of population**

The source of population is all mothers who delivered in at public hospitals of Addis Ababa.

### **4.4. Study population**

Those mothers who gave birth in selected public hospitals under the Addis Ababa City administration Health office during the study period.

## **4.5. Eligible criteria**

### **4.5.1. Inclusion criteria**

All mothers who delivered in selected public hospitals of Addis Ababa after post placental delivery 10 to 48 hrs. of delivery of the baby

### **4.5.2. Exclusive criteria**

Women who did not full fill the WHO eligibility criteria for IPPIUD like Prelabor rupture of membranes (PROM), Postpartum hemorrhage (PPH), puerperal sepsis and critically ill and invasive procedure

## **4.6. Sample size determination**

In this study, sample size was calculated by using a single population proportion formula. Prevalence of immediate postpartum intra uterine contraceptive device utilization (p) was 21.6 % in study done in Sidama region, Ethiopia (16). Based on the following assumptions:  $\alpha = 0.05$ , 95% confidence interval, Margin of error (d) 5% and 10% nonresponse rate the sample size calculated using the following formula:

$$n = (Z \alpha/2)^2 P (1-P) / d^2 \quad \text{Where;}$$

Z= level of corresponding at 95% confidence level =1.96

P=prevalence of the previous study utilization of IPPIUD= (0.216)

$$q = (1-p) (1-0.216) = 0.784$$

d=margin of error at 5% = 0.05

By adding 10% non-response rate the total sample size is 268

EPI INFO version 7 software was applied to calculate the sample size for the factors associated with immediate postpartum intra uterine device utilization among mothers who gave birth in public hospital of Addis Ababa. Three Independent factors taken from the previous study with assumptions of power 80% and 95% confidence level will be considered to attain the maximum sample size.

Table 1: Sample size determination by using the power approach for Utilization of PPIUCD and associated factors among mothers who gave birth in public hospital of Addis Ababa., Ethiopia, 2023.

| Variables              | Un exposed (%) | Exposed (%) | Ratio(un-exposed to exposed ) | COR   | Sample size | Non-response rate=10% |
|------------------------|----------------|-------------|-------------------------------|-------|-------------|-----------------------|
| Knowledge about PPIUCD | 47.8           | 6.7         | 0.14                          | 0.078 | 44          | 49                    |
| Counseling             | 5.2            | 19.9        | 3.8                           | 4.5   | 184         | 202                   |
| FP use                 | 5              | 15.5        | 3.11                          | 3.49  | 296         | <b>325</b>            |

Finally, the largest sample size was taken to ensure the adequacy of the sample for statistical power. Therefore, the sample size for this study was 325

#### 4.7. Sampling procedure

There were six government hospitals in Addis Ababa city; which are regulated and supervised by the City Administration Health Bureau and believed to provide high delivery service were included in this study. Three of the hospitals were selected by employing simple random sampling technique (lottery method). From the institutions report we found that an average number of monthly delivery report; 676 from Gandi, 489 from Minilik, and 725 from Zewuditu totally 1890. From these three hospitals, women who give birth were selected proportional into the study by considering average number of monthly delivery service. Postpartum women's in each included hospitals were selected using systematic random sampling technique. Order of delivery record book found in each hospital was used to select the study subjects and interval of selection was calculated based estimated average monthly delivery case report ( $1890/325 \approx 6$ )

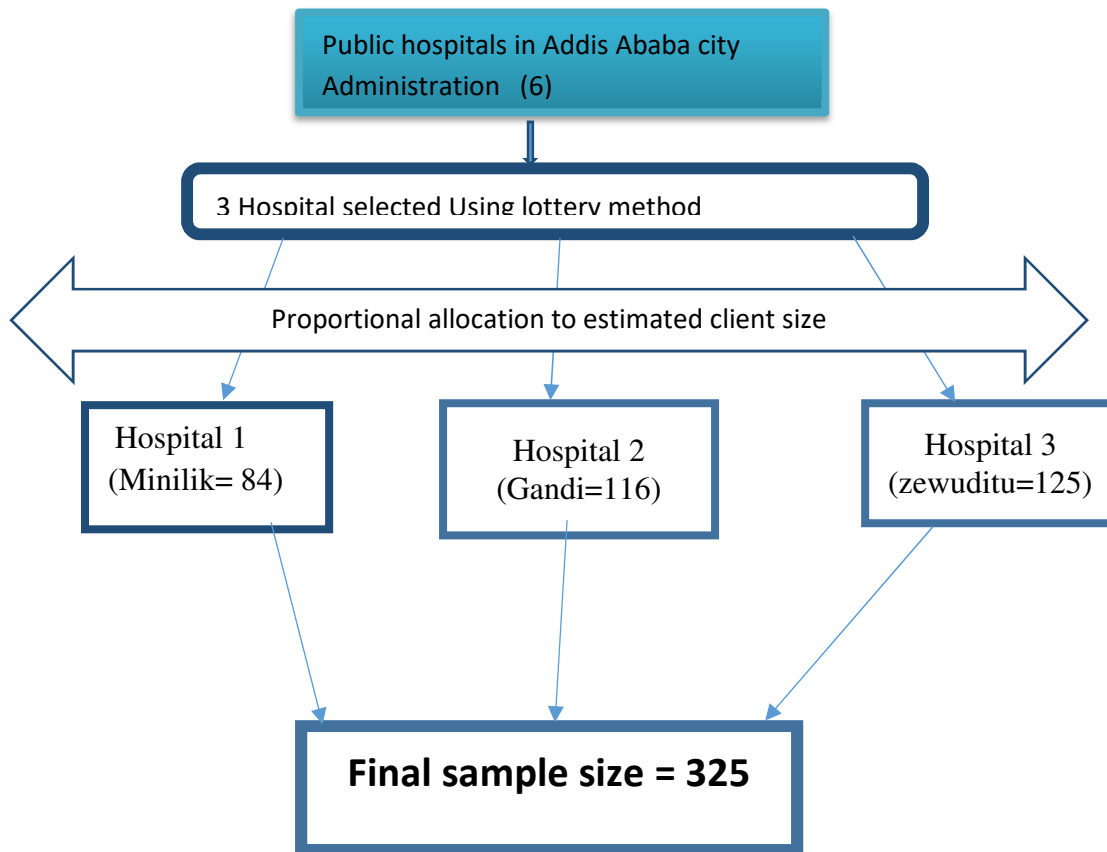


Figure 2: Schematic presentation of sampling procedure for the study of Utilization of PPIUCD and associated factors among mothers who gave birth in public hospital of Addis Ababa, 2023

#### 4.8. Study variables

##### 4.8.1. Dependent variable

- Immediate postpartum intra uterine contraceptive device use (Yes/No)

##### 4.8.2. Independent variables

- Socio demographic related factors : Age, Religion, current marital status, educational status of the mother, educational status of partner, occupation, occupation of the mother, distance from health facility
- Reproductive and Obstetric related factors : ANC visit, mode of delivery, parity, family size
- Family planning related factor: Family planning use, counseling, knowledge about IPPIUCD, attitude of IPPIUCD, husband support/ partner support
- Health-system factors that influenced utilization of IUCD

#### **4.9 Operational definitions**

**Immediate postpartum intra uterine contraceptive device use (IPPIUD):** Immediate postpartum IUCD insertion into the maternal uterus/womb after post-placental delivery, administered within 10 minutes to 48 hours by either Spontaneous or cesarean section (1).

**Utilization of IPPIUD:** If women used IUCD immediately after gave birth within 48hr and is measured by asking a question “Do you used IPPIUCD to delay or to avoid pregnancy immediately after delivery?”. If her response is “Yes”, she was considered as IPPIUCD user unless she is not.

