

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**Duration of return to fertility after use of Depo- Provera and
associated factors among currently pregnant women attending ANC in
public health facilities of Addis Ababa, Ethiopia.**

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ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH



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**A THESIS SUMMITTED TO COLLEGE OF HEALTH AND MEDICAL SCIENCES,
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By-

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List of acronyms

TFR	Total Fertility Rate
FGAE	Family Guidance Association Ethiopia
MCH	Maternal and Child Health
FHD	Family Health Department
LB	Life birth
CPR	Contraceptive Prevalence Rate
FP	Family Planning
MCs	Modern Contraceptives
WFS	World Fertility Survey
OCs	Oral Contraceptives
MOH	Ministry of Health
AARHB	Addis Ababa Regional Health Bureau
IUCDs	Intrauterine Contraceptive Devices
SSA	Sub Saharan African
DHS	Demographic Health Survey
MDHS	Mini Demographic Health Survey
MDGs	Millennium Development Goals
DEMPA	Depot Medroxy Progesterone Acetate

Abstract

Background: One of the best methods to control fertility is use of injectable Depo-Provera which has the side effect of delaying return to fertility after cessation of use. This delay is different from place to place. Health care providers in Ethiopia has been giving information to their family planning clients that Depo will delay return for six or more months referring researches done elsewhere. There is no consis report across countries which range from 6-12 months. However, no such study was done in our country.

Objective: The purpose of this study was to assess the duration of return to fertility and its determinants after cessation of use of injectable contraceptives among currently pregnant women attending ANC in public health facilities of Addis Ababa, Ethiopia, 2015

Methods: A cross sectional facility based survey on 773 pregnant women visiting Ante Natal Care clinic done from April 1-June 30/ 2015. Probability proportionate to sampling technique was used to distribute study women in selected facilities. Then, they are systematically selected from log-books in each facility. A pretested structured questionnaire was used to collect data. Data was entered in Epi info, and then exported to SPSS for cleaning and analysis. Summary measures were computed and displayed. Crude and adjusted odds ratio along with their 95% confidence interval in Binary logistic regression was used to identify factors associated with return to fertility and its significance.

Results: The median duration of return to fertility after cessation of use of Depo Provera was 10 months. Moreover about 355 (45.9%) of women visited public health centers for antenatal care reported the delay of return to fertility for more than 9 months. The odds of delay in fertility was AOR=1.48:95% CI (1.03,2.23) and AOR=1.92: 95% CI (1.00,3.70) times higher among women aged 25-34 and 35-41 years, respectively compared to their counterparts in the age group of 18-24 years. It was AOR=2.31: 95% CI (1.38,3.88) times higher among women belonging to households with monthly income range of 5001-9990 Ethiopian birr though the statistical significance for the income range 2501-5000 vanishes when current age and age at first sex are controlled.

Conclusions and Recommendations: The median delay to fertility return was 10 months. Age group, total monthly income and age at first sex were the major factors associated with delay to return to fertility.

Health care providers should know the median delay to return to fertility documented by this study to counsel their family planning clients. Moreover, they should inform that it is influenced by income level, and age at first sex. Further research with a cohort study design is also recommended.

1. Introduction

1.1. Background

Fertility has been instrumental to aggravate the growth of population in Sub Saharan African countries (SSA), which has an average of 5.3 children per women. In East and North African countries total fertility rate (TFR) was 4.3 children per women. Sub Saharan Africa was at the second stage of demographic transition. Studies have documented that economic, political, cultural, demographic and other characteristics of the African population might be responsible for its highest fertility rate. There are researches that attributed cultural values to large family size especially in rural communities who base their lives on agriculture and low levels of living standards. High mortalities especially among children and infants were accused of causing high fertility to replace the lost ones (1, 2).

Similarly, Ethiopia was one of the SSA Countries with a fast population growth rate of 2.6 percent per annum and a total fertility rate of 4.1 per woman in 2014 (3). Different studies over the last decades in Ethiopia have indicated that as the population size increased, the population caring capacity of the environment decreased. High population growth induces increased demand for resources and the rate at which these resources are exploited. To address population related issues, Ethiopia ratified its population policy in 1993. The objectives of the policy were to reduce the total fertility rate per women to 4 and increasing contraceptive prevalence to 44% by the year 2015. The policy also stated expanding health institution and community based contraceptive distribution by mobilizing public and private services as a strategy to address policy objectives. Family planning program has been in use as a means of tackling population growth in the last decades in most parts of the world. There has been consensus in considering family planning as an effective method in socio-economic development and to enhance family health. It has been widely used in developing countries for several decades now. Family planning methods reduces maternal mortality rate by reducing the times the women get into risky pregnancy and delivery. It has also significant impact to prevent unintended pregnancy which leads to unsafe abortion in most developing countries where safe abortion is not fully legalized like Ethiopia. In other words, it prevents infertility and social stigma which will lead to psychological, economical and health problems. Contraceptive use also help women to delay motherhood, space birth, limiting

pregnancy as well as protecting the women from sexually transmitted infections including HIV/AIDS and achieving MDG Goals (6). Family planning use enhances the survival of children as couples have only few number of children for which they can cater their nutritional and health care needs.

In Ethiopia, family planning has been promoted since 1966 by some concerned volunteers who later established Family Guidance Association of Ethiopia (FGAE) (7). Maternal and Child health care office was established as a department under the Ministry of Health in 1980. After ten years of its establishment it was recognized as Family Health Department with four teams under which one was family planning team. This team was a functioning family planning program all over the country until the end of the Dergue administration. Family planning team has been established in all regions and takes over the activity in the current administration of the country. According to Ethiopian Demographic and Health Survey 2011, knowledge about family planning reached about 97% among currently married women but use of contraceptive was too low, especially use of modern contraceptives was only 27% among currently married women though it has been increasing from 3% to 21% from 2000 to 2011. The most commonly used modern family planning method was injectable which was used by 14% of all women (21% currently married women and 32% unmarried sexually active women) (3)

Modern family planning methods has played significant role to reduce total fertility rate to its blow replacement level of 1.4 children per woman in Addis Ababa (1). Use of any method of family planning in Addis Ababa was 63% while modern method of contraceptive use was 56% of which 35.8% is injectable followed by 10.9% pills. The sources for modern contraceptives were public health facilities serving 82% users (47.3% from health centers, 27.3% from health posts, 4.3% health station/clinic and 2.3% hospitals). The unmet and met need for family planning in Addis Ababa was 10.6% and 62.5% respectively which lead to the total demand for family planning of 73.1%. The percentage of family planning demand satisfied by modern method was 77.1%. However, the injectable contraceptives discontinuation rate was 34.3%, the highest being for pill (69.9%) followed by male condom (62.4%). (3)

Depot Medroxy Progesterone Acetate (DMPA Depo-Provera) injectable progesterone with a dose of 150mg injected deep intramuscularly every three months which requires minimal effort from client side is a very effective family planning method. It has a failure rate which ranges

between 0.1-0.3 per 100 users (8). It has also non- contraceptive effects like protection against pelvic infection, endometriosis and reduce frequency of seizures in epilepsy (6).The undesired effect are irregular menses, amenorrhea (temporary cessation of menstruation) and delay of return to fertility reaching 10 months in South Africa, 9 months in Thailand and 11 months in India (9,10,11). Duration of return to fertility is measured as the time taken to give birth to a child three months after the last date of Depo injection from cessation of use of family planning methods. In this study, an attempt was made to measure duration of return to fertility three months after the cessation of use of Depo Provera to the last date of menstrual period .

1.2. Statement of the problem

Health care professionals working in health facilities have been giving information to their clients about family planning methods with due emphasis on the advantage and side effects of the chosen methods to their clients. One of these undesired effects of Depo-Provera contraceptive method was delay to return to fertility after the last injection. Health care professionals reported that fertility will delay for about six months in the Ethiopian settings when they are counseling their clients to opt for a single method but there was no concrete evidence for them in the local settings. A Prospective study conducted in Thailand found that the average delay of fertility was nine months after last injection (17). A prospective study in India, a similar study documented a fertility return period of eleven months while it was reported to be 10 months in South Africa (11,9). Few studies done on the issue under caption indicated that the duration of fertility return three months after the last injection varies from place to place but there was no study on the determinant factors in those studies and to this effect we do not have such information in the local settings. Delay to fertility return may have social implications like disagreement with husband and family members. There was no study specifically on the social implication, however the high divorce rate in urban areas of our country could partly be related to such delays in return to fertility. Besides, no attempt was made to identify factors associated with delay to fertility return. There were no study on its social implication especially whether it cause divorce or not in our setting as well as in abroad.

