

**PREVALENCE AND DETERMINANTS OF MODERN
CONTRACEPTIVE USE AMONG POSTPARTUM MOTHERS
ATTENDING CHILD HEALTH CLINIC AT MNAZI-MMOJA
HOSPITAL, DAR ES SALAAM.**

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**MMed (Obstetrics and Gynaecology) Dissertation
Muhimbili University of Health and Allied Sciences
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Muhimbili University of Health and Allied Sciences

Department of Obstetrics and Gynaecology



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By

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**A Dissertation Submitted in (partial) Fulfilment of the Requirements for the Degree
of Master of Medicine (Obstetrics and Gynecology) of**

**Muhimbili University of Health and Allied Sciences
October, 2017**

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation “*Prevalence and determinants of modern contraceptive use among postpartum mothers attending child health clinic at Mnazi-Mmoja hospital, Dar es salaam*” in partial fulfillment of the requirements for the degree of Master of Medicine (Obstetrics and Gynaecology) of the Muhimbili University of Health and Allied Sciences.

Prof. Andrea B. Pembe

(Supervisor)

Date

DECLARATION AND COPYRIGHT

I, **Mitei C. Beverly**, declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature.....

Date.....

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I would like to thank my supervisor Professor Andrea B. Pembe whose door was always open whenever I ran into trouble, got stuck or had a question about my study. He consistently steered me in the right direction.

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I am also deeply thankful to my participants, I want to acknowledge and appreciate their help and transparency during my study. Their information has helped me complete this thesis.

Nobody has been more important to me in the pursuit of this project than the members of my family. My mum for her unwavering love and unyielding devotion the bedrock upon which the entire time of this study has been built. I would like to thank my brothers whose unending encouragement and support are with me in whatever I pursue.

DEDICATION

I dedicate this to my precious daughter, Theophila Resian Sankale, you are loved and mean so much to me. To my late brother, Capt Theophilus Kirui you left a void never to be filled but your memory lives on.

ABSTRACT

Background

Postpartum family planning (PPFP) addresses the needs of those who wish to have children in the future, as well as those who have reached their desired family size and wish to avoid future pregnancies. Despite the considerable risk of untimed pregnancy within two years of delivery, many mothers do not pay attention to post partum contraception. Short inter pregnancy interval results in an increased risk of maternal and neonatal morbidity and mortality. In view of the serious adverse consequences associated with short inter pregnancy interval, this study aimed to determine the prevalence, types of contraceptives used and factors influencing use of modern contraceptives among mothers with children less than 12 months old.

Methodology

This hospital based cross sectional study was conducted where mothers bringing their children who were less than 12months old to the child health clinic were recruited till the sample size was reached. The proportion mothers who used PPFP was obtained from women who used modern contraceptive among all the women interviewed. Bivariate and multivariate logistic regression analyses were applied to identify independent risk factors associated with use of PPFP. All analyses were conducted using SPSS version 20.

Results

The number of women recruited was 500 from which the obtained proportion of mothers who used PPFP in this study was 60.4%, the most used type of modern contraceptive was implant followed by injectables, IUD, Condoms and pills was the least used.

The factors that were associated with increased use of contraceptive were age group (OR=3.040, CI 1.203-7.681), previous history of contraceptive use (OR=5.464, CI 2.256-13.234), resumption of menses (OR=26.383, CI 12.315-56.521), partner's approval (OR=4.596, CI 1.800-11.738), choosing FP during ANC (OR=2.812, CI 1.447-5.467) and counselling on FP after delivery (OR=19.919, CI 5.256-75.484).

Conclusion

The prevalence of modern contraceptive methods use in Mnazi Mmoja was higher than the expected. The results show that age group 26-30years, previous history of contraceptive use, having resumed their menses, having their partner's approval, chose FP during ANC and had counselling after delivery have higher likelihood of using PPFP. To ensure adequate inter pregnancy interval, this factors need to be considered so as to increase uptake of PPFP.

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ABBREVIATIONS

ANC	Antenatal Care
DHS	Demographic and Health Survey
DRC	Demographic Republic of Congo
FP	Family Planning
IPPF	International Planned Parenthood Federation
LAM	Lactation Amenorrhea Method
LNMP	Last Normal Menstrual Period
MNH	Muhimbili National Hospital
MOHSW	Ministry of Health and Social Welfare
MUHAS	Muhimbili University of Health and Allied Science
PI	Principal Investigator
PNC	Post Natal Clinic
PPFP	Postpartum Family Planning
RA	Research Assistant
RCH	Reproductive and Child Health
SSA	Sub Saharan Africa
STI	Sexually Transmitted Disease
TDHS	Tanzania Demographic Health Survey
UN	United Nations
UNPF	United Nations Population Fund
USA	United States of America
USAID	United States Agency for International Development
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Post - Partum Family Planning is defined as the initiation and use of family planning methods during the 12 months after delivery.

INTRODUCTION

The postpartum period is a challenging time for family planning, especially for lactating women. The length of amenorrhoea following delivery principally depends on whether she is breastfeeding or not due to the fact that prolactin inhibits ovulation and the return of menstruation in a woman who exclusively breastfeeds(1). Ovulation can occur as early as 25 days postpartum but usually occurs between 45 to 94 days postpartum among non-breastfeeding women. In addition, the length of postpartum amenorrhoea is relatively variable, and depends on a number of factors, including maternal age and parity, and the duration and frequency of breastfeeding (2). There is reduced fertility during lactation amenorrhoea and even when ovulation returns. Although two thirds of women ovulate before their first menses, only half of these have sufficient pregnanediol excretion and luteal phase lengths to hypothetically sustain a pregnancy (3). Because it is difficult to predict which subset of women will ovulate before their first menses, it is important to give women tools to control their fertility and avoid unwanted pregnancy.

Family planning allows individuals to plan and attain their desired number of children, the spacing and timing of their births. Short inter pregnancy intervals of less than 24 months is associated with preterm delivery, low birth weight and perinatal death. As well as the unplanned pregnancies are associated with unsafe abortions(4).