**Good knowledge towards IPPIUD:** women were considered to have good knowledge on PPIUCD if they were answers greater than or equal to the mean score of 9 knowledge related questions.(41)

**Positive attitude towards IPPIUD:** Women who scored above the mean were considered to have a positive attitude towards PPIUCD (42). Five attitude related Likert scale questions were used to assess the level of attitude.

#### **4.10. Data collection tools**

A pretested structured interviewer administered questionnaire was used. The questionnaire was developed by reviewing different literatures (7,18,29,31).

The tool has four sections: The first section consists of socio demographic characteristics; second section was about obstetrics related Practice, third section assesses knowledge, fourth section is about attitude and the final section is about PPIUCD utilization and related characteristics of study participants. The questionnaire was designed in English and translated in to local Amharic language for data collection and then translated back to English by language experts for consistency.

Three BSc midwives and one MSc in RH and maternity nursing were used as a data collector and supervisor respectively and training was given to both data collectors & supervisor for 2 days. All collected data was checked at the end of each day for its completeness by the principal investigator.

#### **4.11. Data quality assurance**

Data quality was assured by designing appropriate assessment tool. To ensure the quality of data, we conducted a pre-test one week before the actual data collection on 5% of the sample size at Adama Hospital, Oromia region. Based on the finding from the pretest, the questionnaire was revised and modified, and the time needed for the data collection was estimated. The one-day training was given to the data collectors and supervisor about the purpose of the study, data collection tools, collection

techniques, ethical issues, and time of data collection for study. The data collectors was supervised daily and the filled questionnaires was checked daily by the supervisor and principal investigator. While there is any problem during the data collection, the feedback was given by discussing it with the principal investigator, supervisor and, data collectors.

#### **4.12. Data processing and analysis**

Data was checked for completeness and entered into Epi-data version 4.6. Then, it was exported to SPSS version 24 for further analysis. Descriptive statistics was carried out and presented with narration, tabulation, and graphical presentation. Normality, outliers, and multicollinearity of the variables was checked before running the bivariable and multivariable binary logistic regression analysis. Binary logistic regression (bivariable and multivariable binary logistic regressions) analysis was performed to identify statistically significant variables.

The variables that have statistically significant associations at  $p\text{-value} < 0.2$  with the dependent variable in the bivariable logistic regression analysis was further considered as a candidate for a multivariable logistic regression for controlling the possible effect of confounding variables. Lastly, statistically significant variables was established at  $p\text{-value} < 0.05$  in a multivariable binary logistic regression model, and an adjusted odd ratio (AOR) with a 95% confidence interval was reported to measure the strength of association. The final model was checked for goodness-of-fit using the Hosmer–Lemeshow test.

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

Ethical clearance was obtained from Saint paul millennium medical college Institutional Review Board (IRB). Subsequently, from each hospital an official letter of permission was obtained.

Thereafter, informed written consent was obtained from each study subject before participation in the interview. During the data collection, confidentiality was kept throughout the study by excluding names and patient record numbers as identification in the data extraction form and the data was used only for the purpose of the proposed study. To keep the confidentiality all collected data was coded and locked in a separate room before entered into the computer. After entering to the computer, the data was locked by password, and the data didn't disclose to any person other than principal investigator

## **5. Result**

### 5.1 Socio-demographic characteristics of study participants

Over all 325 of participants were approached among which 309 were consented to participate which result in response rate of 95.1%. Majority of the study participants were 80 (25.9 %) in the age range of 27 to 29. The mean age of the respondent was  $26.89 \pm 4.64$  SD years. More than half of the study participants were Orthodox 159 (51.5 %) and protestant 85 (27.5 %) by their religion respectively. One hundred twenty five (40.5%), and ninety four (30.4%) of the study participants were secondary school and primary school completed in their educational status. An about half of the respondents were house wife regarding their occupation (Table 2).

Table 2: Socio-demographic characteristics of mothers who gave birth in public hospitals of Addis Ababa, Ethiopia, 2023 (n=309).

| Variable                               | Frequency | Percent (%) |
|----------------------------------------|-----------|-------------|
| Age                                    |           |             |
| <2 4                                   | 105       | 34          |
| 24 - 26                                | 64        | 20.7        |
| 27 - 29                                | 80        | 25.9        |
| $\geq 30$                              | 60        | 19.4        |
| Religion                               |           |             |
| Orthodox                               | 159       | 51.5        |
| Muslim                                 | 85        | 27.5        |
| Protestant                             | 65        | 21          |
| Marital status                         |           |             |
| Married                                | 291       | 94.2        |
| Unmarried<br>(Single/divorced/widowed) | 18        | 5.8         |
| Educational status of mothers          |           |             |

|                                |     |      |
|--------------------------------|-----|------|
| No education                   | 22  | 7.1  |
| Primary                        | 94  | 30.4 |
| Secondary                      | 125 | 40.5 |
| College and above              | 68  | 22   |
| Educational status of husbands |     |      |
| No education                   | 8   | 2.6  |
| Primary                        | 45  | 14.7 |
| Secondary                      | 105 | 34.2 |
| College and above              | 149 | 48.5 |
| Occupation of mothers          |     |      |
| Housewife                      | 166 | 53.7 |
| Government employee            | 58  | 18.8 |
| Private employee               | 51  | 16.5 |
| Daily labor                    | 24  | 7.8  |
| Student                        | 10  | 3.2  |
| Occupation of husbands         |     |      |
| Government employee            | 110 | 35.3 |
| Private employee               | 164 | 53.1 |
| Daily labor                    | 35  | 11.3 |
| Income in ETB                  |     |      |
| ≤ 5000                         | 95  | 30.7 |
| 5001 – 8000                    | 66  | 21.4 |
| 8001 – 12000                   | 95  | 30.7 |
| ≥ 12001                        | 53  | 17.2 |

|                                             |     |      |
|---------------------------------------------|-----|------|
| Distance from Health care facility ( in KM) |     |      |
| $\leq 5$                                    | 169 | 54.7 |
| $\geq 6$                                    | 140 | 45.3 |

## 5.2 Reproductive and obstetric characteristics of respondents

All study participants had a history of ANC visit at least once during their pregnancy. More than half, 175 (56.6%), of the mother gave birth through spontaneous vaginal mode of delivery. The study participants ever used family planning methods was 224 (72.5%) and most 198 (64.3) of the family planning use were jointly made decision.

Most of the study participants, 263 (85.1%) had a planned current pregnancy and majority of the study participants 140 (45.3%) had a history of pregnancy at least once.

Among the study participant women 137 (46.3%), 130 (43.9%) of them had 1 and 2 – 3 number of alive children respectively. More than three-quarters, 247 (79.9%) of the women did not get counselling service about the use of IPPIUCD whereas the rest 62 (20.1%) had get the counselling service. Moreover, 164 (53.1%), of the women get support with their husbands to use IPPIUCD (Table 3).