1.3. Rationale of the study

This study will give policy makers and programmers of family planning in the country to give clear information on duration of fertility return and factors associated with it in the Ethiopian context. It may also inform health providers to consider another choice of modern family planning methods for those clients who wish to resume their fertility immediately after the cessation of use of family planning methods. Similarly, it will avail pertinent country based information for health care professionals on duration of fertility return which could be used as an input in the reproductive health commodities security. Family planning clients will also be benefited if they know the approximate delay in fertility return after the use of Depo-provera contraceptive methods. Moreover, the findings from this study may reduce misunderstandings occurring between couples due to inaccurate information provided to clients by health care workers. Besides, health care providers will also consider other optional methods before prescribing Depo Provera. It may also be used as a reference to teach health personnel at different levels on the specific issue. Finally it will guide the programs to limit the age of the client to use this method and health care professionals to consider the age of the women approaching menopause to give injectable contraceptives. Clients will get information from the provider and ready for the time taken to give birth.

2. Literature Review

2.1. Duration of fertility return among Depo-Provera contraceptive users

All family planning methods except tubal ligation in females and vasectomy in males does not lead to permanent infertility. The return to fertility after cessation of use is immediate in almost all short term family planning methods except Depo-Provera contraceptives. Data on return to fertility after cessation of use of Depo-Provera contraceptives shows greater variability in terms of duration of return to fertility after discontinuation of the method (12).

Various studies in different parts of the World indicated that fertility return varies from 10 months in South Africa, 9 months in Thailand to 11 months in India (9, 10, and 11). The median delay of return to fertility due to the use of Depo-Provera contraceptive is about 10.8 months, three months from the last date of injection regardless of the duration of use and body mass index in Australian study (13, 14, and 15).

The return to fertility after depot medroxyprogesterone acetate (DMPA) use coincides with date on the return of ovulation; which is approximately 5 months. The largest prospective study followed 796 Thai users of DMPA who stopped using the method to have a planned pregnancy, and reported a median time to conception of 5.5 months after the expected effect of the last injection (16). An earlier Life Table analysis of 135 Thai women aged 18-37 years, who had discontinued DMPA, showed a cumulative pregnancy rate of 76.8% at 12 months (18). When confined to 80 women, 18-25 years of age, the cumulative pregnancy rate was slightly higher (78.4%) at 12 months. This shows that age of the women determines duration of fertility return.

Among 69 Indian women discontinuing DMPA in order to plan a pregnancy, the cumulative conception rate at 12 months was 72.5% (19), a value only slightly lower than that observed for DMPA among Thai women (17).

2.2. Factors associated with duration of fertility return after using Depo-Provera contraceptive methods

Socio-demographic Factors

Different factors hinder women to utilize health care especially for their choice of certain family planning methods. In most studies conducted in African countries, gender has the powerful influence on reproductive decision of women. A study in twelve developing countries, majority in Africa indicated that men are the primary decision makers on sexual activity, fertility and contraceptive methods (5). Another study in Pakistan showed that decision making about reproductive matters relays on the husband (14). An impact survey done in Pakistan on barriers to family planning methods indicated that the majority of the reproductive age group show desire to limit child bearing were not using any form of fertility control methods. The main reason of the respondents for non-use has been attributed to religion, fear of undesired effect of contraceptives on the health of users, opposition from the partner, and limited availability of methods (15). Some of the factors mentioned above may also be associated with the use of Depo-Provera contraceptive methods or women may use it without the consent of their partners because it is not taken every day and seen by family members while she is taking it in our settings. A prospective cohort study in Uganda followed for two and a half years showed that women's use of contraceptive increase over time with age group 15-39 years and highest among the educated women. The use of family planning method by women varies by the number of the family size, previous unwanted pregnancies and attempt of induced abortion but no difference by religion. In this study, the younger women 15-19 need small family size compared to older age women (16). This may also be true for the women choosing injectable methods. However there is no such study in the local setting which attempted to identify factors associated to return to fertility after the use of injectable methods.

Biological and Genetic Factors

Individual and regional variations in the time to return to fertility after DMPA use are noteworthy; variances on the mean time until return of fertility are wide, and regional reports differ significantly. A retrospective review of clinical data on 363 Australian women suggested a mean interval from the end of the effective dose of DMPA to conception be 10.8 months with a standard deviation of 9.7 months (17), an interval twice as long as that reported from Thailand (18). Regional differences may reflect underlying differences in the fecundability of different population groups (due to infection or cohort effects), differences in client motivation to conceive, or more fundamental differences in pharmacokinetics.

Knowledge and Attitude

Many women regarded regular menses as the "pulse" of their reproductive health, indicative of their fertility and pregnancy status, and they associate an irregular menstrual pattern with ill-health. In addition, their menstrual pattern has sexual, socio-cultural, economic and sometimes religious implications, which make it an important factor affecting their everyday lives. It is, thus, not surprising that women do not easily tolerate disruptions of their menstrual patterns, and that menstrual disturbances are the main medical reason why women discontinue the use of injectable contraceptives (19).

Qualitative data on women's attitudes to injectable contraceptives include the failure to have a rapid and predictable return of fertility after discontinuation, and the lack of user-controlled reversibility within the injection interval (20).

Hypothesis: There is a difference in duration of return to fertility across different socio-demographic characteristics

Return to fertility is used to measure the duration of delay to return to fertility three months after the last injection. The Bongaarts model is used to identify factors associated to return to fertility. According to him, factors associated with return to fertility return are classified as distal(indirect) and proximate(direct) factors.(1)The distal factors include culture, knowledge and attitude while the proximate determinants include level of progesterone three months after the last injection, weight of the contraception women and their biological and genetic factors.

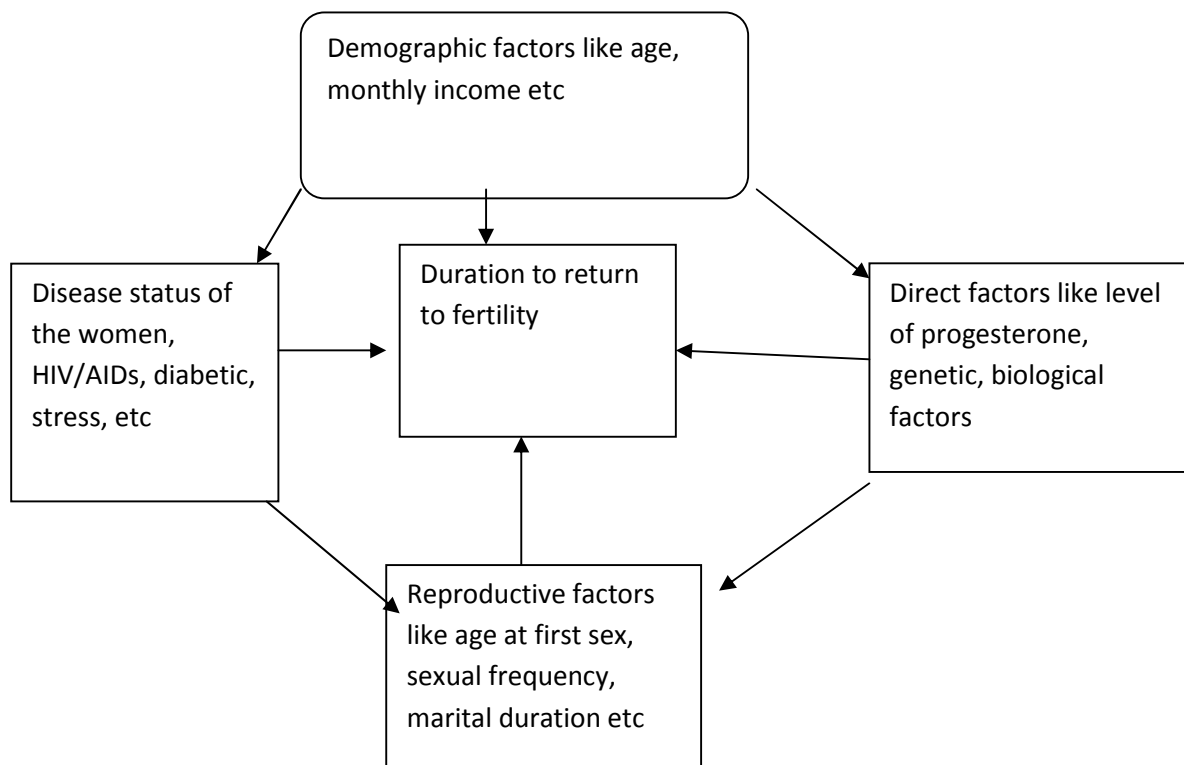


Figure 1: Conceptual Framework

3. Objective

3.1. General objective

The main aim of this study was to measure the duration of return to fertility after stopping the use of injectable family planning methods and to identify factors associated with it.