There are several types of contraceptives divided mainly into short term, long term and permanent methods. Short acting methods include condoms, spermicidal, sponges, rings, patches, diaphragms, pills and injectables whilst long acting methods include IUCD and implants. Natural family planning methods include fertility awareness based methods, withdrawal and lactation amenorrhoea methods. Permanent methods include vasectomy and bilateral tubal ligation. The most commonly used are short acting methods. Most of these methods can be used post partum and only differ on when it can be initiated following delivery. The World Health Organization recently revised guidelines on postpartum and newborn care includes provision of family planning counselling and methods (5). The postpartum period is an ideal time to begin contraception as women are more strongly motivated to do so, which also has an advantage of being convenient for both patients and health-care providers (6). The minimum inter pregnancy interval recommended is 24 months.

LITERATURE REVIEW

Data on postpartum family planning (PPFP) worldwide is limited. The prevalence of postpartum contraceptive use even within some countries varies depending on geography, socioeconomic and religious factors. In Mexico among urban low income women the prevalence of modern contraceptive use in the postpartum period is 47 percent (7). An analysis of 17 countries, Bangladesh, Zambia and Malawi reports a prevalence rate of 40% whilst Pakistan and other African countries has a prevalence rate of about 20% (8). The postpartum use of modern contraceptive in Uganda is 28% (9). Tanzania has a prevalence rate of 10% between three to six months post partum and this increases to around 20% between six and twelve months post partum (8).

Research worldwide shows that there are several factors that influence the decision of postpartum mothers to use contraceptives. These include age, educational level, parity, cultural and religious factors, spousal influence and health service related factors.

In Malawi high rates of 40% of postpartum contraception among women between the ages of 20-34, lower rates of around 10% among women below 19 and above 35 years of age (10). Contraceptive use in Uganda during the post partum seems to decrease with increase in age (11).

The level of education does not influence the use of post partum contraception in Turkey when pregnant women were interviewed on their thoughts about post partum contraception (12). There is a strong association between the level of education and modern contraceptive use in Ethiopia (13). The same was observation is seen in Northern Tanzania where the more educated women are more likely to use the methods as a way of post partum contraception (14).

The number of children influence the use of post partum contraception, the more children a woman has the more likely they are going to use contraception. In Nigeria the more children a woman has, is more likely to use post partum contraception (15). This has as well been demonstrated in other low income countries including Guatemala, India, Kenya, Pakistan and Zambia (16).

Cultural and religious factors also play a role in the use of PPFPP especially in setting where women depended on their in laws and relatives for information surrounding birth. Situations like this means they would fall victims of myths and misconceptions hence shy away from using modern contraception. Young mothers lack knowledge and experience of the post partum period as compared to older women (17). Five East African countries Rwanda, Burundi, Kenya, Uganda and Tanzania show disparity in relation to this. In Tanzania, women in Zanzibar, Lake and Western regions are over 10 times more likely to use non-modern contraceptives compared to women in the Southern region. This could be a reflection of existing differences in culture and religion (18).

Male partner influence is dominant in all spheres of life in most African countries. Family planning practices among women are influenced by husband's socio demography and role in decision making. Thus a husband is an individual that will influence the wife to use a contraceptive method (19). Male should be involved in decision making the choice of contraception as this maybe increase acceptability of PPFPP is they approve of it (20).Leveraging contact between women and health care providers through adequate antenatal and post natal visits increases use of contraception after delivery as observed in data analyzed in low income and low middle income countries (8). Women who do not attend antenatal clinics are at a higher risk of unintended pregnancies. Deficiencies in postpartum counseling results in few women having information about return to fertility, fertility intentions and transition from LAM to other modern methods of contraception thus affecting contraceptive use post delivery (10). Lack of knowledge on pregnancy risk during amenorrhea needs to be addressed through additional counseling on post partum contraception by health care providers.

There are several types of contraception from barrier, hormonal, non hormonal to permanent methods. In India female sterilization and long term methods such as IUCD are gaining popularity compared to other methods (4). Male condoms use is popular followed by injections and pills then IUCD among the women who use PPFPP in Nigeria (15). Injectable are popular followed by pills and withdrawal in Malawi, the lowest being IUCD and female condom (17).

Postpartum period is a good time to initiate contraception as the women is likely to accept and use the method. Those who choose to use the method will have a healthy life as well as healthy children. Modern contraception during post partum is less researched in Tanzania hence this study looks into determinants for use of postpartum contraception among mothers bringing children less than 12 months old to Mnazi Mmoja child health clinic.

PROBLEM STATEMENT

Short inter pregnancy interval remains a serious public health problem worldwide because of its negative impact on the mother, baby and the community as a whole. Despite the considerable risk of untimed pregnancy within two years of delivery, many young mothers often do not pay attention to postpartum contraception. Thus the lapse between the resumption of sexual intercourse and adoption of an effective contraceptive method often leads to short interval pregnancy with elevated risk of maternal and neonatal morbidity and mortality. Over the years, safe motherhood programs and other interventions have promoted the postpartum contraceptive use and also reduce unmet need for contraception across the country with the aim of helping all women achieve at least two year birth intervals. Uptake of post partum family planning will alleviate cost burden both within the family and to the nation, ensure good health and nutrition for both mother and child and will also contribute in reducing maternal and child mortality. In view of the serious adverse consequences associated with short inter pregnancy interval, this study will explore the prevalence of postpartum contraceptive use. There is inadequate information on postpartum contraception among mothers in Tanzania

RATIONALE OF THE STUDY

WHO estimates that 303,000 maternal deaths occurred in 2015 in sub-Saharan Africa with a lifetime risk of maternal death of 1 in 180 in developing countries versus 1 in 4900 in the developed countries. Sub-Saharan Africa has the greatest unmet need for family planning with only 21 percent married women aged 15-49 using modern contraception compared to 56 percent for other developing regions of the world (21).

The child bearing continuum comprising of the antenatal, intra partum, immediate postpartum and the extended postpartum periods offer great opportunities for contraceptive counselling due to frequent visits to the healthcare facility and regular interactions between the pregnant women and health care providers (22).

This study will add to the existing literature and go a long way to help address contraceptive needs among postpartum women in the districts surrounding Mnazi Mmoja and Tanzania as a whole. The result will inform interventions targeted at postpartum women with the goal of reducing morbidity and mortality related to short-interval pregnancies.