Table 3: Reproductive and obstetric characteristics of respondents of mothers who gave birth in public hospitals of Addis Ababa, Ethiopia, 2023 (n=309).

| Variable  | Frequency | Percent (%) |
|-----------|-----------|-------------|
| ANC visit |           |             |

|                                                       |     |      |
|-------------------------------------------------------|-----|------|
| 1 – 3                                                 | 24  | 7.8  |
| ≥ 4                                                   | 285 | 92.2 |
| Mode of delivery                                      |     |      |
| Spontaneous vaginal                                   | 175 | 56.6 |
| Cesarean section                                      | 134 | 43.4 |
| Have you ever used family planning methods previously |     |      |
| Yes                                                   | 224 | 72.5 |
| No                                                    | 85  | 27.5 |
| Who decides the family planning                       |     |      |
| Mainly Wife                                           | 101 | 32.5 |
| Mainly Husband                                        | 10  | 3.2  |
| Joint decision                                        | 198 | 64.3 |
| Current pregnancy status                              |     |      |
| Planned                                               | 263 | 85.1 |
| Unplanned                                             | 46  | 14.9 |
| Parity (Number of pregnancies )                       |     |      |
| 1                                                     | 140 | 45.3 |
| 2 – 3                                                 | 133 | 43   |
| ≥ 4                                                   | 36  | 11.7 |
| Number of alive children                              |     |      |
| 1                                                     | 137 | 46.3 |
| 2 – 3                                                 | 130 | 43.9 |
| ≥ 4                                                   | 29  | 9.8  |
| Number of children you plan to have                   |     |      |
| ≤ 3                                                   | 180 | 58.3 |
| ≥ 4                                                   | 129 | 41.7 |
| Counseled about IPPIUCD                               |     |      |

|                                        |     |      |
|----------------------------------------|-----|------|
| Yes                                    | 62  | 20.1 |
| No                                     | 247 | 79.9 |
| husband/partner supportive of IUCD use |     |      |
| No                                     | 145 | 46.9 |
| Yes                                    | 164 | 53.1 |

### **5.3 Knowledge and attitude towards immediate PPIUCD of study participants**

The finding of this study revealed that the good knowledge towards immediate PPIUCD among mothers who gave birth was 172 (55.7 %) 95% CI: [50.2 % – 61.1 %] had good knowledge (Fig. 2).

Out of 309 study participants, 243 (78.6%) have heard about IPPIUCD and 128 (41.4%) were aware that PPIUCD can be inserted immediately after delivery. Nearly two third (60.2 %) of the participants knew that IUCD can prevents unwanted pregnancy for at least 13 years. Furthermore, 114 (36.9 %) of the participants knew that IUCD can be reversed and 276 (89.3) of them did not fear PPIUCD use can cause cervical cancer.

On the other hand, about 143 (46.3 %) with 95% CI [41.1% – 51.7%] of the study participants had positive attitude about immediate IPPIUCD (Fig. 3).

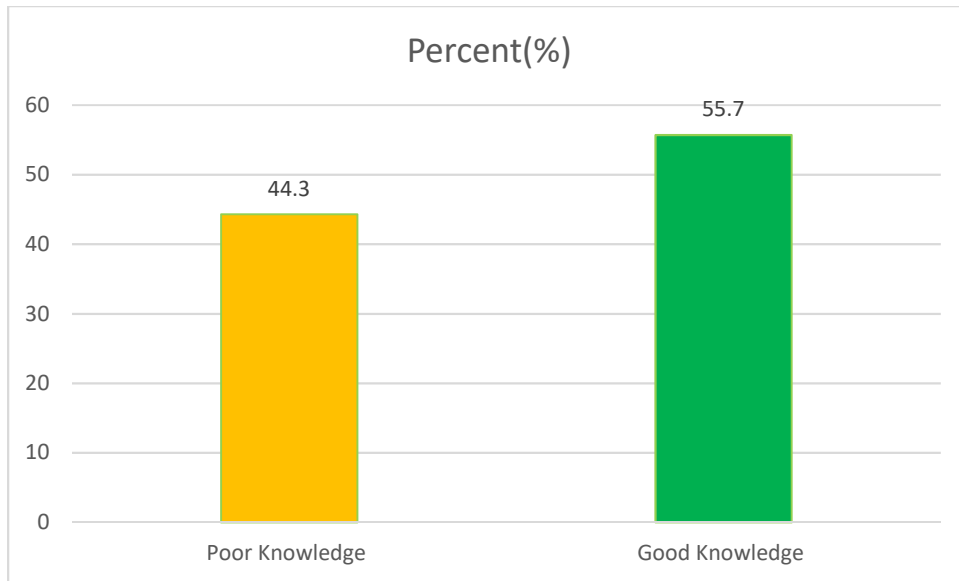


Figure 3: Knowledge towards use of immediate postpartum intrauterine contraceptive device among mothers who gave birth in selected hospitals of Addis Ababa, 2023

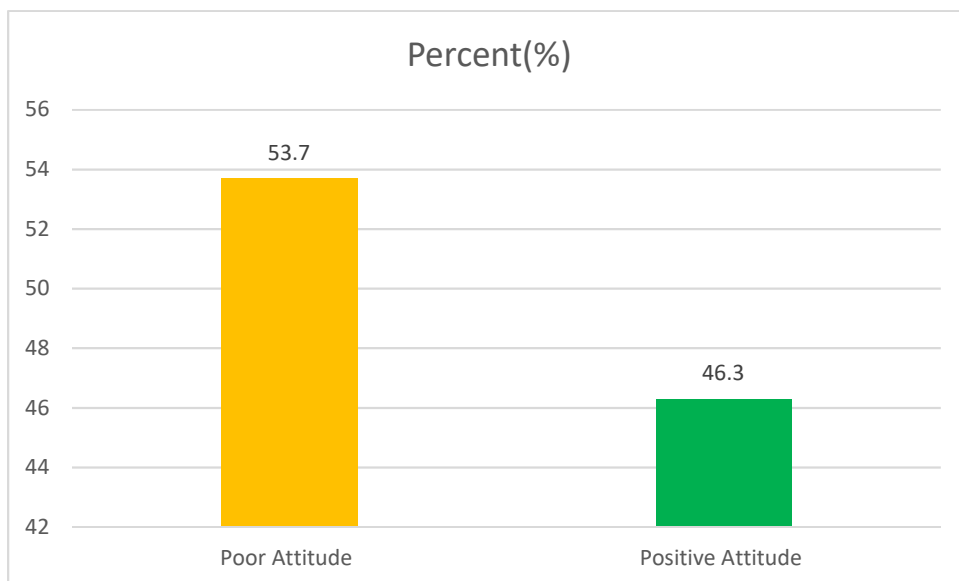


Figure 4: Attitude towards use of immediate postpartum intrauterine contraceptive device among mothers who gave birth in selected hospitals of Addis Ababa, 2023

In the current study, 42 (13.6%), 10 (3.2%) of the mothers who gave birth agree and strongly agree respectively that insertion and removal of IUCD is highly painful. Similarly about 30 (9.7%) and 4

(1.3%) of the study participants believe agree and strongly agree as using IUCD cause irregular bleeding. In addition, 38 (11.7%) of the study participant women believe that using IUCDs may impair future fertility (Table 4).

Table 4 : Attitude of women who gave birth towards Immediate Postpartum Intrauterine Contraceptive Device / IPPIUCD (n=309), Addis Ababa, Ethiopia, 2023

| Attitude-related questions                      | SD (%)   | DA (%)    | N (%)       | A (%)     | SA (%)   |
|-------------------------------------------------|----------|-----------|-------------|-----------|----------|
| Insertion and removal of IUCD is highly Painful | 8 (2.6)  | 87 (28.2) | 162 (52.4%) | 42 (13.6) | 10 (3.2) |
| Using IUCD cause irregular bleeding             | 19 (6.1) | 78 (25.2) | 178 (57.6)  | 30 (9.7)  | 4 (1.3)  |
| The insertion of IUCD cause to lose privacy     | 16 (5.2) | 78 (25.2) | 190 (62.4)  | 18 (5.8)  | 7 (1.4)  |
| Using IUCD restricts normal activities          | 11 (3.6) | 75 (24.3) | 198 (64.2)  | 23 (7.4)  | 2 (0.6)  |
| IUCDs may impair future fertility               | 12 (3.7) | 62 (20.1) | 198 (64.6)  | 32 (10.4) | 5 (1.3)  |

SD: Strongly Disagree, DA: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

#### 5.4 Immediate postpartum IUCD utilization among the participants

Of the total study participants, 55 (17.79 %) (95% CI: 13.59, 22.01) had utilized PPIUCD immediately; within 48hr of giving birth (Fig.4). Whereas the rest 82.21% of the study participants did not utilized PPIUCD.