3.2. Specific objectives

- To measure the duration of return to fertility after the cessation of use in women using Depo-Provera injectable contraceptives in public health facilities, Addis Ababa, Ethiopia, 2015.
- To identify factors associated with duration of return to fertility among women using Depo-Provera injectable contraceptive users in public health facilities, Addis Ababa, Ethiopia, 2015.

4. Methods

4.1. Study area and period

The study was conducted in Addis Ababa, capital city of Ethiopia. The city is also the capital of Africa; the city hosts the office of African Union (AU), United Nations Economic Commission for Africa and diplomatic missions of many countries. Addis Ababa has three layers of administration; city government at the top, ten Sub city administrations in the middle and 116 Woreda administrations at the bottom. According to Central Statistical Authority, the estimated population size of Addis Ababa was over 3 million (3,040,740) with annual growth rate of 2.1% on 1 July 2012 (34). The city has 47 hospitals (12 public, 33 private and 1 defense and 1 police), Out of the 12 public hospitals, six are under the Addis Ababa Regional Health Bureau (AARHB), four specialized federal hospitals (Alert, Black lion, Amanuel and St.Paulos hospital) and two of them are under National defense ministry and Federal police force. Furthermore, the city has 32 currently active health centers. There are two hospitals, three health centers, and 31 different level clinics established by non-Governmental Organizations (NGOs). The city also has 33 private hospitals and more than 700 different level private clinics. In the city administration Family planning services have been given in almost all public health facilities. These facilities are offering injectable, oral contraceptive pills, IUCDs, Implants (Jaddellee, Sino-Implant and Implannon) family planning services and were equipped with the necessary equipment and staffing to offer these services. The study was conducted from April-June 30, 2015.

4.2. Study Design

A quantitative cross sectional study was conducted in public health facilities in Addis Ababa. Most clients of hormonal contraceptive methods prefer health centers due to their physical proximity that made them convenient for this study.

4.3. Source Population

All pregnant women who were using DMPA and visiting ANC at public health facilities in Addis Ababa.

4.4. Study population

Pregnant women who were using DMPA and visiting ANC at Selected public health facilities in Addis Ababa during the study period.

4.4.2 Inclusion Criteria

All pregnant women attending ANC and previously using Depo-Provera contraceptives for at least one year at public health centers in Addis Ababa and stop the method intentionally to become pregnant.

4.4.2 Exclusion criteria

Pregnant women who did not remember the starting and last date of injection, did not know her last date of menstrual period or had no ultrasound result, delivered, and aborted after cessation of the method. Moreover, pregnant women who were taking injectable methods for more than a year but pregnant due to method failure, pregnant women who were severely ill, unable to speak or hear and were not interested to participate in the particular study were excluded from this study.

4.5. Sample Size determination

The sample size was determined by using a formula for single population proportion considering the assumption that 50% of women will return to fertility within 9 months (which is the median delay of injectable contraceptive methods) after the cessation of use, 5% margin of error and 95% confidence level($\alpha=0.05$). Based on this assumption the actual sample size for the study were:

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

Where; **n**= the required sample size

p=assumed proportion attending ANC used the method

Z_{α/2} = the value of **Z** in a standard normal distribution (95% confidence level corresponding to a alpha level of 0.05 which was equal to 1.96)

d = the Margin of error between the sample and the population (0.05)

n=384

The required sample size using single population proportion was 384. Assuming the heterogeneous nature of study women as they vary in economic and educational status and their cultures the design effect of 2 was considered, the desired sample size was then calculated at

$384 \times 2 = 768$. To compensate the non-response rate for unseen reasons, 10% of the determined sample was added up on, and 845 women were sampled.

4.6. Sampling procedure

First five sub-city administrations were randomly selected using a lottery system then from the selected sub-cities health centers with the highest volume of ANC client flow was identified and again one health center was selected from each of the five sub-cities using a lottery method. Finally, eligible participants were recruited as they come to these selected health centers based on the inclusion criteria. Lafto Wereda 3 health center in Nifas Silk sub-city administration, Kolfe Keranio health center in Kolfe Keranio sub-city, Wereda 7 health center in Bole subcity, Selam health center in Gulele subcity at, Yeka health center in Yeka sub city are randomly selected since they have the largest client size of 750, 450, 500, 600, and 400 Pregnant women who were actively visiting them (by referring the client's registration book, October-December 2014). The expected total number of women attending ANC within a month prior to data collection in the five facilities was 2700. The total number (2700) divided by the total sample size (845). Women were allocated to each health center using a probability proportionate to size technique. Finally, every woman who full fill the inclusion criteria and waiting for ANC examination were interviewed as they come to facilities within the study period.

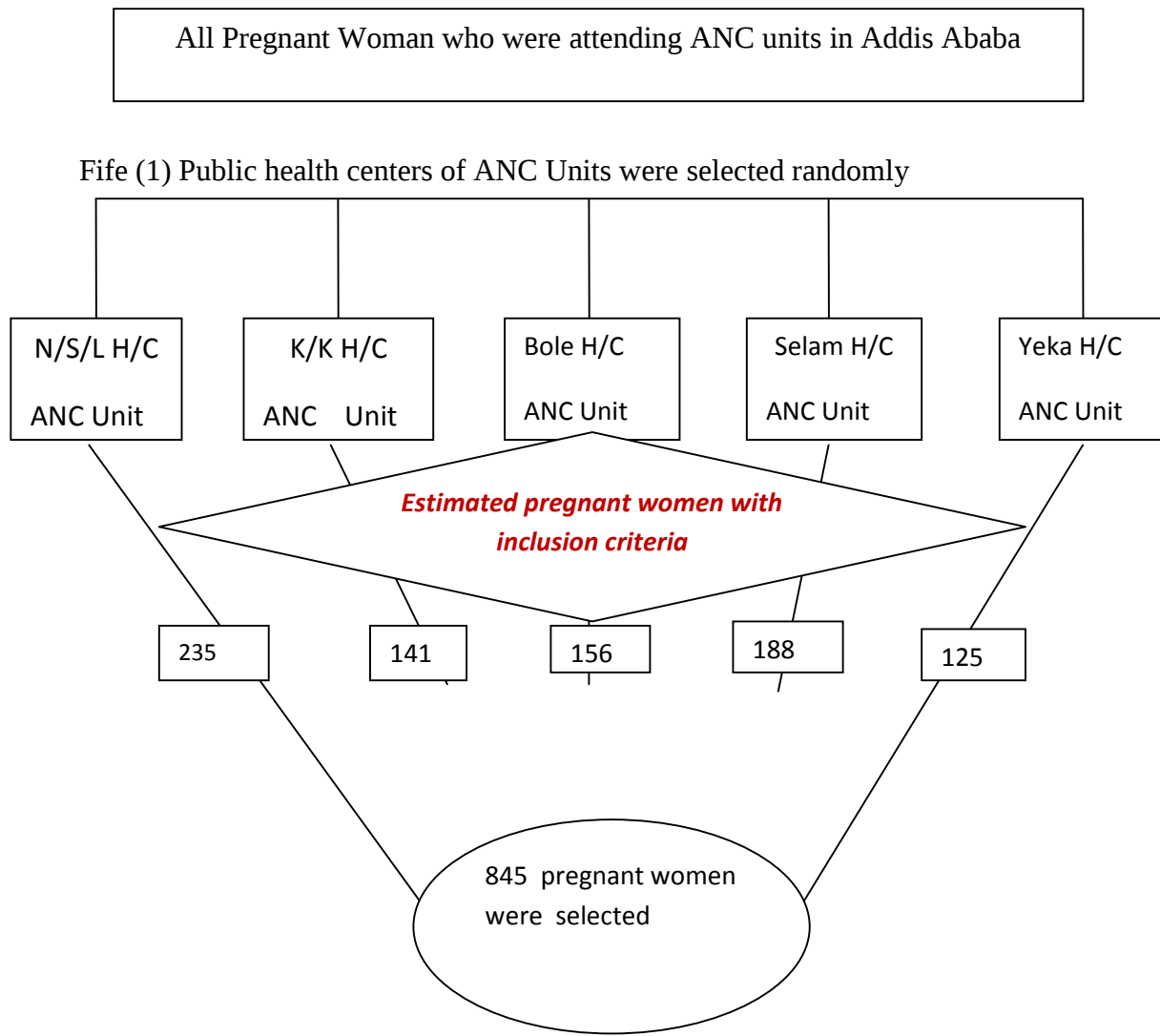


Figure 2: Schematic Presentation of the sampling procedure used in this study

4.7. Data collection Procedures

4.7.1.Data collection instruments

Data was collected using structured questionnaire designed by reviewing pertinent research findings on the issue under caption. The Questionnaire constitutes information on socio-demographic and economic variables, reproductive history and family planning questions. The questionnaire was adapted from previous studies considering the local situation and the study area (4). The Questionnaire was first prepared in English and then translated to Amharic language. To check whether the translation was consistent with the English version the questionnaire was back translated to English by another language expert.