Conceptual framework for the determinants of modern contraceptive use among mothers attending child health clinic at Mnazi Mmoja

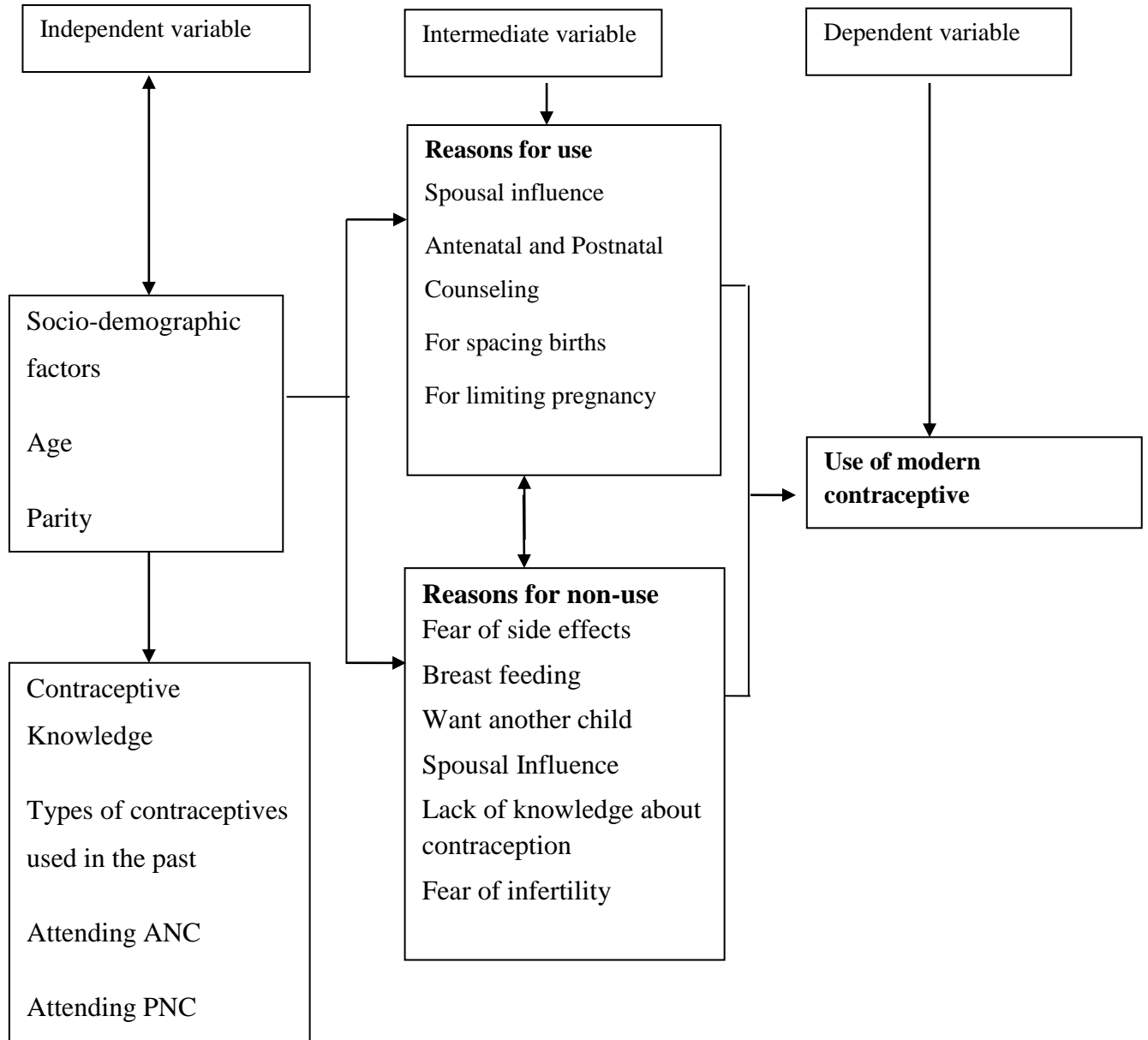


Figure 1: Conceptual Framework for this study, based on reviewed literature

The determinant variables are classified in three major categories: mothers' knowledge in family planning, socio-demographic characteristics and fertility preference. Based on this conceptual frame work and the analysis evaluated the effects of the outlined determinants on modern contraceptive use.

Explanation of Conceptual Framework: There are social demographic factors which may influence the clients' contraceptive knowledge and also health seeking behaviour which in this case is family planning. They are interlinked for example the patient's clients' level of education may play a role in terms of knowing when and where to seek for contraception after delivery. Health related factors such as method availability also plays a vital role as a patient may have delivered in a centre where the preferred method is not offered and she is referred for the service elsewhere. This may lead to non use as a result of either distance, partner support and at times she has other kids to care for hence unable to make the time to seek for this service. In other cases it maybe as result of unskilled personnel in providing the required service or the attitude of the provider to the client may be poor. Health related factors, socio demographic factors and contraceptive knowledge are intertwined and may be reasons for use or non use. The above factors can be modified through various interventions aimed at improving post partum family planning services.

Research Question

What are the proportion and the determinants of postpartum contraceptive use among mothers attending Mnazi-Mmoja hospital child health clinic, Dar-es-salaam from January to March 2017.

Objectives

Broad objective

To determine proportion and factors associated with contraceptive use among mothers with children 12 months of age and below attending child health clinic at Mnazi-Mmoja Hospital in Dar es Salaam.

Specific objectives

1. To determine the proportion of contraceptive use among mothers with children less than 12months attending Mnazi Mmoja child health clinic.
2. To identify the type of contraceptives used by mothers with children less than 12 months attending Mnazi Mmoja child health clinic.
3. To determine the factors associated with contraceptive use among mothers with children less than 12 months attending Mnazi Mmoja child health clinic.

METHODOLOGY

Study Design

This was a cross-sectional hospital-based study, the obtained proportion of mothers who used PFP in this study was 60.4%, and the most used type of modern contraceptive was implant followed by injectables, IUD, Condoms and pills was the least used.