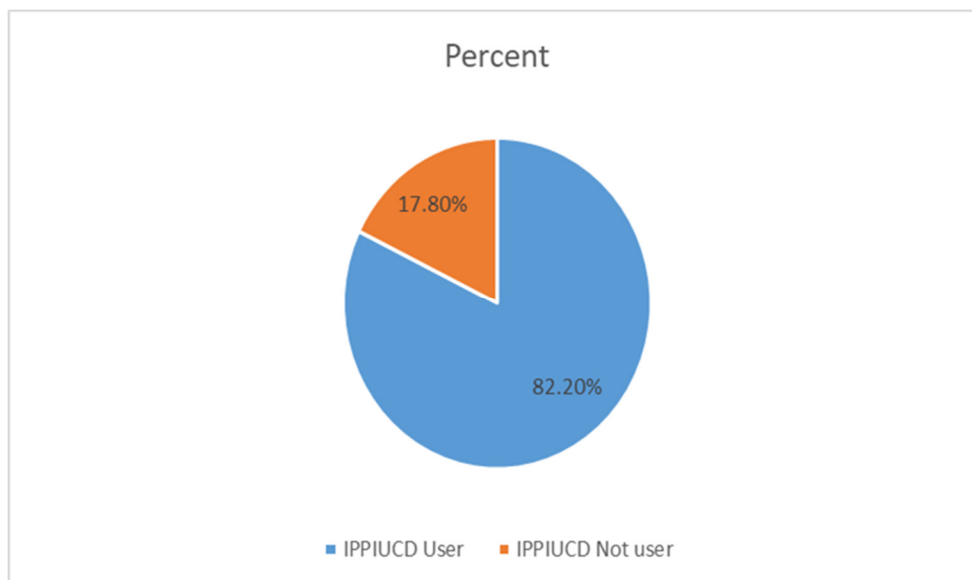


Figure 5: The proportion of utilization of immediate postpartum intrauterine contraceptive device (IPPIUCD) among mothers who gave birth in Hospital of Addis Ababa, Ethiopia 2023.

In this study, lack of awareness 120 (38.8%), preference for another family planning method 80 (25.9%), fear of side effects 40 (12.9 %) were the three most reported reasons for not using immediate PPIUD (Fig.5)

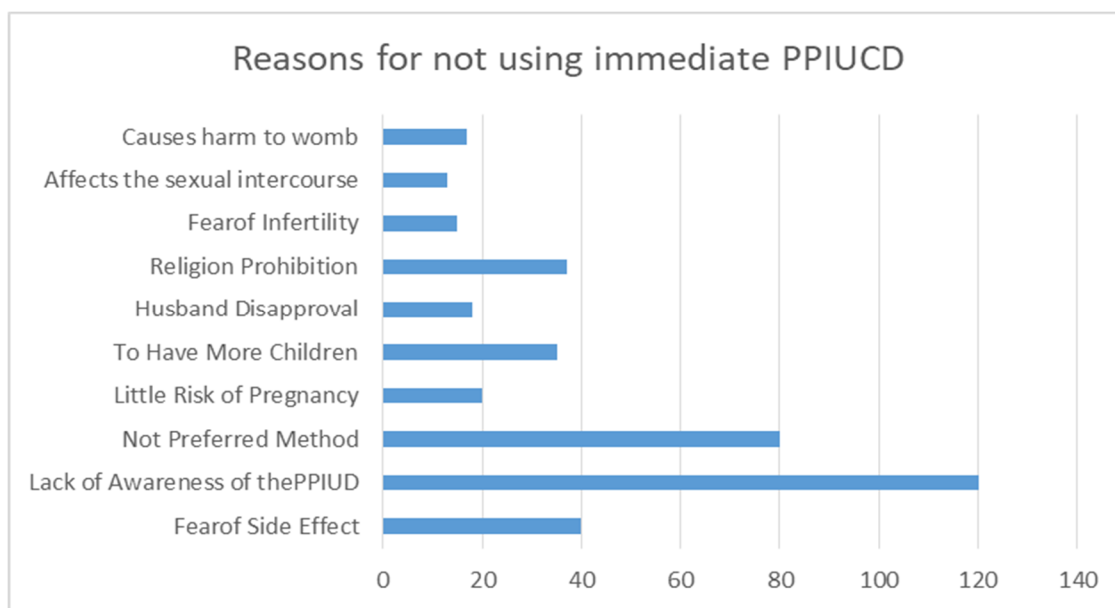


Figure 6: Reason not to use immediate postpartum intrauterine contraceptive device among mothers who gave birth in selected hospitals of Addis Ababa, 2023

## 5.5 Factors associated with IPPIUCD

Factors associated with immediate postpartum intrauterine contraceptive device utilization were determined using multivariate logistic regression analysis. In bi-variable binary logistic regression analysis, eight variables which includes age of the respondents, income, husband /partner support, parity, number of alive children, counseling on PPIUCD, knowledge and attitude were eligible for multi-variable logistic regression ( $p\text{-value} \leq 0.2$ ). However, after controlling all confounder variables in a multivariable logistic regression analysis, age of the respondents, husband/partner support, counseling on PPIUCD, and attitude were significantly associated with immediate postpartum intrauterine contraceptive device utilization.

According to the current study, the odds of using IPPIUCD were found to be eight times higher among women in the age group of 27 – 29 years compared to women who were found in the age group of less than 24 years [AOR = 7.9, 95% CI : (1.9, 33.2)]. Similarly, the probability of utilizing IPPIUCD among women in the age group of  $\geq 30$  was 6.6 times higher than those were less than 24 years [AOR = 6.6 , 95% CI : (1.3, 33.4)].

In addition, Women who had husband support were four times more likely to use IPPIUCD than those who had not support [AOR = 4.07, 95% CI: (1.60, 10.32)].

In the current study, women who were counseled about IPPIUCD were 2.76 times more likely to use IPPIUCD as compared to those who were not counseled [AOR = 3.91, 95% CI: (1.63, 9.36)]

Furthermore, women with positive attitude towards PPIUCD were almost eight times more likely to use IPPIUCD than women with poor attitude [AOR=8.14, 95% CI: (3.06, 21.49)] (Table 5)

Table 5: Bi-variable and multivariable binary logistic regression analysis of associated factors with Immediate postpartum intrauterine contraceptive device utilization in hospitals of Addis Ababa, Ethiopia, 2023 (n= 309).

| Variables                | IPPIUCD use |        | COR (95% CI)       | AOR (95% CI)        | P Value |
|--------------------------|-------------|--------|--------------------|---------------------|---------|
|                          | Yes (%)     | No (%) |                    |                     |         |
| Age of respondents       |             |        |                    |                     |         |
| <24                      | 5           | 100    | 1                  |                     |         |
| 24 – 26                  | 10          | 54     | 3.7 (1.2,11.3)     | 4.0(0.93,17.66)     | 0.06    |
| 27 – 29                  | 21          | 59     | 7.1 (2.5,19.2)     | 7.9(1.9,33.2)       | 0.005*  |
| ≥ 30                     | 19          | 41     | 9.2 (3.2,26.4)     | 6.6 (1.3, 33.4)     | 0.023*  |
| Income                   |             |        |                    |                     |         |
| ≤ 5000                   | 7           | 88     | 1                  | 1                   |         |
| 5001 – 8000              | 11          | 55     | 2.5 (0.9, 6.8)     | 1.55 (0.43,5.61)    | 0.5     |
| 8001 – 12000             | 26          | 69     | 4.7 (1.8, 11.5)    | 2.98 (0.98, 9.07)   | 0.54    |
| ≥ 12001                  | 11          | 42     | 3.2 (1.2, 9.0)     | 0.95 (0.27, 3.37)   | 0.94    |
| Husband/partner support  |             |        |                    |                     |         |
| No                       | 8           | 137    | 1                  | 1                   |         |
| Yes                      | 47          | 117    | 6.87( 3.12, 15.14) | 4.07 (1.60, 10.32)  | 0.003*  |
| Parity                   |             |        |                    |                     |         |
| 1 in number              | 12          | 128    | 1                  | 1                   |         |
| 2 – 3                    | 32          | 101    | 3.38 (1.65, 6.89)  | 0.22 (0.02, 1.81)   | 0.15    |
| ≥ 4                      | 11          | 25     | 4.69 (1.86, 11.81) | 0.250 (0.02, 2.34)  | 0.22    |
| Number of alive children |             |        |                    |                     |         |
| 1                        | 12          | 125    | 1                  | 1                   |         |
| 2 – 3                    | 35          | 95     | 3.83(1.89, 7.78)   | 1.11 (0.40, 3.07)   | 0.83    |
| ≥ 4                      | 8           | 21     | 3.96 (1.45, 10.86) | 2.987 (0.66, 13.46) | 0.15    |
| Counselling              |             |        |                    |                     |         |
| Yes                      | 29          | 33     | 7.47 (3.92, 14.21) | 3.91(1.63, 9.36)    | 0.002*  |
| No                       | 26          | 221    | 1                  | 1                   |         |
| Knowledge                |             |        |                    |                     |         |
| Poor knowledge           |             |        | 1                  | 1                   |         |
| Good knowledge           |             |        | 6.06 (2.75, 13.34) | 2.02 (0.77,5.36)    | 0.14    |
| Attitude                 |             |        |                    |                     |         |
| Poor attitude            | 7           | 159    | 1                  | 1                   |         |
| Good attitude            | 48          | 95     | 8.07 (3.03, 21.48) | 8.14 (3.06, 21.49)  | 0.00**  |
|                          |             |        |                    |                     |         |