4.7.2.Personnel

Five health care professionals who have experience and working in the respective health center ANC units were recruited as data collectors. Two experienced supervisors who have first degrees in Midwifery or nursing were assigned to oversee the data quality in addition to the principal investigator of the study.

4.7.3.Assurance of data quality

To achieve a good data quality the questionnaires first prepared in English and translated into Amharic language and then back to English to keep its consistency. Moreover, data collectors were selected based on previous experience on data collection. Training was given to data collectors for one day about the objective and principles and steps of data collection. Vague points about the questionnaire were given and an explanations and clarifications were solicited. Ethical procedures that have to be followed were highlighted. Mock-interview was practiced to help the field staffs correctly understand the full contents of the questionnaire. Data collection tool was pilot tested in similar health centers where the actual data collection was not conducted. The pre-testing was done in Lideta and Addis Ketema Wereda 6 health centers. Necessary modifications were then made according to the inputs obtained from the pilot study. Closer supervision was also undertaken during data collection.

Every completed questionnaire was cross-checked daily by the supervisors and the principal investigator. Problems faced during data collection were discussed over night with data collectors and the supervisors.

Besides a data entry software with internal consistency check was used and data entry was started while the data collection was carried out to make necessary changes in the field procedure.

4.8. Variable of study

4.8.1. Dependant variable/Out come

Duration of return to fertility among currently pregnant ANC followers and who were using injectable contraceptive is the dependent variable.

4.8.2. Explanatory or Independent Variables

Socio demographic characteristics: age, educational status of the mother, educational status of the partner, approval of husband, marital status; religion, occupation, ethnicity and economical status.

Reproductive health variables: number of pregnancies (unintended and intended), number of live child (ren), history of abortion, sex of alive children, marital duration, duration of use of the injectable contraceptive method.

4.8.3.Data entry, cleaning and analysis

Data was edited by the principal investigator, cleaned, coded and entered into EPI-INFO version 7 statistical software packages. Data was exported to SPSS version 21 for further cleaning and statistical analysis. Descriptive statistics including calculation of median, mean and standard deviation of duration of return to fertility after cessation of use of injectable contraceptive methods were computed. The main outcome variable, duration of return to fertility after cessation of use was dichotomized using the median duration as a threshold. Then, the distribution of study women by their different demographic, social, economic and reproductive health characteristics were presented using tables and graphs. Measures of central tendency and dispersion; and percentages were used as indicators for the descriptive study. Delayed return to fertility was calculated by subtracting last date of Depo-Provera injection from the last date of menstrual period. Delay to fertility delay was dichotomized by using the calculated median delay in this study which was 10 months (i.e. 0-8 month was considered as not delayed and 9 month and above was considered delayed fertility).. The Median was preferred than mean because there were extreme values.

The overall association between each covariate and the binary coded outcome variable of interest is seen by cross tabulation with a chi-square test. Moreover, only variables that were found to be statistically significant ($p < 0.05$) were modeled into Binary logistic regression to identify the relative importance of each category of the predictor variable to the dependent variables. The interactions and multi-co linearity of the covariates which were modeled was checked. There is no interaction and multi-collinearity between these variables. Initially, each variable was entered in to the binary logistic regression model as the only independent variables, with duration of fertility return being a binary coded dependent variable. Then, multivariate logistic regression analysis was employed in order to infer associations and predictions and to determine the associations between different variables with the outcome variable after controlling for other confounding variables. Odds ratio along with their 95% confidence interval was used to calibrate the strength, direction and significance of the association between independent variables and the outcome variable of interest.

5. Ethical considerations

Written ethical clearance was obtained from the Research Ethics committee (REC) of the School of Public Health in Addis Ababa University; moreover ethical approval was sought from the research ethics committee of Addis Ababa Health Bureau and respective health centers. First a formal letter was sent to the Addis Ababa Regional Health Bureau from the School of Public Health and then to the selected health centers from Addis Ababa Health Bureau. Finally the health center administrators informed to the ANC unit personally. Each study participant was asked to give verbal consent after they understand the main purposes of the study. Participants were informed that they can decline to participate at the very beginning or at any stage during the interview. They were also informed that the services they get from the facility were not affected even if they decline to participate in this study. The information collected from respondents was kept confidential and it was used for the purpose of this study only. Privacy of respondents was kept during the interview by handling it in a single examination room.

6. Dissemination and utilization of the result

The study finding will be disseminated to the relevant bodies that need the result, AAU, MOH, AAHB and other relevant bodies by providing the copies to them and other means as appropriate. Publication in peer reviewed journals and presentation in scientific conferences shall also be considered.

7. Results

In this study 773 pregnant women attending ANC were participated which made the response rate 91.5 %. Amahara and Oromo were the majority ethnic group representing 297 (38.4%) and 241 (31.2%) respectively. The rest 118 (14.3%), 94 (12.2%) were Gurage and Tigree. Orthodox Christianity was the major religious group representing 437 (56.5%) followed by Muslims 200 (25.9%) and 136 (17.6%) other Christian denominations. The mean age of the respondents were 27.5 with standard deviation of 3.88. About 205(26.5), 236(30.5%), 209(27%) were in the primary, secondary and tertiary education level respectively. Besides, 97.2% respondents were under wedlock for 1-25 years

Socio-economic characteristics like monthly income in Birr were included in this study. Monthly income in birr was obtained from all of the respondents, 450 (58.2%) were in the middle income level, 2501-5000 Birr per month, 239 (30.9%) were in the low income 350-2500 and 84 (10.9%) were in the high income level, 5001-9990. The majority of the women 349 (45.1%) were house wives, 144 (18.6%), 233 (30.1%) were private and government employee respectively, the rest were students 47 (6.1%).

The median delay to conception was 10 months, three months from the last date of 'Depo-Provera' (medroxyprogesterone acetate) injection to the last date of menstrual period or ultrasound dating. The mean duration of fertility return was 14 months with standard deviation of 16.30. The magnitude of fertility delay in this study was 355 (45.9%) Table 1.

Table 1: Frequency distribution of pregnant women attending ANC by their main socio-demographic characteristics, Addis Ababa, 2015 (n=773)

Variable		Number	Percent (%)
Age group	18-24	172	22.3
	25-34	548	70.9
	35-41	53	6.9
Educational Status	No education	123	15.9
	Primary	205	26.5
	Secondary	236	30.5
	Tertiary	209	27
Women's Occupation	House wife	349	45.1
	Government Employee	144	18.6
	Private Employee	233	30.1
	Students & others	47	6.1
Ethnicity	Amhara	297	38.4
	Oromo	241	31.2
	Tigre	94	12.2
	Gurage	118	14.3
	Others	23	3
Religion	Orthodox	437	56.5
	Muslim	200	25.9
	Other Christians	136	17.6
Monthly Income	350-2500	239	30.9
	2501-5000	450	58.2
	5001-9900	84	10.9
Years stayed in marriage	1-10	689	91.4
	11-20	63	8.4
	21-25	2	0.2
Age of First Sex	12-17	67	8.7
	18-23	593	76.7
	24-29	113	14.6
Total number of pregnancy	1-2	513	66.4
	3-4	235	30.4
Disease status	No disease	690	89.3
	HIV/AIDS	69	8.9
	Other Chronic disease	14	1.8
Sexual frequency	1-2 & others/week	511	66.1
	2-4/week	234	30.3
	Every day	28	3.6
Years of depo use (Duration)	1-3 years	645	83.4
	4-6 years	106	13.7
	7-9 years	22	2.8

Figure 3 below showed that about four fifth of study women has been on Depo-provera for a period of 1-3 years while 13.7% of them were on the same contraceptive for the period of 4-6 years.