The factors that were associated with increased use of contraceptive were age group (OR=3.040, CI 1.203-7.681), previous history of contraceptive use (OR=5.464, CI 2.256-13.234), resumption of menses (OR=26.383, CI 12.315-56.521), partner's approval (OR=4.596, CI 1.800-11.738), choosing FP during ANC (OR=2.812, CI 1.447-5.467) and counselling on FP after delivery (OR=19.919, CI 5.256-75.484).

Study Area

Mnazi Mmoja is in Ilala municipality which has a population of 634,924 but serves the surrounding districts as well such as Kinondoni and Temeke most of them being self-referral clients because of its central location and easy access. Mnazi Mmoja Hospital is a government hospital located in Michikichi Street which is one of three local government authorities in Dar-Es-Salaam. The Maternal and Child Health Centre at Mnazi Mmoja Hospital is called the Amtullabhai Kareemji Maternal and Child Health Centre. This Centre offers services for family planning, routine antenatal care, HIV testing and counselling in pregnancy and vaccinations for both mother and child. The ground floor has one room used for vaccination, one room for HIV testing and counselling, one room is the doctor's room where the patients with complications are seen. There is also the office of the nurse in charge where mostly administrative duties are done.

The registration room is the first room next to the entrance and the room next to the exit is the vaccination for both mother and child. The clinics are conducted on all working days (Monday to Friday) and not on public holidays, there is always a nurse attending to clients. The total number of children attending the clinic per day is estimated to be 20 and they receive vaccination as per the Tanzanian immunization schedule.

Study Population

All mothers attending child health clinic with a child less than 12 months at Mnazi-Mmoja hospital during the study period from January to March 2017.

Inclusion and exclusion criteria

i. Inclusion criteria

Mothers with children less than 12 months

ii. Exclusion criteria

Mothers who were pregnant at the time and those who have had hysterectomy.

Sample Size Estimation

To estimate the true proportion of women using some method of contraception with need for family planning services within $\pm 5\%$ points with 95% confidence,

With $p = 0.20$ ($q=1-p$), $d=0.05$, $\alpha =0.05$ and $Z=1.96$;

Given that: $n = \frac{Z^2 \cdot P \cdot q}{d^2}$ (23)

Then

$$n = \frac{(1.96 \times 1.96) \times (0.20 \times 0.80)}{(0.05 \times 0.05)} = 246$$

From determinants of previous studies in order to be able to get an adequate sample size for this study this figure was doubled. Therefore, the sample size was 492 but was rounded off to 500 mothers.

Doubling was done in order to obtain a sample size that could give better results as the sample size calculated from the prevalence was small.

$p =$ Prevalence (The modern post partum contraceptive prevalence rate) = 20% (8)

$q = 100\% - 20\% = 80\%$

d = the margin of error on p (put at 5%), i.e. maximum error the PI was willing to allow, between the estimated prevalence of the outcome P and the true prevalence in the population = 5%

Sampling Technique

It was a convenience sampling where all mothers with children 12 months and below attending child health clinic at Mnazi Mmoja hospital were recruited into the study consecutively until the sample size was reached. Approximately 10 to 15 women were interviewed per day 5 days a week from January to March, 2017.

Training and Recruitment of Research Assistants

Research assistants were trained for one day by the principal investigator but whenever questionnaires were being entered into the SPSS. Two research assistants were selected among nurses working in the child health clinic and trained on the purpose of the study and how to collect data using a questionnaire. Supportive supervision was done whenever missed information was picked during data entry. Principal investigator also participated in data collection and assurance of quality of data.

Data Collection

Participants were women who were bringing their children for immunization services at MCH clinic at Mnazi Mmoja Health Centre. The principal investigator and the two research assistants reviewed their RCH 4 cards for the date of delivery and if this was not available then brief history was taken to determine time of last delivery. Women who delivered within 12 months and below were recruited in the study including those who attend the clinic for other issues apart from immunization including illnesses. Those who were eligible for the study were informed about the objectives of the study and consent obtained.

A questionnaire adopted from the TDHS 2014 which was modified to suit the study was used for data collection (Appendix 1). The first part of the questionnaire included questions on demographic characteristics for each participant such as current age, age at first delivery, marital status, occupation, education and religion. The second part of questionnaire was to inquire obstetrics and contraceptive history including parity, pregnancy interval, prior history of modern contraceptive exposure and if previous

pregnancy was planned. Third part covered current contraceptive use including resumption of post-partum menstruation and sexual intercourse, use of modern contraceptives; method used and partner involvement on family planning. Lastly the fourth part was to inquire about factors affecting contraceptive use including place of delivery, attendance of ANC and PNC and if counselling was done during the visits. Interviews were carried out by the principal investigator and the research assistants. Data collected in the study was entered in duplicate in IBM SPSS version 20 statistical analysis computer program.

Women eligible for the study were interviewed by the PI or the research assistants in privacy in a section put aside inside the clinic to ensure confidentiality. Their RCH 4 cards were marked on the inside with a red pen to avoid repetition.

Data Collection Tools

The questionnaire was adopted from TDHS 2010 and changes made accordingly to meet the specific objectives.

Data Management and Analysis

Data was checked for completion and consistency. Data analysis was done to determine the strength of association between dependent and independent variables using Chi square for categorical variables. Continuous variables namely Age, number of children and pregnancy interval were regrouped to help in analysis and coding done. All statistical tests were performed at 5% significance level (95% confidence interval). Cross tabulation was performed to find the association between contraceptive use with demographic characteristics, obstetric and other factors where Chi square and P values were obtained. Bivariate analysis was done to obtain crude odds ratio, 95% CI and P value. All the variables that had a P value less than 0.2 was subjected to multivariate analysis. From the multivariate analysis some variables had very wide CI so modifications were done by removing some of the variables so as to obtain a good model. The wide CI and high AORs were are result of insufficient cells containing events less than 12.

Ethical Consideration

Ethical clearance was sought from Muhimbili University of Health and Allied Sciences Senate research and publication committee. Permission to conduct the study was sort from the Medical officer in charge of the Mnazi Mmoja hospital. The participants got

explanation about the research, its purpose, confidentiality and safety. Informed consent was sought from all the patients who were eligible for the study and they were informed of their right to withdraw at any point of the study.