Keys: CI: confidence interval; COR: Crudes odds ratio; AOR: adjusted odds ratio; 1: reference category; \*\*statistically significant at  $p < 0.001$  \*statistically significant at  $p < 0.05$

## 6. Discussion

The level of immediate PPIUCD utilization was found to be 17.79 % [95% CI: (13.59, 22.01)]. Age of the mothers, husband/partner support, counseling on PPIUCD, and attitude were significantly associated factors with Immediate PPIUCD utilization.

The level of IPPIUCD utilization in the present study was comparable to the study done among mothers in Adama, Ethiopia (22 .1 %) (21). However, it was higher than the studies conducted in Hawassa ( 10%) (23), West Gojam (4.02%) (19). Similarly this result is higher than the pooled prevalence of IPPIUCD use reported from a systematic review and meta-analysis done in Ethiopia (43), northern Uganda (9.6 % ) (44), and India (12.6%) (45).

This disparity might be due to the higher proportion of mothers receiving antenatal care unlike the other studies (30). For example in this study 100 % of the mothers had history of ANC follow up. Another possible reason for the difference could be the significant number health care workers working in the selected hospitals had taken the training on IPPIUCD and its counselling. Moreover, the dissimilarity might be explained due to the mothers and their partners living in Addis Ababa have a better access of information regarding IPPIUCD as it is the capital city of the country majority of dwellers could get a better reproductive health services (30). This consequently might increase the level of IPPIUCD utilization. Furthermore, the higher use of IPPIUCD in the hospitals could be attributed due to the adequate provision of all the resources required for the training of midwives as well as sufficient supplies of IUCD materials in those hospitals.

On the other hand, the finding of this study was lower than the one reported in the studies conducted in Addis Ababa (26.6%) (1), Sidama zone ( 21.6) (24), Nigeria (41%) (31), Tanzania (27%) (46) and Rwanda (28.1% ) (6). This difference might be due to the difference in study period, the variation in the quality of healthcare provision, study setting access to information about IPPIUCD compared to

the current study. For example in the case of the study undertaken in Rwanda, the hospital in which the study conducted was one of the piloting health facility for PPIUCD implementation.

In this study, being older age is statistically associated with IPPIUCD utilization. This finding is supported with the study done in West Gojam, Ethiopia (19) , Bahirdar (47), and Uganda (44). This might be due to as mother's age increases couples might have sufficient numbers of children so they want to use family planning methods including PPIUCD to space or limit the number of their offspring. On top of that, as age increases mothers exposure to family planning services increase as a result they might get information and counseling about IPPIUCD (19). This in turn will increase level of IPPIUCD utilization among aged mothers.

The current study also revealed that husband support on PPIUCD is significantly associated factor with mothers' IPPIUCD utilization. This finding is in agreement with a systematic review and meta-analysis study done in Ethiopia (27). The plausible explanation for this might be that shared decision made by partners could have a better outcome in the implementation PPIUCD of than their counterparts.

Study participants who were counseled about IPPIUCD were more likely to use IPPIUCD as compared to those who were not counseled. This finding is in concordance with the studies done in Adama (21), Addis Ababa (1) ,Sidama zone (24), Gamo, Ethiopia (48), and Rwanda (6). A systematic review and meta-analysis done in Ethiopia is also in support of the current study (43). The possible explanation for this might be due to that women who are received counseling on family planning during ANC and PNC might be highly motivated to use PPIUCD (30). This implies that counselling service on PPIUCD is determinant factor for utilization of it.

In this study, study participants with positive attitude towards PPIUCD were almost eight times more likely to use IPPIUCD than those with poor attitude. In the same manner, a study conducted in

Hawassa (23) indicated that mothers with favorable attitudes were six times more likely to accept IPPIUCD compared with mothers with an unfavorable attitude. Another study done in Nepal (49) also supports our study. The probable reason for this could be, having a favorable attitude toward IPPIUCD may shape the mother's intention for immediate postpartum IUCD willingness and utilization of it.

On the other hand, this study describes that more than half (53.7%) of the participants had a good knowledge about PPIUCD. Though different studies (1, 50, 51) identified knowledge towards family planning including IPPIUCD as an associated factor, in our study it was not statistically significant factor to utilize IPPIUCD.

## **7. Limitation of the study**

First, the study was conducted using a cross-sectional design which does not allow causal inferences to be made between the investigated variables. Second, there may be socially desirable bias that women may not give an exact response to some socially sensitive issues.

Moreover, this study was carried out in public hospitals women who gave birth at private health facilities and public health centers were not included in the study.

Despite these limitations, we believe that the study provided a reasonably updated and accurate assessment of level of IPPIUCD and associated factors among women's who gave birth in hospitals of Addis Ababa.

## **8. Conclusion and Recommendations**

### **8.1 Conclusion**

IPPIUCD is relatively higher among women's who gave birth in selected hospitals compared to other previous studies. The results of this study provide evidence that age of the respondents, husband/partner support, counseling on PPIUCD, and attitude were significantly associated with immediate postpartum intrauterine contraceptive device utilization.

Therefore, creating a favorable attitude towards IPPIUCD, promoting husband support and consolidating counselling service on IPPIUCD in health care facilities could be useful strategies to increase the level of IPPIUCD utilization among women who gave birth in hospitals.

### **8.2 Recommendations**

For Health Facilities

- ✓ Provide in-service training for health care workers on counseling service of IPPIUCD
- ✓ Conducting awareness among the community on the use of PPIUCD and its benefits through mass media, health education at ANC, community outreaches.

Health care workers

- ✓ Educating clients on joint decision of family planning including immediate postpartum intra uterine contraceptive device.
- ✓ High emphasis should be given to IPPIUCD counseling immediately after delivery
- ✓ Behavior and attitude centered education shall be given for mother came for ANC and PNC service

Researchers

- ✓ National wide research with mixed-method study design including all types of health care facilities is needed to provide accurate figure on IPPIUCD utilization level across the nation and other cities in Ethiopia; which will be used as input for policy makers

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## 10. ANNEXES

### Appendix 1. Information sheet and Informed consent form (English)

#### **1. Title of Research**

Immediate post-partum intrauterine contraceptive device utilization and its associated factors among mothers who gave birth in selected public hospitals, Addis Ababa, Ethiopia,

#### **2. Introduction**

My name is \_\_\_\_\_. I am a data collector for immediate post-partum intrauterine contraceptive device utilization and its associated factors among mothers who gave birth in selected public hospitals in Addis Ababa. I am going to give you information about the research and invite you to participate in this research. Please, ask the principal investigator to stop when you encounter words that you do not understand.