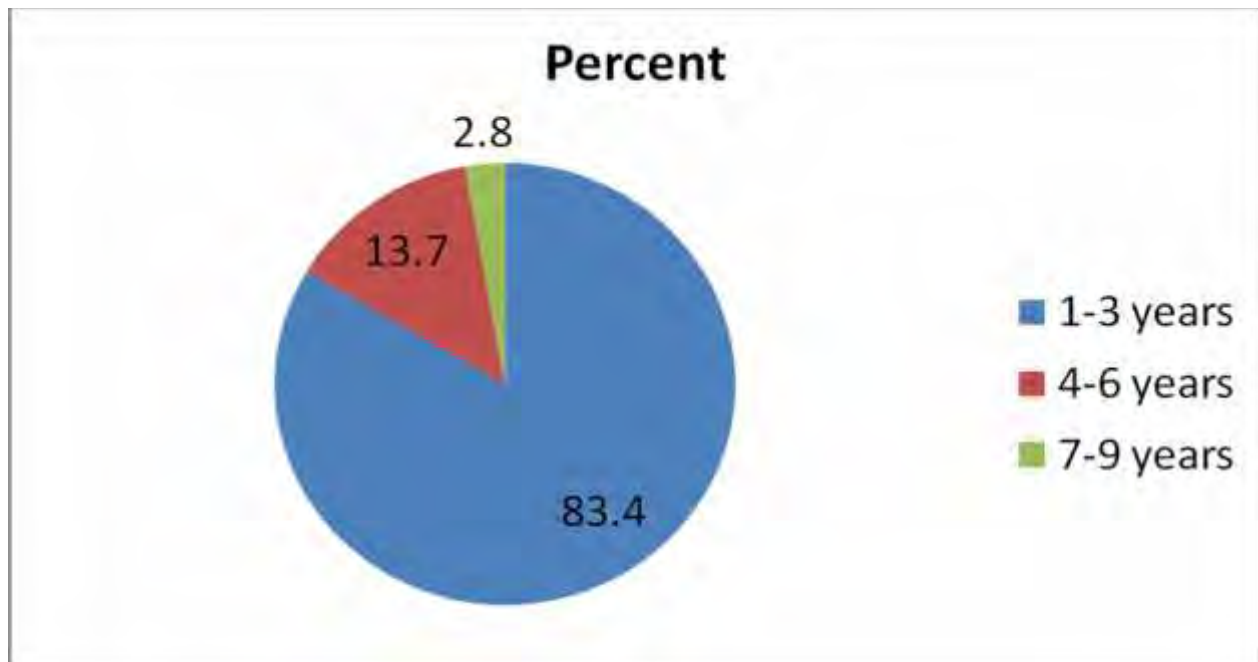


Figure 3: Distribution of pregnant women attending ANC by their duration of use of Depo Provera, Addis Ababa, 2015

On the other hand, the prevalence of delay to fertility return after the cessation of use of Depo Provera was found to be 355 (54.9%) in Addis Ababa among public health facility users for ANC as shown in Figure 4 below.



Figure 4: Prevalence of Delay to Fertility Return in pregnant women attending ANC at public health facilities, Addis Ababa, Ethiopia, 2015

Table 2 below showed that Ethnicity, household monthly income, duration of marriage and age at first sex had overall association with delay to fertility return among pregnant women on Antenatal care attendance in Addis Ababa. The delay was particularly higher among Tigrie women, among members of household with higher income group and those who were married for the duration of 1-10 years and had their first sex when they were aged 12-17 years.,

Table 2: Bivariate logistic regression result among pregnant women visiting ANC who were using DMPA in the past at public health facilities, Addis Ababa , Ethiopia, 2015. (N=773)

Variable		Fertility delay		P- Value
		No	Yes	
Age group	18-24	109(63.4%)	63(36.6%)	0.01
	25-34	285(52%)	263(48%)	
	35-41	24(45.3%)	29(54.7%)	
Educational status	No	65(52.8%)	58(47.2%)	0.3
	1-8	121(59.0%)	84(41%)	
	9-12	126(53.4%)	110(46.6%)	
	13-17	106(50.7%)	103(49.3%)	
Women's Occupation	House wife	193(55.3%)	156(44.7%)	0,9
	G.Employee	76(52.8%)	68(47.2%)	
	Private Employee	125(53.6%)	108(46.4%)	
	Students & others	24(51.1%)	23(48.9%)	
Ethnicity	Amhara	158(53.2%)	139(46.8%)	0.05
	Oromo	141(58.5%)	100(41.5%)	
	Tigre	39(41.5%)	55(58.5%)	
	Gurage	69(58.5%)	49(41.5%)	
	Others	11, (47.8%)	12, (52.2%)	

Religion	Orthodox	238(54.5%)	199(45.5%)	0.4
	Muslim	101(50.5%)	99(49.5%)	
	Others Christians	69(57.5%)	51(42.55)	
Monthly Income	350-2500	142(59.4%)	97(40.6%)	0.03
	2501-5000	244(54.2%)	206(45.8%)	
	5001-9900	32(38.1%)	52(61.9%)	
Years stayed in marriage	1-10	363(52.7%)	326(47.3%)	0.06
	11-25	42(66.7%)	23(33.3%)	
Age of First Sex	12-17	42(62.7%)	25(37.3%)	0.03
	18-23	326(55%)	267(45%)	
	24-29	50(44.2%)	63(55.8%)	
Total number of pregnancy	1-2	284(55.4%)	229(44.6%)	0.6
	3-4	121(51.5%)	114(48.5%)	
	5-7	13(52%)	12(48%)	
Disease status	HIV/AIDS	42(60.9%)	27(39.1%)	0.4
	Other Chronic Disease	10(71.4%)	4(28.6%)	
Sexual frequency	1-2 & others/week	266(52.1%)	245(47.9%)	0.2
	2-4/week	137(58.5%)	97(41.5%)	
	Every day	15(53.6%)	13(46.4%)	
Duration of depo use	1-3 years	350(54.3%)	295(45.7%)	0.7
	4-6 years	58(54.7%)	48(45.3%)	
	7-9 years	10(45.5%)	12(54.5%)	

Table 3 below showed the Bivariat analysis indicating that the odds of delay to return to fertility after cessation of use of Depo was [COR= 1.60:95% CI (1.12,2.27)] times higher among women aged 25-34 years compared to those aged 18-24 years. Besides, the likelihood of delay to return to fertility among women aged 35 years and over was COR=2.09: 95% CI (1.12, 3.90) times higher compared to young women in the age group of 18-24 years. Thus, the study indicated that as age increases delay to return to fertility increases.

Monthly household income was also found to be statistically significantly associated with delay to return to fertility. The risk of delay to return to fertility was COR=1.24: 95% CI (0.89, 1.69) times higher among women who were members of a household whose monthly income is in the range of 2501-5000 Ethiopian birr compared to those whose monthly household income is less than 2501 Ethiopian birr. In addition to this, the odds of delay to return to fertility return was COR=2.38: 95% CI (1.43, 3.96) times higher among women whose monthly household income was in the range of 5001-9990 compared to those whose monthly household income falls below 2501 Ethiopian birr. Household income has been positively correlated with delay in fertility in this study.

On the other hand, this study showed that the risk of delay in fertility return increases as the age at first sex increases though it was not statistically significant for the age at first sex group of 18-23 years compared to those whose age at sexual debut is 12-17 years. The likelihood of fertility return was **COR = 2.14: 95% CI (1.14,3.93)** times more likely compared to those who started their first sex in the age group of 12-17 years.

An attempt was also made to control the confounding effect of other variables by running multiple logistic regressions. Current age of women has been statistically significantly associated with delay in fertility even when household income and age at first sex are controlled.

The odds of delay in fertility was AOR=1.48:95% CI (1.03,2.23) and AOR=1.92: 95% CI (1.00,3.70) times higher among women aged 25-34 and 35-41 years, respectively compared to their counterparts in the age group of 18-24 years. On the other hand the risk of delay in fertility return was AOR=2.31: 95% CI (1.38,3.88) among women belonging to households with monthly income range of 5001-9990 Ethiopian birr though the statistical significance for the income range 2501-5000 vanishes when current age and age at first sex are controlled. There was no significant statistical association between age at sexual debut and delay in fertility return when current age and monthly household income are controlled.