Pregnancy carries risks for every woman, but particularly for those under age 20. The most recent Tanzania Demographic and Health Survey revealed that pregnancy were found to be highest in the southern regions, where 35% of 15-19 year old girls were pregnant or already mothers. The 1989 Convention on the Rights of the Child (CRC) makes it clear that children under 18 have rights towards their reproductive health and should not be declined services to avoid sexually transmitted diseases, HIV/AIDS and unwanted pregnancies. Considering these information; those under 18 were therefore be included in the study and a request to waiver parental or guardian consent was sought. Mnazi Mmoja hospital provides adolescents reproductive health friendly services including family planning therefore it did not pose any challenges during data collection.

RESULTS

During the study a total of 505 women were interviewed from January to March 2017 and recruited but 5 were left out of the analysis because of missing information. Among the 500 women whose data was analyzed 302 were using modern contraception making the proportion 60.4%

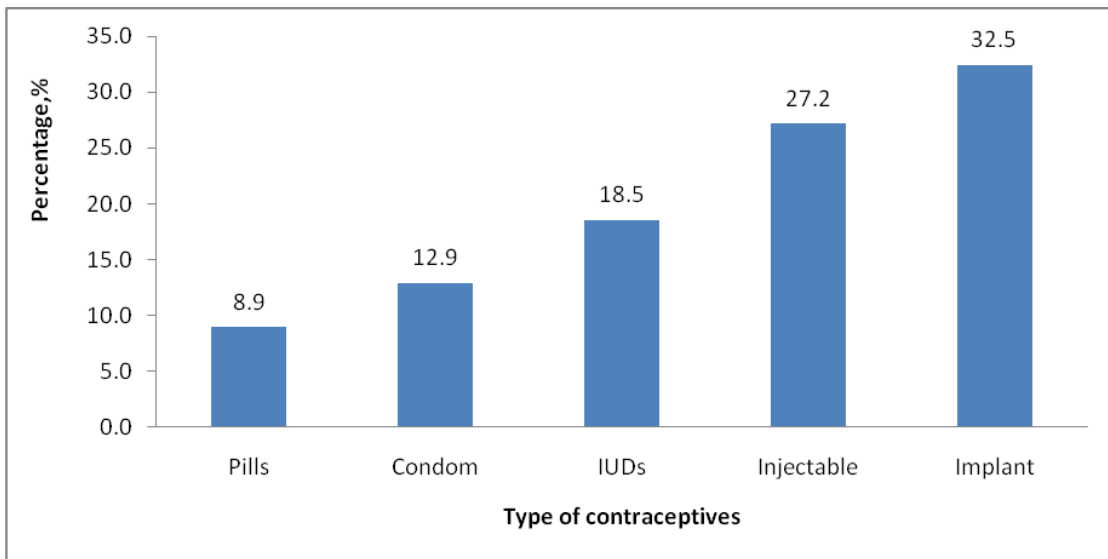


Figure 2: Graph showing percentages of the types of contraceptives being used among the 302 mothers who used Post Partum Family Planning at Mnazi Mmoja child health clinic.

Table 1: Socio demographic, obstetric and other reproductive characteristics among mothers using and not using modern contraceptive (N=302).

Variable	Total	Using contraceptive; (N=302) n (%)	Not using contraceptive; (N=198) n (%)	Chi2	p-value
Age group					
<=25	121	43(14.2)	78(39.4)	42.525	0.000
26-30	138	94(31)	44(22.2)		
31-35	126	82(27.2)	44(22.2)		
>35	115	83(27.5)	32(16.2)		
Education level					
Primary and below	277	157(52)	120(60.6)	4.757	0.093
Secondary	167	112(37.1)	55(27.8)		
College/university	56	33(10.9)	23(11.6)		
Marital status					
Married/ Cohabiting	423	264(87.4)	159(80.3)	4.646	0.031
Single	77	38(12.6)	39(19.7)		
Current occupation					
Unemployed	147	71(23.5)	76(38.4)	49.573	0.000
Farmer	38	27(8.9)	11(5.6)		
Business	248	182(60.3)	66(33.3)		
Other	67	22(7.3)	45(22.7)		
Number of children					
1	155	62 (20.5)	93(47)	40.498	0.000
2	149	109(36.1)	40(20.2)		
>=3	196	131(43.2)	65(32.8)		
Partner level of education					
Primary and below	233	131(43.4)	102(51.5)	4.408	0.110
Secondary	154	103(34.1)	51(25.8)		
College/university	113	68(22.5)	45(22.7)		
Pregnancy planned					
Yes	411	253(83.8)	158(80.2)	1.047	0.306
No	89	49(16.2)	40(19.8)		
Previous history of contraceptive use					
Yes	392	291(96.4)	101(51)	145.224	0.000
No	108	11(3.6)	97(49)		

<hr/>					
Return of menses					
Yes	374	284(94)	90(45.5)	149.764	0.000
No	126	18(6)	108(54.5)		
Resumed sexual intercourse					
Yes	399	281(93)	118(59.6)	83.014	0.000
No	101	21(7)	80(40.4)		
Partner's approval					
Yes	405	288(95.4)	117(59.1)	102.244	0.000
No	95	14(4.6)	81(40.9)		
Place of delivery					
Yes	476	289(96.7)	187(94.4)	0.410	0.522
No	24	13(4.3)	11(5.6)		
Attended ANC	493	302(100)	191(96.5)	10.828	0.001
Yes	7	0(0)	7(3.5)		
No					
Attended PNC				6.501	0.011
Yes	469	290(96)	179(90.4)		
No	31	12(4)	19(9.6)		
PNC counselling					
Yes	449	285(98.3)	164(91.4)	12.010	0.001
No	20	5(1.7)	15(8.4)		
Choose FP during ANC					
Yes	282	217(71.9)	65(32.8)	74.070	0.000
No	218	85(28.1)	133(67.2)		
Counselling on FP after delivery					
Yes	465	296(98)	169(85.4)	29.442	0.000
No	35	6(2)	29(14.6)		
<hr/>					

Table 1 shows that majority of participants were between 26-30 years of age. Most of them were married or cohabiting, and about half of them were doing business for a living. Age, marital status, both the mother's and partner's level of education and occupation showed significant association with PFP with a p values less than 0.2. Furthermore, obstetric and

other variables showed significant association with PFP use except for if the previous pregnancy was planned and place of delivery.