#### **3. Purpose of the study**

In this study, I would like to gather information on immediate intrauterine contraceptive device use and the factors that affect use of the contraceptive of laboring mothers in hospitals by using interviewer administered questionnaire.

This information might be helpful in scaling up IPPIUD utilization that could prevent both the maternal and child death. The finding of this study helps to increase maternal health and child health by decreasing unintended pregnancy. The finding may also serve as a baseline data for future researchers who want to conduct a research on related topics.

#### **4. Potential benefits for participants**

There will be a benefit of getting good-evidenced information on utilization of intrauterine contraceptive use after giving birth, which will be known, at the end of the study. There will also be an indirect benefit that your participation is likely to help us find out how to provide better family planning practices for laboring mothers

#### **5. Incentives**

There is no incentive or charge for the participants and relatives as a participant of this research.

#### **6. Confidentiality**

Information about you will not be shared to anyone outside the research team and Hospital

Administrators. The information that we collect from this research will be kept private. Any information about you will have a code number on it instead of your name. Only the researcher (Bereket Woldecherkos) will know what your number is and the number will be kept safely.

The knowledge got from this research will be shared with you and healthcare providers if necessary; and with authorized persons responsible for decision-making. The research findings will be published so that other interested people may learn from the research.

### **7. Right to refuse**

You do not have to take part in this research if you do not wish to do so, and choosing not to participate will not affect your rights and advantages in any way. You may stop participating in the study at any time that you wish without being affected.

### **8. Whom to contact**

If there is any question or confusion before, during and after the research, you can ask me, Bereket woldecherkos) at Phone (251-935757578)

## **B, Laboring mothers Consent form**

Dear participants, I kindly ask you to take part in the study. I the undersigned will like to approve that, as I give my consent to participate in this study after the detailed objectives of the study have been explained to me in the language I understand. I have also understood that I can withdraw my consent any time without loss of any personal benefits. Would you willing to participate, please? Please mark thick (√) in front of your answer.

☐ Yes

☐ No

Do not write or sign your name on the questionnaire. Answer each question by selecting the response that best applies to you.

Questionnaire identification number\_\_\_\_\_

Name of the hospital\_\_\_\_\_

Signature of the study participant: \_\_\_\_\_Date \_\_\_\_\_

Name of data collector \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of supervisor \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**For any question regarding the study you can contact:**

Principal investigator: Bereket W/cherkos, Phone number: **+251-935757578**

E-mail: "bekiexam@gmail.com"

## Appendix 2. Questionnaire (English Version)

Questionnaire for assessing utilization of immediate postpartum intrauterine contraceptive device and associated factors among mothers who gave birth at selected hospitals in Addis Ababa, Ethiopia, Multi-level facility based study, 2023

### Part I: Socio demographic characteristics of the participants

| Date _____ hospital _____ Code _____ |                                      |                                                                                  |        |
|--------------------------------------|--------------------------------------|----------------------------------------------------------------------------------|--------|
| s.no                                 | Question                             | Choices                                                                          | Remark |
|                                      | Address                              | 1. Addis Ababa<br>2. Outside Addis Ababa                                         |        |
| 101                                  | How old are you?                     | Years _____                                                                      |        |
| 102                                  | What is your religion?               | 1. Orthodox<br>2. Muslim<br>3. Protestant<br>4. Catholic<br>5. Other specify     |        |
| 103                                  | What is your current marital status? | 1. Single<br>2. Married<br>3. Divorced<br>4. Widowed<br>5. Cohabited             |        |
| 104                                  | What is your educational status?     | 1. No education<br>2. Primary(1-8)<br>3. Secondary(9-12)<br>4. College and above |        |
| 105                                  | The educational level of the husband | 1. No education<br>2. Primary(1-8)<br>3. Secondary(9-12)<br>4. College and above |        |

|     |                                    |                                                                                                                     |  |
|-----|------------------------------------|---------------------------------------------------------------------------------------------------------------------|--|
| 106 | What is your occupation?           | 1. Housewife<br>2. Government employee<br>3. Private employee<br>4. Daily laborer<br>5. Student<br>6. Other specify |  |
| 107 | Occupational status of the husband | 1. Government employee<br>2. Private employee<br>3. Daily laborer<br>4. Student<br>5. Other specify                 |  |
| 108 | What is your monthly income?       | _____ETB                                                                                                            |  |
| 109 | Distance from health facility      | _____KM                                                                                                             |  |

## Part II: Obstetrics characteristics of the respondents

|     |                                                                               |                                                                                                                                                                                           |                                   |
|-----|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 201 | Do you have ANC visit?                                                        | <ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>                                                                                                                   | If the answer is “no” skip to 203 |
| 202 | If yes how many ANC visits                                                    | <ol style="list-style-type: none"> <li>1. _____</li> </ol>                                                                                                                                |                                   |
| 203 | Mode of delivery                                                              | <ol style="list-style-type: none"> <li>1. Spontaneous vaginal delivery</li> <li>2. Cesarean section</li> <li>3. Other specify</li> </ol>                                                  |                                   |
| 204 | Have you ever used family planning methods Previously?                        | <ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>                                                                                                                   | If “no ”skip to 205               |
| 205 | If, your answer is yes which method you used?(more than two answers possible) | <ol style="list-style-type: none"> <li>1. Natural FP.</li> <li>2. IUCD</li> <li>3. Pills</li> <li>4. Condom</li> <li>5. Next implanon/Implanon/ jadelle</li> <li>6. Injectable</li> </ol> |                                   |
| 206 | Who decides the family planning?                                              | <ol style="list-style-type: none"> <li>1. Wife</li> <li>2. Husband</li> <li>3. Both</li> </ol>                                                                                            |                                   |
| 207 | The number of pregnancies?                                                    | _____                                                                                                                                                                                     |                                   |

|     |                                                       |                            |  |
|-----|-------------------------------------------------------|----------------------------|--|
| 208 | How many of them are Alive now?                       | _____                      |  |
| 209 | What was the status of Pregnancy?                     | 1. Planned<br>2. Unplanned |  |
| 210 | Number of future children desire                      | _____                      |  |
| 211 | Did your husband /partner supports the use of PPIUCD? |                            |  |
| 212 | Have you get counselling service on PPIUCD            |                            |  |

### **Part III: Knowledge and awareness of women towards immediate PPIUCD**

|     |                                                                                                    |                                                                                          |                     |
|-----|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------|
| 301 | Have you ever heard about IUCD as a Contraceptive method?                                          | 1. Yes<br>2. No                                                                          | If “No” skip to 401 |
| 302 | From whom do you get information on PPIUCD for the first time?<br>(more than two answers possible) | 1. Neighbors/friends/relatives<br>2. Health professionals<br>3. Mass media<br>4. Husband |                     |
| 303 | Do you know that IUCD can be inserted immediately after delivery ?                                 | 1. Yes, I know<br>2. No, I don't know                                                    |                     |

|     |                                                                               |                                       |  |
|-----|-------------------------------------------------------------------------------|---------------------------------------|--|
| 304 | Do you know IUCD prevents unwanted pregnancy for at least 3 Years ?           | 1. Yes. I know<br>2. No, I don't know |  |
| 305 | Do you know IUCD is a FP method that can be put into uterine?                 | 1. Yes, I know<br>2. No, I don't know |  |
| 306 | Do you know IUCD has no high risk of getting sexually transmitted infections? | 1. Yes, I know<br>2. No, I don't know |  |

|     |                                                               |                                       |  |
|-----|---------------------------------------------------------------|---------------------------------------|--|
| 307 | Do you know IUCD has no interference with sexual intercourse? | 1. Yes, I know<br>2. No, I don't know |  |
| 308 | Do you know IUCD is immediately reversible?                   | 1. Yes, I know<br>2. No, I don't know |  |
| 309 | Do you fear that IUCD can cause cervical cancer?              | 1. Yes, I fear<br>2. No, I don't know |  |