Table 3: The Association of covariates with fertility delay in pregnant women attending ANC who were using Depo-Provera in Addis Ababa, 2015 (n=773)

Variable		Fertility Delay		Crude OR(95% CI)	Adjusted OR(95% CI)
		No	Yes		
age group	18-24	109	63	1.00	1.00
	25-34	285	263	1.60(1.12,2.27)	1.48(1.03,2.23)
	35-41	24	29	2.09(1.12,3.90)	1.92(1.00,3.70)
Monthly inc	350-2500	142	97	1.00	1.00
	2501-5000	244	206	1.24(0.89,1.69)	1.19(0.86,1.65)
	5001-9990	32	52	2.38(1.43,3.96)	2.31(1.38,3.88)
Age of first sex	12-17	42	25	1.00	1.00
	18-23	326	267	1.38(0.82,2.32)	1.40(0.83,2.39)
	24-29	50	63	2.14(1.14,3.93)	1.82(0.97,3.43)

8. Discussion

The median delay to fertility return in this study was found to be 10 months three months after the last date of Depo injection to the last date of last menstrual period. This finding is similar to the finding of the large study in USA and the South African study. However, this finding is a bit different from the finding of Thailand study which documented the median delay in fertility duration of 9 months, 11 months in India, and 9.2 months in Australia (9, 10, and 11). The variation in the duration of delay in fertility return might be attributed to genetic and Ethnic variation in the pharmacokinetic pattern, individual factors in metabolic clearance, regional differences may reflect underlying differences in the fecundability of different population groups (due to infection or cohort effects), differences in client motivation to conceive, or more fundamental differences in pharmacokinetics. The time to return to fertility did not appear with the duration of use of the method which is similar with other studies done elsewhere. Limited available data from other ethnic groups suggest pharmacokinetic and pharmacodynamic effects.

Age group of the women, total monthly income and age at first sex were found important determinants of duration of fertility return in this study. In this study women in the age group 25-34 and 35-41 years had more delayed fertility return after cessation of use of Depo than those women in the age group of 18-24 **AOR = 1.48: 95% CI (1.03,2.23)**

and AOR = 1.92: 95% CI (1.00,3.70) Though the indicators used are a bit different a study done in Thailand showed in 135 women aged 18-37 years the observed cumulative pregnancy rate of 76.8% at 12 months when compared to the 80 women aged 18-25 years whose observed cumulative pregnancy rate was slightly higher (78.4%) at 12 months (18). There was no other

study on the determinant factors of duration of fertility return other than Thailand study. Between the age 30 and 40 most women's fertility decline by about 50 percent.(19)

When looking at monthly income, those with medium and high income level were exposed to extend delayed to fertility return compared with low monthly household income level. There was no similar study done in any other places. But, it may be due to the weight of the women. Because "in the Ethiopian context higher income is associated with body weight" which could be attributed to lack of knowledge to balanced dietary intake in developing countries. In Ethiopian context weight gain is the sign of wellness or living in the comfortable life compared to loss of weight, whereas in more developed countries the reverse is true. Those people with high income control their body weight by controlling the type of diet they were taking. But those who have low income gain more weight than high income level. Those with high BMI have lower clearance of progesterone from the body compared to low BMI.

Age at first sex was also associated with duration of fertility return in this study. Those who had first sex at age group of 18-23 were more exposed to delayed fertility compared to age group 12-17 [**OR 1.38 (0.82,2.31)**], and those who had first sex at the age group of 24-29 were also prone to delayed fertility [**OR 2.14 (1.14,3.93)**]. This showed that as the age of first sex increase delayed fertility also increased. This may be due to stress arising from desire to get pregnant soon. And this desire also has social pressure which intensifies the problem. It may be also related to lack of knowledge when to have sex in order to get conception. There was no study done in this regard but early sex before the age of 18 is not recommended since it leads to unwanted or unplanned pregnancy. Studies repeatedly showed that maternal age has a profound effect up on the fetal death, prenatal and infant mortality.

9. Strength and Limitation of the study

9.1 Strength of the study

This is the first study in the Ethiopian context which could serve as a baseline for subsequent studies.

9.2 Limitation of the study

Lack of literature was one the limitation to compare the findings of this study with similar studies. It would have been preferred to employ longitudinal design to build causality and include variables like BMI and serum progesterone level measurements three months from the last date of Depo-Provera injection. Besides, a comparative study with other modern contraceptive methods such as pills or IUCD could be preferable.

10 Conclusions

This study conducted among pregnant women attending ANC who were using Depo-Provera in Addis Ababa to assess the duration of delay to return to fertility and factors associated with it has reached at the following important conclusions.

- The median duration of fertility return was 10 months, three month from the last date of depo provera injection date to time of last menstrual period or ultrasound dating.
- Current age and monthly income has significant association with duration of fertility return.

11. Recommendations

1. The ministry of health should include this finding in the guidelines of family planning methods so as others will be guided by it.
2. Institutions also include this finding to teach their medical students to properly counsel their clients and assure the understanding of the client.
3. Health professionals at health facility should refer this finding to counsel their clients.

4. More research using a cohort study design is needed to strength this finding especially with deferent designs.

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Annex 1: English version Questionnaire

Addis Ababa University
College of Health Science
School of public Health

Questionnaire for assessing duration of fertility return and its determinant after using of injectable contraceptive among currently pregnant mothers attending ANC at public health facility.

Information sheet

Good morning/afternoon, My name is, I am working for a research team, lead by Ato Feleke Mulatu for the partial fulfillment of his master of public health degree in Addis Ababa University. We are interviewing women who were using injectable contraceptive for at least one year before they become pregnant to measure the duration of fertility return and its main determinants. I am going to ask you some questions that are not difficult to answer. Your name will not be written in this format and never be used in connection with any of the information you are going to tell me. You are not obliged to answer any question that you do not want to answer and you may quit this interview at any time you want to and do not affect the service that you want to get from other facilities. However, your honest answers to these questions will help us in measuring the duration of fertility return among women who has been using injectable contraceptive methods for some time and suggest alternative family planning for users. I would appreciate your help in responding to these questions, and the interview will not take more than 15 minutes.

Consent Form

Do you understand what I explained so far? If you want more clarification about the issue under caption here is the full address of principal investigator, Ato Feleke Mulatu, mobile 0911360542, email mulatu43@yahoo.com

I have been provided with full information and made my decision with out any interference .

Are you willing to participate in the study? Yes.... No-----

Signature_____Date_____

Date of interview_____

Name of data collector_____

Name of supervisor_____

PART ONE: IDENTIFICATION PARTICULARS

001:-Questionnaire number

002:-Study area: - sub city Woreda.....name of health center-----code

PART Two: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

S.no	Questions	Choices and code	Skip to---
101	How old are you in completed full years?	_____	
102	What is your marital status?	Single____1 Married__2 Divorced__3 Widowed__4	
103	Did you read and write in any language you speak?	Yes -----1 No-----2	If No Skip to 105
104	If yes to103, what is your attained level of education?	Grad completed_____ Informal_____	
105	What is your current main occupation?	House wife -----1 Government employee-----2 Private employee -----3 Student-----4 Others specify-----5	
106	What is your ethnicity?	Amhara-----1 Oromo-----2 Tigre-----3 Gurage-----4 Others specify---5	
107	What is your religion?	Orthodox-----1 Muslim-----2 Protestant-----3 Catholic-----4 Others specify—5	

108	What is your monthly household income from all sources including in kind?	-----ETB	
109	Did your partner read and write in any language he speaks?	Yes-----1 No-----2	If No Skip to 111
110	If yes to 109, what is his attained level of education?	Grade_____ Informal_____	
111	What is your husband's main occupation?	Government employee-----1 Private employee -----2 Student-----3 Others specify-----4	