Table 2: Bivariate logistic regression analysis for the use of modern contraceptive

Variable	Using contraceptive N(%)	OR	95%CI	p-value
Age group				
≤ 25	43(14.2)	Ref		
26-30	94(31)	3.875	(2.312-6.495)	0.000
31-35	82(27.2)	3.381	(2.005-5.699)	0.000
>35	83(27.5)	4.705	(2.709-8.173)	0.000
Education level				
Primary and below	157(52)	Ref		
Secondary	112(37.1)	1.556	(1.043-2.324)	0.030
College/university	33(10.9)	1.097	(0.612-1.965)	0.094
Marital status				
Married/ Cohabiting	264(87.4)	Ref		
Single	38(12.6)	1.704	(1.046-2.776)	0.032
Current occupation				
Unemployed	71(23.5)	Ref		
Farmer	27(8.9)	2.627	(1.214-5.687)	0.014
Business	182(60.3)	2.952	(1.922-4.533)	0.000
Other	22(7.3)	0.523	(0.286-0.957)	0.036
Number of children				
1	62(20.5)	Ref		
2	109(36.1)	4.087	2.518-6.634	0.000
≥3	131(43.2)	3.023	1.951-4.684	0.000
Partner level of education				
Primary and below	131(43.4)	Ref		
Secondary	103(34.1)	1.573	(1.029-2.402)	0.112
College/university	68(22.5)	1.777	(0.745-1.858)	0.036
Pregnancy planned				
Yes	253(83.8)	1.274	(0.800-2.029)	
No	49(16.2)			
Previous history of contraceptive use				
Yes	291(96.4)	25.407	(13.087-49.323)	0.000
No	11(3.6)	Ref		

Return of menses				
Yes	284(94)	18.933	(10.897-32.897)	0.000
No	18(6)	Ref		
Resumed sexual intercourse				
Yes	281(93)	9.-072	(5.359-15.358)	0.000
No	21(7)			
Partner's approval				
Yes	288(95.4)	14.242	(7.764-26.123)	0.000
No	14(4.6)	Ref		
Place of delivery				
Yes	289(96.7)	0.765	(0.336-1.743)	
No	13(4.3)			
Attended ANC				
Yes	302(100)	0.000	(0.000-)	
No	0(0)			
Attended PNC				
Yes	290(96)	2.565	(1.216-5.411)	0.013
No	12(4)	Ref		
PNC counselling for FP				
Yes	285(98.3)	0.262	(0.135-0.506)	
No	5(1.7)			
Choose FP during ANC				
Yes	217(71.9)	5.224	(3.542-7.703)	0.000
No	85(28.1)	Ref		
Counselling of FP after delivery				
Yes	296(98)	8.465	(3.445-20.803)	0.000
No	6(2)	Ref		

Younger single mothers with secondary education, with 2 children were more likely to use modern contraception post partum. Furthermore, those with previous history of contraceptive use, resumed menses or sexual intercourse, had partner's approval, attended

PNC/ANC, chose FP during ANC and had counselling on FP after delivery show association with use of modern contraceptive.

Previous history of contraceptive use, having resumed menses, attending ANC/PNC, receiving PNC counselling on FP and counselling after delivery for FP had very few events. (Table 2)

Table 3: Multivariable logistic regression analysis on use of modern contraceptive among mothers with children less than 12 months attending child health clinic at Mnazi Mmoja

Variable	AOR	95% CI	P value
Age group			
Below 25			0.010
26-30	3.040	1.203-7.681	0.019
31-35	0.714	0.306-1.666	0.436
Above 35	1.196	0.466-3.069	0.710
Occupation			
Unemployed			0.000
Farmer	5.950	0.905-39.113	0.063
Business	2.737	1.409-5.318	0.003
Other	0.309	0.117-0.817	0.018
Previous history of contraceptive use			
Yes	5.464	2.256-13.234	0.000
No			
Return of menses			
Yes	26.383	12.315-56.521	0.000
No			
Partner's approval			
Yes	4.596	1.800-11.738	0.001
No			
Choose FP during ANC			
Yes	2.812	1.447-5.467	0.002
No			
Counselling after delivery for FP			
Yes	19.919	5.256-75.484	0.000
No			

In Table 3, some of the variables that had small events including attending ANC/PNC, PNC counselling on FP were excluded. Place of delivery and if pregnancy was planned had p values < 0.2 were also not included in the multivariate logistic regression analysis.

Women who had history of using contraceptives were five times more likely to use modern contraceptive compared to those who had not used before (OR=5.464, CI 2.256-13.234). Having partner's approval is four times likely to use modern contraceptive (OR=4.596, CI 1.800-11.738), women who chose FP during ANC were two times more likely to use modern contraceptive (OR=2.812, CI 1.447-5.467). Others that had a likelihood of using modern contraceptive are women in the age group 26-30years, did farming, had resumed their menses and those who had counselling on FP after delivery.

DISCUSSION

Many postpartum women have unmet family planning needs even though most of them would desire to use contraception only a few actually seek these services (4). Much of the research literature about the use of family planning generalizes contraceptive use among all women, this study has tried to assess contraceptive use specifically among women in the postpartum period and its associated factors.

The study revealed post partum contraceptive prevalence rate as 60.4%. This is higher than expected but Mnazi Mmoja being one of the leading health facilities in provision of family planning could be a reason. The TDHS 2015 reports that 32% of married women used modern contraceptive (24). These findings on the TDHS are community based and not specific to postpartum mothers which explains the difference in prevalence. Most mothers after delivery would be motivated to use contraception probably for spacing or delaying birth and may also be because they are in frequent contact with health services during post natal and child health clinics. Prevalence of PFP in our study is of great use because it can provide a clue as to why the prevalence rate at Mnazi Mmoja is higher and the reasons can be applied to other facilities in the country therefore resulting in improvement in utilization of family planning services. Moreover postpartum mothers would also be motivated to use contraception compared to the general public because of the demand to take care of a new born or a younger child.