#### **Part IV: Immediate PPIUCD utilization**

|     |                                                                                                          |                                                                                                                                                                                                                                                                                                     |                                               |
|-----|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| 401 | Do you used IPPIUCD to delay or to avoid pregnancy immediately after delivery                            | 1. Yes, I use<br>2. No, I don't use                                                                                                                                                                                                                                                                 | if your answer is no, answer question no. 402 |
| 402 | If you are not going to use IPPIUD, would you tell me the main reasons? (more than two answers possible) | 1. Fear of Side Effect<br>2. Lack of Awareness of the PPIUD<br>3. Not My Preferred Method<br>4. Little Risk of Pregnancy<br>5. To Have More Children<br>6. Husband Disapproval<br>7. Religion Prohibition<br>8. Fear of Infertility<br>9. affects the sexual intercourse<br>10. causes harm to womb |                                               |

|     |                                                               |                                                                                    |  |
|-----|---------------------------------------------------------------|------------------------------------------------------------------------------------|--|
| 501 | Do you think insertion and removal of IUCD is highly painful? | 1. Strongly disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |  |
| 502 | Do you think using IUCD cause irregular Bleeding?             | 1. Strongly disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |  |
| 503 | Do you think the insertion of IUCD cause to lose privacy?     | 1. Strongly disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |  |
| 504 | Do you think using IUCD restricts normal activities           | 1. Strongly disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |  |
| 505 | Do you think IUCDs may impair future fertility                | 1. Strongly disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |  |

**attitude towards IPPIUCD utilization**

**የአማርኛ መጠይቆች**  
**እንደምንደረሩ/ እንደምንዋሉ**

ስሜ ----- እባላለሁ ----- በጥናቱ ውስጥ የሚሰበሰበው መረጃ በሚስጥር ይጠበቃል። በጥናቱ ስም ወይም የትኛውም አይነት ገላጭ አይጠቀስም። ተሳትፎዉ በፈቃደኝነት ነው እና ፈቃደኛ ከሆኑ በጥናቱ እንዲሳተፉ እጠይቃለሁ። መጠይቁን ለመመላት ከ20-30 ደቂቃዎችን ሊወስድ ይችላል። ለመሳተፍ ፈቃደኛ ከሆኑ የስምምነቱን ቅጽ ይፈርሙ። ላለመሳተፍ ከወሰኑ በእርሶ ላይ የሚደርሱ ምንም አይነት አሉታዊ ተፅዕኖዎች አይኖሩም።

መረጃዉ የተሰበሰበበት ቀን ----- ፊርማ -----

መረጃዉን ያረጋገጠው ሱፐርቫይዘር ስም ----- ፊርማ ----- ቀን -- ----

**አመሰግናለሁ**

**1.ስነ-ሕዝባዊ እና ማህበራዊ ሁኔታን በተመለከተ**

| ተ.ቁ | ጥያቄ             | አማራጭ                                                                   | ምርመራ |
|-----|-----------------|------------------------------------------------------------------------|------|
| 1.  | የሚኖሩበት አድራሻ     | 1. አዲስ አበባ<br>2. ከአዲስ አበባ ውጪ                                           |      |
| 2   | እድሜ             | ..... ዓመት                                                              |      |
| 3.  | ሀይማኖት/ሽ ምንድን ነው | 1. ኦርቶዶክስ<br>2. ሙስሊም<br>3. ፕሮቴስታንት<br>4. ካቶሊክ<br>5. ሌላካለ.....          |      |
| 4.  | የጋብቻ ሁኔታ        | 1. ያገባ<br>2. ያላገባ<br>3. በፍቺ ያለ<br>4. በሞት የተለየ                          |      |
| 5.  | የትምህርት ደረጃ      | 1. ያልተማረ<br>2. የመጀመሪያ ደረጃ(1-8)<br>3. ሁለተኛ ደረጃ(9-12)<br>4. ኮሌጅ እና ከህብላይ |      |

|     |                             |                                                                                               |  |
|-----|-----------------------------|-----------------------------------------------------------------------------------------------|--|
|     |                             |                                                                                               |  |
| 6.  | የትዳር አጋር የት/ት ደረጃ           | 1. ያልተማረ<br>2. የመጀመሪያ ደረጃ (1-8)<br>3. ሁለተኛ ደረጃ (9-12)<br>4. ኮሌጅ እና ከዛ በላይ                     |  |
| 7.  | የስራ አይነት                    | 1. የቤት እመቤት<br>2. የመንግስት ሰራተኛ<br>3. የግል ሰራተኛ (ተቀጣሪ)<br>4. የቀን ሰራተኛ<br>5. ተማሪ<br>6. ሌላ ካለ..... |  |
| 8.  | የትዳር አጋር የስራ አይነት           | 1. የመንግስት ሰራተኛ<br>2. የግል ሰራተኛ (ተቀጣሪ)<br>3. የቀን ሰራተኛ<br>4. ተማሪ<br>5. ሌላ ካለ.....                |  |
| 9.  | የወር ገቢ                      | .....ብር                                                                                       |  |
| 10. | ከመኖሪያ ቤቱ እስከ ጤና ተቋሙ ያለው ርቀት | .....ኪ.ሜ                                                                                      |  |

## 2.ስነ-ተዋልዶን በተመለከተ

| ተ.ቁ | ጥያቄ                       | አማራጭ                                           | ምርመራ                                      |
|-----|---------------------------|------------------------------------------------|-------------------------------------------|
| 11. | የቅድመ ወሊድ ክትትል አለሽ         | 1. አዎ<br>2. የለም                                | የተራ ቁጥር 11 መልስዎ የለም ከሆነ ወደ ተ/ቁ 13 ጥያቄ ይለፉ |
| 12. | መልሶት አዎ ከሆነ ለምን ያክል ጊዜ    | 1. አንድ<br>2. ሁለት<br>3. ሶስት<br>4. አራት እና ከዛ በላይ |                                           |
| 13. | የወሊድ ሁኔታ                  | 1. በምጥ<br>2. በኦፕራ ሲሆን                          |                                           |
| 14. | ከዚህ በፊት የወሊድ መቆጣጠሪያ ተጠቅመሽ | 1. አዎ<br>2. አይ                                 | ለተራ ቁጥር 14 ጥያቄ መልስሽ                       |

|     | ታውቂያለሽ                                                    |                                                                                     | አይ ከሆነ ወደ ተ/ቁ17 ጥያቄ ይለፉ |
|-----|-----------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------|
| 15. | ለተራ ቁጥር 14 ጥያቄ መልስሽ አዎ ከሆነ የትኛውን አይነት መከላከያ ተጠቅመዋል?       | 1. ተፈጥሮአዊ<br>2. በማህፀን የሚቀበረውን<br>3. ፒልስ/ከኒን<br>4. ኮንደም<br>5. በክንድ የሚቀበረውን<br>6. መርፌ |                         |
| 16. | ከቤተሰብ ውስጥ የወሊድ መቆጣጠሪያውን እንድትተቀሚ ያደረገሽማ ንነው ?              | 1. ባለቤቴ<br>2. እኔ<br>3. ሁለታችንም ተስማምተን                                                |                         |
| 17. | በአጠቃላይ ምን ያህል እርግዝና ነበርሽ                                  | ..... በቁጥር                                                                          |                         |
| 18. | ምን ያህል ልጆች በህይወት አሉሽ                                      | ..... በቁጥር                                                                          |                         |
| 19. | ከአሁን በፊት የነበረው እርግዝና በምን አይነት ሁኔታ ነበር የተፈጠረው              | 1. የታቀደበት<br>2. ያልታቀደበት                                                             |                         |
| 20. | ወደፊት ምን ያህል ልጆች እንዲኖርሽ ትፈልጊያለሽ                            | ..... በቁጥር                                                                          |                         |
| 21. | በማህፀን ውስጥ ስለሚቀመጥ የወሊድ መቆጣጠሪያ የምክር አገልግሎት አግኝተዋል           | 1. አዎ<br>2. የለም                                                                     |                         |
| 22. | የትዳር አጋርሽ በማህፀን ውስጥ የሚቀመጠውን የወሊድ መቆጣጠሪያ እንድትጠቀሚ ድጋፍ ያደርጋል | 1. አዎ<br>2. የለም                                                                     |                         |