PART TWO Reproductive characteristics of women

S.No	Questions	Choices Code	Skip to no
201	When did you married?	Date___Month ___Year	
202	How long did you live in marriage?	___year ___month	
103	What was your age when you have first sexual intercourse?		
204	When was your last LMP? Or Ultrasound dating?	___day ___month ___year	
204	How many times did you get pregnant?	_____	
205	Have you ever given birth to a child that show any evidence of life?	Yes_____NO_____	
206	How many times did you encounter abortion before taking depo?	_____	
207	How many still birth did you encounter before taking depo?	_____	
208	How many female & male children do you have?	Male___1 Femal___2	
209	How many sons and daughters live with you?	Sons___1 Daughters___2	
210	Do you have sons and daughters to	Yes_____1	If No

	whom you have given birth who are alive but do not live with you?	No_____2	skip to220
211	If yes to 210how many sons and daughters?	Sons_____ Daughters_____	
212	How frequently did you have sex with your partner after stopping depo?	Every day_____1 Every other day____2 Twice a week_____3 Trice a week_____4 Others specify_____5	

Section III About Depoprovera related characteristics

S.No	Questions	Choices Code	Skeep to no
301	Did you discussed about family planning methods with your partner before you took depo?	Yes_____1 No-----2	
302	If yes to301 who chose depo?	Me____1 Partner_2 Both discussed __3 Parents _____4	
303	Why was depo chosen?	It is private__1 Better than others _____2 I did not know others_____3 I was forced by others to take____4 Others specify_____	
304	When did you start taking depo?	___day ___month___year	
305	When did you stop taking depo?	__ day ___month ___year	
306	How long have you been using depo?	_____	
307	Did you take any modern family planning method before taking depo?	Yes_____ No_____	
308	If yes to 307 Which one?	A Pills____1 B Implants---2 C IUCDs-----3 D Condoms____4 E LAM_____5 F Others specify-6_____ Multiple answers possible	
309	Were you told about side effects of depo?	Yes____1 No_____2	
310	What were those side effects?	A Amenorrhea B Bleeding between periods	

		C Mood change D Delayed fertility return E Over weight F Others specify Multiple of answers possible	
311	Who provide you information about depo before you took it?	Family member_____1 Friend_____2 Neighbourhood_____3 Health worker_____4 Massmedia_____5 Others specify_____6	

Annex 2. Amharic Version Questionnaire

የቃለመጠይቅ ፈቃደኝነት መጠየቂያ

በአዲስ አበባ ዩኒቨርሲቲ ጤና ሳይንስ ኮሌጅ የማህረሰብ ጤና አጠባበቅ፤

በመርፌ በሚሰጥ የወሊድ የመቆጣጠሪያ ዘዴ ሲወስዱ ቆይተው መርፌ ካቆሙ በኋላ ለማርገዝ የሚወስደውን ጊዜ ለመለካትና ተፅዕኖ የሚያሳድሩ ምክንያቶች ለማወቅ አሁን በዕርግዝና ላይ ያሉና ክትትል እያደረጉ ያሉ ነብሰጡር እናቶችን በጤና ተቋማት ላይ የሚደረግ ቃለ መጠይቅ የተሳታፊዎች መጠየቂያ ቅፅ፡፡

እንድምን አደር/ዋሉ? ስሜ _____ ይባላል፡፡

በአዲስ አበባ ዩኒቨርሲቲ ጤና ሳይንስ ኮሌጅ የማህረሰብ ጤና አጠባበቅ ት/ቤት የሚደረገውን የጥናት ቡድን አባል ነኝ፡፡ የጥናቱ ዓላማ በመርፌ የሚወሰድን የወሊድ መከላከያ ዘዴ ተወስዶ ካቆመ በኋላ ለማርገዝ የሚወስደውን ጊዜ ለመለካት ተፅዕኖ የሚያሳድሩ ምክንያቶችን ለመለየት ነው፡፡

በዚህ ጤና ጣቢያ ውስጥ ለረጅም ጊዜ በቤተሰብ ምጣኔ ላይ ያሰሩና በጤና ጥበቃ ሚኒስቴር በቤተሰብ ምጣኔ ፕሮግራም ላይ ኤክስክፐርት የሆኑ ባለሙያዎችን አስተያየትና ጥቆማ ወይም ሙያዊ ውህደት እንዲያደርጉ እጠይቃለሁ፡፡

ይህ ጥናት በተሳታፊዎች ላይ የሚያደርሰው ምንም ዓይነት ጉዳት የለም፡፡ ለተወሰኑ ደቂቃዎች ለውይይት ከመውሰዱ በስተቀር የእርስዎ ምላሾችና ሙያዊ ውይይቶች ግን በመርፌ በሚሰጥ የወሊድ መቆጣጠሪያ ዘዴ አጠቃቀም ላይ የፖሊስ ቀረፃና ፕሮግራም አፈፃፀም ማሻሻያ ለማድረግ በጣም ጠቃሚ ነው፡፡ በተጨማሪም ለጤና ባለሙያዎች መርፌ ተወስዶ ከቆመ በኋላ ለማርገዝ የሚወስደውን ጊዜ ለተጠቃሚዎች ለማስተማር ይረዳል፡፡ ለዚህም የጥናቱ ተሳታፊ እንዲሆኑ ተመርጠዋል፡፡ በጥናቱ መሳተፍ ወይም አለመሳተፍ ይቻላል፡፡ የሚሰጡን ሙያዊ ውይይት በሚስጥርነት እንደሚጠበቅ ላረጋግጥልዎት እወዳለሁ፡፡ የሚሰጡን መረጃ ለዚህ ጥናት ብቻ ይውላል፡፡ የተሳታፊም ስም እዚህ ላይ አይፃፍም፡፡ የሚሰጡን ውይይት በትክክል የድፅ መቅጃ መሣሪያ እጠቀማለሁ፡፡

ግልፅ ያልሆነልዎት ነገር ካለ መጠየቅ ይችላሉ፡፡

ምናልባት ተጨማሪ መረጃ ቢፈልጉ የጥናት አድራጊው ሙሉ አድራሻ፡

ስም፡- ፈለቀ ሙላቱ ለማ

ስልክ፡- 0911 36 05 42

ኢሜል፡- mulatu43@yahoo.com

አሁን በጥናቱ ላይ ለመሳተፍ ፈቃደኝነትዎን ይግለፁልኝ (ሳጥኑ ውስጥ ምልክት ያድርጉ)

☐ አዎ ፈቃደኛ ነኝ፡፡

☐ አይ ፈቃደኛ አይደለሁም ፡፡

ተሳታፊዎ/ው ስለ ጥናቱ በቂ መረጃ ተሰጥቷቸው በቃለመጠይቁ ለመሳተፍ ፈቃደኛ ከሆኑ መጠይቁን ይጀምሩ፡፡ ፈቃደኛ ካልሆኑ አመስግነው ሌላዋን/ውን ይጠይቁ፡፡

ቃለ መጠይቅ የተደረገበት ቀን፡ _____ ወር፡ _____ ዓ.ም.፡ _____ ቦታ፡ _____

ክፍል አንድ፤ መለያ

001 የመጠይቅ ቁጥር ☐ ☐ ☐

002 የጥናቱ ቦታ፤ ክ/ከተማ ----- ወረዳ ----- የጤና ጣቢያው ስም----- ኮድ -----

003 የካርድ ቁጥር ☐ ☐ ☐ ☐ ☐

ክፍል ሁለት የተሳታፊዎች ማህበራዊ ሁኔታዎችን የሚዳስስ መጠይቅ አዲስ አበባ 2007 ዓ.ም.

ተ.ቁ	ጥያቄዎች	አማራጭ መልሶች	ወደ ---ቁጥር ይለፉ
101	ዕድሜዎት በሙሉ ዓመት ስንት ነው		
102	የጋብቻ ሁኔታ ምንድነው?	ያላገባች1 ያገባች2 የተለያዮች.....3 ባሏ የሞተባት.....4	
103	በሚናገሩት በማንኛውም ቋንቋ ማንበብና መጻፍ ይችላሉ?	አዎ1 የለም2	የለም ከሆነ ወደ 105 ይለፉ
104	ለጥያቄ ቁጥር 3 መልስዎ አዎ ከሆነ የክፍል ደረጃዎ ስንት ነው?	የክፍል ደረጃ ----- መደበኛ ያልሆነ ----	
105	አሁን የሚሰሩት ሥራ ምንድነው?	የቤት እመቤት1 የመንግስት ተቀጣሪ2 የግል ተቀጣሪ3 ተማሪ4 ሌላ ካለ ይጥቀሱ.....5	
106	ብሔርዎ ምንድነው?	አማራ1 አሮሞ.....2 ትግራይ3 ጉራጌ4 ሌላ ካለ ይግለፁ5	
107	ኃይማኖትዎ ምንድነው?	ኦርቶዶክስ1 ሙስሊም2 ፕሮቴስታንት3 ካቶሊክ4 ሌላ ካለ ይጥቀሱ.....5	
108.	የቤተሰቡ ወርኃዊ ገቢ ምን ያህል ነው?	----- ብር	
109	ባለቤትዎ በሚናገሩት ቋንቋ ማንበብ እና መጻፍ ይችላሉ?	አዎ1 አይችልም..... 2	አይችሉም ከሆነ ወደ 111 ይለፉ
110	ለጥያቄ ቁጥር 9 መልስዎ አዎ ከሆነ የክፍል ደረጃዎት?	ክፍል ----- መደበኛ ያልሆነ	
111	የባለቤትዎ ሥራ ምንድነው?	የመንግስት ተቀጣሪ.....1 የግል ሙያ.....2	