This study revealed that implants followed by injection were the commonest method of contraception being used at 29.1% and 24.3% respectively. This is slightly different from findings of the TDHS where generally women tend to use injectable followed by implants. The difference is in Ethiopia where most women used injectable followed by implant at 59.7% and 24.7% respectively (25). In mid 2016 there was a new type of implant called implanon NXT that was introduced at Mnazi Mmoja, among other things covered during counselling, information on how insertion is done is covered, in this case the technique is easier compared to the previously used implant which may have led more women to prefer the implant.

Occupation was significantly associated with increase in contraceptive use where a woman who is employed is more likely to use PFP. Similar findings are observed in another

study where women with higher socio economic status were more likely to use modern contraceptive. Contraceptive use was maximum among women with higher socio economic status compared to those with lower socio-economic status in Bellary, Karnataka (26). The policy of maternal leave once every 3 years could also influence the employed to use contraception.

Previous history of contraception was associated with use of modern contraception in this study, women who had previously used contraceptive were five times more likely to use compared to those who had not used before. This was also seen in a study where history of using contraceptives was a factor that would influence uptake of contraceptive (24,25). Previous history of use could influence both negatively and positively; positively if the user encountered no or few side effects or if they generally understood benefits of contraception and how to deal with side effects. Negatively if there were side effects or counseling on the benefits and side effects was inadequate. Effective counseling on possible side effects is needed to reduce discontinuation rates.

Women who had resumed menses were more likely to use contraceptives compared to women who had not resumed their menses. Having menstruation means menstrual cycle is going back to normal and chances of getting pregnant are increased. Similar findings were observed from the Malawi DHS 2010 where they 2 times more likely to use contraceptive compared to those who had not resumed their menses (17). The same was also noted in a study done in Nairobi slums in 2007 where women were more likely to seek contraception after resuming their menses (29). Resumption of menses is more likely to increase the chances of getting pregnant because most are associated with ovulation therefore adopting a contraceptive lowers this risk. The time taken for one to resume menses if longer, it is likely that more women would delay making the decision to use modern contraception.

Partner approval is also a significant factor associated with modern contraceptive use which is consistent with studies done elsewhere. Three quarter of the mothers who used contraceptive in this study had partners approval which is almost close to 89% in a study previously done at Shinyanga (30). The same was noted also where couples who discussed openly about family were more likely to use contraception than their counterparts (31). Spousal communication is a focal point in family planning programs to encourage couples

share ideas about reproductive goals and with the help of providers, they will then make informed choices.

Women who chose a type of modern contraception during ANC were more likely to use a modern contraceptive as this was significantly associated with increased contraceptive use. The results also demonstrates that family planning counseling done at antenatal clinic yields more positive results in that women are able to choose a method of contraception. Hence women that do not attend ANC will lack this opportunity to get crucial information and would be less likely to use modern contraceptive resulting in having closely spaced pregnancies. Women who had never heard of a contraception were more likely to experience an unwanted pregnancy as they would not be able to choose a method of contraception reported in a study done in Ethiopia (32). Choosing a method during ANC is important because this is also the time when the woman decides on feeding options for the baby so she will be able to choose a method that is suitable for her and the baby. This will also depend on other factors such as the number of children she desires, how long she wants to space, antenatal period would also give her time to consult the partner as she waits for delivery because he also plays a vital role in approving what methods would suit both of them. Methods such as IUD could even be chosen antenatally to enable insertion immediately after delivery if there are no contradictions.

Counselling on family planning after delivery was associated with increased use of contraceptive. This was also seen in a study done in Turkey where women were more likely to use contraception if they received counselling following delivery (12). Counselling generally helps the client to make an informed choice and gives them another chance to clarify what they may not have understood during ANC counselling. In a study done to compare counselling pre natal and post natal among Italian women and immigrant showed that women were more likely to use contraception if counselled (33). A woman will make an informed choice based on the information provided by the health professionals who will improve her knowledge and awareness on contraception.

It is a hospital based study done in one centre in an urban area and therefore not a representative of the population. A community based study would give a better representation of the general population if done in different set ups both rural and urban.

Some of the barriers to use of contraceptive that were mentioned by those who did not use included fear of side effects, fear of being infertile, intention to use but later when menses resume, desire to have more children among others. Addressing this barriers would further increase prevalence because most of them are myths that could be addressed through creating awareness on the effectiveness, how contraception work, side effects and existing co morbidities that could affect the fertility of a woman for example an active STI and insertion of IUD during this period.

The study was powered to achieve the outcome and this was achieved however assessment of confounding was a challenge due to limited number of events related to those confounders, a much larger study would help in getting the role of those confounders on the outcome.

The main strength of the study is that it's one of the few studies done to find out factors associated with PFP in Tanzania. Data on PFP is still limited and this study will help in identifying the gaps so that future studies can be addressed to meet the gap. The TDHS 2015-16 for example has data but has not been tailored to PFP, it has information on general use of contraceptives among women of reproductive age that is 15-49, has gone further to classify use among married and not married women and also give prevalence per different regions of Tanzania.

The results are consistent with those of other studies done in other parts of Africa like in Ethiopia and Uganda where there seems to be data on PFP and are supported by known mechanisms for utilization of modern contraceptive use (9,31).

CONCLUSION

The proportion of mothers attending child health clinic with a child less than 12 months using PFP in Mnazi Mmoja is higher. Higher level of education, occupation, parity, previous history of contraceptive use, resumption of sexual intercourse, partner's approval and attendance of ANC and PNC were associated with increased use of post partum modern contraceptive use.

RECOMMENDATIONS

Emphasize on counselling during ANC on family planning which should continue throughout covering the period during delivery and after. Counselling done at ANC should go further to allow the mothers to actively choose a method of contraception after delivery and then it should be offered to them as soon as possible if still eligible.

More studies need to be done in several centres in both rural and urban areas so the findings can be generalized as this study was done in one centre in an urban setting.