**ክፍል 3. በማህፀን ውስጥ ስለሚቀመጥ የወሊድ መቆጣጠሪያ ግንዛቤ በተመለከተ**

| ተ.ቁ | ጥያቄ                                           | አማራጭ                                                             | ምርመራ |
|-----|-----------------------------------------------|------------------------------------------------------------------|------|
| 23. | በማህፀን ውስጥ የሚቀመጥ የወሊድ መቆጣጠሪያ እንዳለ ሰምተሽ ታውቂያለሽ? | 3. አዎ<br>4. የለም                                                  |      |
| 24. | በማህፀን ውስጥ የሚቀመጥ የወሊድ መቆጣጠሪያ እንዳለ የነገረሽ ማን ነው? | 1. ሰዎች ሲያወሩ ሰዎቹ ነው<br>2. የጤና ባለሙያዎች<br>3. ከመገናኛ ብዙሀን<br>4. ከባለቤቴ |      |

|     |                                                                      |                 |  |
|-----|----------------------------------------------------------------------|-----------------|--|
| 25. | አንዲት እናት እንደወለደች ወዲያውኑ በማህፀን ውስጥ የሚቀበረውን መከላከያ ማድረግ እንደምትችል ታውቂያለሽ ? | 1. አዎ<br>2. የለም |  |
| 26. | በማህፀን ውስጥ የሚቀመጠው መከላከያ ቢያንስ ለ13 አመት ያክል ካልተፈለገ እርግዝና እንደሚከላከል ታውቂያለሽ | 1. አዎ<br>2. የለም |  |
| 27. | በማህፀን የሚቀበረው መከላከያ የወሊድ መቆጣጠሪያ እንደሆነ ያውቃለሁ                           | 1. አዎ<br>2. የለም |  |
| 28. | በማህፀን ውስጥ የሚቀመጥ የወሊድ መከላከያ ከአባላዘር በሽታ የሚጠብቅ መሆኑን ታውቂያለሽ              | 1. አዎ<br>2. የለም |  |
| 29. | በማህፀን ውስጥ የሚቀመጥ የወሊድ መከላከያ በግብረሰጋግነት ጊዜምንም አይነት ግር እንደሌለው ታውቂያለሽ     | 1. አዎ<br>2. የለም |  |
| 30. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ እንዳስወጣሽ ማርገዝ እንደምትችይ ታውቂያለሽ             | 1. አዎ<br>2. የለም |  |
| 31. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ የማህፀን ጫፍ ካንሰር ያመጣልብለሽ ትፈሪያለሽ            | 1. አዎ<br>2. የለም |  |

#### ክፍል 4. በማህፀን ውስጥ ስለሚቀመጠው የወሊድ መቆጣጠሪያ መጠቀምን በተመለከተ

| ተ.ቁ | ጥያቄ                                                                       | አማራጭ                                                                                                                                                                                                                 | ምርመራ |
|-----|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 32. | ከወሊድ በኋላ ወዲያውኑ በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ ተጠቅመሻል/ትጠቀሚያለሽ?               | 1. አዎ<br>2. የለም                                                                                                                                                                                                      |      |
| 33. | ከወሊድ በኋላ ወዲያውኑ በማህፀን ውስጥ የሚቀመጥ የወሊድ መከላከያ የማትጠቀሚኝ ከሆነ ምክንያቶችን ምን ሊሆን ይችላል | 1. የጎንዮሽ ጉዳቱን በመፍራት<br>2. ስለ እርግዝና መከላከያ አይነት ስለማላውቅ<br>3. ምርጫዬ ስላልሆነ<br>4. የማርገዝ እድሌ ዝቅተኛ ስለሆነ<br>5. ተጨማሪ ልጆች ስለምፈልግ<br>6. ባለቤቴ ስለማይፈልግ (ስለማይፈቅድ)<br>7. ሀይማኖቴ ስለማይፈቅድ<br>8. መካንነት ያመጣል ብዬ ስለምፈራ<br>9. በግብረሰጋግነት ወቅት |      |

|     |                                                                 | አይመችም ብዬ ስለማሰብ<br>10. ማህፀኔ ይጎጋል ብዬ ስለማስብ                                            |  |
|-----|-----------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| 34. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ ማስገባትም ሆነ ማስወጣት ህመም አለው ብለኝ ታስቢያለኝ | 1. በጣም አልስማማም<br>2. አልስማማም<br>3. ምንም እይነት አስተያየት የለኝም<br>4. እስማማለሁ<br>5. በጣም እስማማለሁ |  |
| 35. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ የተዛባ የወርአበባ ደም መፍሰስ ያስከትላል         | 1. በጣም አልስማማም<br>2. አልስማማም<br>3. ምንም እይነት አስተያየት የለኝም<br>4. እስማማለሁ<br>5. በጣም እስማማለሁ |  |
| 36. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ ማስገባት የግላዊ መብትን ይጥሳል ብለኝ ታስቢያለኝ    | 1. በጣም አልስማማም<br>2. አልስማማም<br>3. ምንም እይነት አስተያየት የለኝም<br>4. እስማማለሁ<br>5. በጣም እስማማለሁ |  |
| 37. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ የዕለት ተዕለት ተግባራት ያስተንጉላል ብለኝ ታስቢያለኝ | 1. በጣም አልስማማም<br>2. አልስማማም<br>3. ምንም እይነት አስተያየት የለኝም<br>4. እስማማለሁ<br>5. በጣም እስማማለሁ |  |
| 38. | በማህፀን ውስጥ የሚቀመጠውን የወሊድ መከላከያ ለወደፊት መካኘትን ያስከትላል ብለሁ ያስባሉ        | 1. በጣም አልስማማም<br>2. አልስማማም<br>3. ምንም እይነት አስተያየት የለኝም<br>4. እስማማለሁ<br>5. በጣም እስማማለሁ |  |

**አመሰግናለሁ!!**

## Declaration Form for students

### Declaration by students

I certify that this research is my own work, and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication. I also certify that this research work has not previously been submitted for assessment in any other unit, except where specific permission has been granted from all unit coordinators involved, or at any other time in this unit, and that I have not copied.

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Date of signing: \_\_\_\_\_

## ADVISORS' APPROVAL SHEET

**SAINT PAULOS HOSITAL MILLENIUM MEDICAL COLLEGE**

**DEPARTMENT OF OBSTETRICS AND GYNECOLOGY**

**ADVISOR’S APPROVAL SHEET (submission sheet-1)**

This is to certify that the thesis entitled *Immediate post-partum Intrauterine Contraceptive Device utilization and its associated factors among mothers who gave birth in selected public hospitals, Addis Ababa, Ethiopia, 2023* submitted in partial fulfillment of the requirements for Speciality certificate in GYNECOLOGY AND OBSTETRICS, and has been carried out by Bereket W/cherkos Id. No. -----under my/our supervision. Therefore, I /We recommend that the student has fulfilled the requirements and hence hereby can submit the thesis to the department.

**Dr. Mustefa Negash**

\_\_\_\_\_  
Name of advisor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Candidate

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date