		በራሱ ስራ የሚተዳደር.....3 ነጋዴ.....4 የቀን ሰራተኛ5 ገበሬ.....6 ተማሪ8 ሌላ ካለ ይጠቀስ	
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ክፍል ሁለት የሥነ ተዋልዶ ሁኔታ መግለጫ

ተ.ቁ	ጥያቄዎች	አማራጭ መልሶች	ወደ---ቁጥር ይለፉ
201	በየትኛው ቀን፣ ወር፣ ዓ.ም አገቡ?	--- ቀን ----ወር ---- ዓ.ም.	
202	በጋብቻ ምን ያህል ዓመት ቆዩ?	----- ዓመት	
203	ለመጀመሪያ ጊዜ የግብረሰጋ ግንኙነት ሲያደርጉ ዕድሜዎት ስንት ነበር?	----- ዓመት	
204	ለመጨረሻ ጊዜ ወር አበባ ያዩት/ አልትራሳውንድ የተነሱት መቼ ነበር?	-----	
205	ስንት ጊዜ አርግዘው ያውቃሉ?	---- ጊዜ	
206	ለአጭር ጊዜም ቢሆን በሕይወት የመኖር ምልክት ያሳየች/ያሳየ ልጅ ወልደው ያውቃሉ?	አዎ1 የለም2	የለም ከሆነ ወደ ቁጥር 208 ይለፉ
207	አሁን በሕይወት ያሉ ወንድ እና ሴት ልጆች አለዎት?	አዎ1 የለም2	የለም ከሆነ ወደ ቁጥር 209 ይለፉ
208	ለጥያቄ ቁጥር 207 መልስዎ አዎ ከሆነ ስንት ሴትና ወንድ ልጆች አለዎት?	ወንድ.....1 ሴት2	
209	ስንት ሴትና ወንድ ልጆች ከእርስዎ ጋር ይኖራሉ?	ወንድ----- ሴት-----	
210	የእርስዎ ተፈጥሮአዊ ልጅ የሆኑና ከእርስዎ ጋር የማይኖሩ አሉ?	አዎ1 የለም2	የለም ከሆነ ወደ ቁጥር 212 ይለፉ
211	ለጥያቄ ቁጥር 210 መልስዎ አዎ ከሆነ ስንት ወንድና ሴት ልጆች ናቸው?	ወንድ----- ሴት -----	
212	በመርፌ የሚሰጠውን መከላከያ ከመውሰድዎ በፊት ስንት ጊዜ ውርጃ አጋጠሞዎት ነበር?	-----	
213	በሕይወት ያልተወለደ ልጅ ስንት ጊዜ አጋጠመዎት?	-----	
214	በሀኪም የተነገረዎት በሽታ አለ?	አለ-----1 የለም-----2	የለም ከሆነ ወደ ቁጥር 216 ይለፉ
215	ለጥያቄ ቁጥር 214 መልስዎ አለ ከሆነ ምን ዓይነት በሽታ? (ሁለት እና ከዚያ በላይ መልስ ሊሆን ይችላል፡፡)	A. ካንሰር B. ኤች አይቪ ኤድስ C. ቲቢ D. ስኳር በሽታ E. ሌላ ካለ ይጠቀስ	

216	በመርፌ የሚወስዱትን መከላከያ ካቆሙ በኋላ በምን ያህል ልዩነት ወሲብ ያደርጉ ነበር?	A. በሳምንት አንድ ጊዜ B. በሳምንት ሁለት ጊዜ C. በሳምንት ሦስት ጊዜ D. በሳምንት አራት ጊዜ E. በየቀኑ F. ሌላ ካለ ይጠቀስ-----	
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ክፍል ሦስት : በመርፌ በሚሰጡ የወሊድ መከላከያ መግለጫ

ተ.ቁ	ጥያቄዎች	አማራጭ መልሶች	ወደ--- ቁጥር ይለፉ
301	በመርፌ የሚሰጠውን የወሊድ መቆጣጠሪያ ከመውሰድዎ በፊት ስለ ቤተሰብ ምጣኔ ከባለቤትዎ ጋር ተመክክረው ነበር?	አዎ1 አልተመክክርኩም.....2	አልተመክክርኩም ከሆነ ወደ ቁጥር 303 ይለፉ
302	ለጥያቄ ቁጥር 301 መልስዎ አዎ ከሆነ መርፌውን ማን መረጠው?	እኔ.....1 ባለቤቴ.....2 ሁለታችንም ተመክክረን ...3 ሌላ ቤተሰብ..... 4	
303	በመርፌ የሚሰጠው የወሊድ መቆጣጠሪያ/መከላከያ ለምን ተመረጠ? (ሁለት እና ከዚያ በላይ መልስ ሊሆን ይችላል):	A. በቀላሉ ስለማይረገፍ B. በቀላሉ ስለሚገኝ C. በቀላሉ በጤና ባለሙያ ስለሚሰጥ D. ባለሙያ ስለመረጠልኝ E. ባለቤቴ/ሌላ ሰው ስለመረጠልኝ F. ከሌሎች የበለጠ የመከላከል አቅም ስላለው G. የጎንዮሽ ጉዳቱ በጣም ትንሽ ስለሆነ H. ሌላ ካለ ይግለፅ-----	
304	በመርፌ የሚሰጠውን የወሊድ መከላከያ መቼ ጀመሩ?	ቀን----- ወር ---- ዓ.ም.	
305	በመርፌ ሚሰጠውን የወሊድ መከላከያ መቼ አቋረጡ?	ቀን ----- ወር ---- ዓ.ም.	
306	መርፌውን ለምን ያህ ዓመትና ወር ተጠቀሙ	----- ዓመት ----- ወር	
307	በመርፌ የሚወሰደውን የወሊድ መከላከያ ከመውሰድዎ በፊት ሌላ ዘመናዊ መከላከያ ተጠቅመው ነበር ?	አዎ1 አልወሰድኩም2	አልወሰድኩም ከሆነ ወደ ቁጥር 309 ይለፉ
308	ለጥያቄ ቁጥር 307 መልስዎ አዎ ከሆነ የትኛውን ነው የወሰዱት? (ሁለት እና ከዚያ በላይ መልስ ሊሆን	A. እንክብል B. በክንድ ሥር የሚቀመጥ C. ሉፕ	

	ይችላል።)	D. ኮንዶም E. ጡት ማጥባት F. ሌላ ካለ ይጥቀሱ	
309	ስለመርፌው የጎንዮሽ ጉዳት ተነግሮዎት ነበር?	አዎ1 አልተነገረኝም2	አልተነገረኝም ከሆነ ወደ ቁጥር 311 ይለፉ
310	ለጥያቄ ቁጥር 309 መልስዎ አዎ ከሆነ የተነገረዎት የጎንዮሽ ጉዳት ምንድነው? (ሁለት እና ከዚያ በላይ መልስ ሊሆን ይችላል።)	A. የወር አበባ መቅረት B. ጠብ ጠብ የሚል የወር አበባ በወር ሁለቱ ወይም ሶስት ጊዜ መምጣት C. የባህርይ ለውጥ ማምጣት D. እርግዝናን ማዘግየት E. ክብደት መጨመር F. ሌላ ካለ ይጥቀሱ -----	
311	በመርፌ የሚሰጠውን የወሊድ መከላከያ ከመውሰድዎ በፊት ስለ መርፌው መረጃ ያገኙት ከየት ነው? (ሁለት እና ከዚያ በላይ መልስ ሊሆን ይችላል።)	A. ከቤተሰብ አባል B. ከጓደኞቹ C. ከጎረቤት D. ከጤና ባለሙያ E. ከመገናኛ ብዙሃን F. ሌላ ካለ ይግለፁ-----	