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APPENDICES

Appendix 1: Consent Form English Version

Introduction

I am Dr. Mitei Beverly, a postgraduate student from Muhimbili University of Health and Allied Sciences (MUHAS) from the department of obstetrics and gynaecology. I am conducting a study titled; ‘Determinants of modern contraceptive use among mothers attending child health clinic at Mnazi Mmoja.’ The aim of conducting this study is as a prerequisite for the completion of my studies, but also the results of this study will generate deeper understanding of the problem and ultimately lead into more improved post partum family planning services. Your participation in this study will include the following; getting information about your general condition prior to the last delivery, reasons for choosing contraception after delivery and the type of contraception .

Participation in the study

You are kindly requested to participate in this study. If you accept to participate in this study your particulars/information will be taken and used for the purpose of the study and this will certainly not bother you or cause any discomfort to you.

Confidentiality

You are strongly assured of the confidentiality of the information obtained that will only be used for the purpose of this study and anonymity will highly be observed when collecting data and compiling report. To assure you, even your name will not be required to appear in the questionnaire.

Risk to participant

No anticipated risk or harm that may result from participating in this study. Your participation is absolutely voluntary and there is no penalty for not participating. You will receive the standard of care given to all other such patients. You are free to ask any question and you may stop to participate in this study any time.

Contact Person

In case of any queries about this study contact the principal investigator, Dr. Mitei Beverly, contact number is +255689225205. If you have any questions/concerns about your rights as a participant you may contact Dr Joyce Masalu, the chairperson of Senate Research and Publication, Muhimbili University of Health and Allied Sciences, P.O.BOX 65001, Dar es salaam, telephone number +255 222 152 489.

Signing of the consent

If you agree to participate in this study please sign in this consent form.

I (initials)..... have read and understood the contents of this form and I have been given satisfactory explanation with all my questions answered. I therefore consent to participate in this study.

Signature of intervieweeDate.....

Signature of interviewerDate

Appendix 2: Consent form Kiswahili version

FOMU YA RIDHAA KUSHIRIKI KATIKA UTAFITI

Utangulizi;

Naitwa Dkt. Mitei Beverly, ni mwanafunzi wa uzamili Chuo Kikuu cha Sayansi za Afya Muhimbili, idara ya magonjwa ya akina mama na uzazi. Ninafanya utafiti kuhusiana na ‘upangaji wa uzazi kwa wakina mama waliojifungua ndani ya mwaka mmoja wanaoleta watoto wao clinic ya chanjo Mnazi Mmoja’ Ninafanya utafiti huu kama hitaji la lazima ili niweze kumaliza masomo yangu. Pia matokeo ya utafiti huu yatasaidia kufahamu kwa undani zaidi kuhusu jambo hili na matokeo yake kuboresha zaidi huduma za upangaji wauzazi. Ushiriki wako katika utafiti huu utahusisha yafuatayo; kupata taarifa kutoka kwako kabla ya kujifungua mimba ya mwisho, sababu ya kutumia uzazi wa mpango na njia ipi ulichagua.

Kushiriki katika utafiti huu

Tafadhali unaombwa kushiriki katika utafiti huu, na mara tu utakaporidhia, unahakikishiwa kuwa habari zako na maelezo utakayotoa yatumika kwa makusudio na malengo ya utafiti huu tu na kuwa hii haitakuletea usumbufu wowote.

Usiri wa taarifa za mshiriki

Unahakikishiwa tena kuwa taarifa zozote zitakazopatikana kutoka kwako wakati wa utafiti huu zitapewa usiri mkubwa sana na hazitatumika kwa malengo mengine yeyote tofauti na utafiti husika. Kuhakikisha hilo dodoso litakalohusika halitakuwa na jina lako wakati wote wa utafiti na hata baada ya utafiti.

Athari za utafiti huu kwa mshiriki

Hakuna athari au madhara yeyote yatakayo kupata kutokana na kushiriki katika utafiti huu. Ushiriki wako katika utafiti huu ni wa hiari kabisa. Unayo haki ya kushiriki au kutoshiriki bila kulazimshwa. Pia unayo haki ya kukataa kuendelea kushiriki / kuacha kujibu maswali wakati wowote utakapojisikia kufanya hivyo na hakutakuwa na hatua yeyote itakayochukuliwa dhidi yako au kulaumiwa kwa kufanya hivyo.

Taarifa / Mawasiliano

Kuna kamati ya kusimamia udhibiti wa utafiti huu.

Endapo unahitaji kupata maelezo kuhusu haki zako au taarifa ,wasiliana nami Dr. Mitei Beverly, +255689225205. Kama una swali lolote kuhusu haki yako kama mshiriki wasiliana na Dr Joyce Masalu, mwenyekiti wa kamati ya utafiti na machapisho chuo kikuu cha Afya na Tiba Muhimbili, kwa S.L.P 65001 Dar es Salaam.

Kukubali kushiriki

Ukikubali kushiriki tafadhali thibitisha kwa kujaza na kusaini sehemu ya fomu hii hapa chini.

Miminimesomewa na kuelewa yaliyomo kwenye form hii na maswali yangu yote yamejibiwa vizuri. Hivyo ninakubali mwenyewe kwa hiari yangu bila kushurutishwa au kushawishiwa kushiriki katika utafiti huu.

Sahihi ya mhojiwa.....

Tarehe.....

Sahihi ya mhoji.

Tarehe.....

Appendix 3: Questionnaire – English version

Instructions to the interviewer

1. Circle the response or write in the space provided.
2. Make sure you follow the skip patterns
3. Countercheck to ensure all the relevant questions are completed

SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS		
NO.	Question	Response
1	How old are you? (Complete years)
2	What is your highest level of your education?	1. No formal education
		2. Basic
		3. Secondary
		4. College/University
3	What is your religion?	1. Christianity
		2. Islam
		3. Traditional
		4. Other (Specify.....)
4	What is your current marital status?	1. Married
		2. Cohabiting/Single
5	What is your current occupation?	1. Student
		2. Farmer
		3. Unemployed
		4. Business
		5. Other
6	What is your partner's educational level?	1. No formal education
		2. Basic
		3. Secondary
		4. College/University
7	Where do you live?

Obstetrics and Contraceptive history		
No	Question	Response
8	How many children do you have?	1. One
		2. Two
		3. Three
		4. Four
		5.
9	What is the age of your last child?(in months)
10	After weaning this child do you like to have another child?	1. Yes
		2. No
11	Did you ever use any contraception?	1. Yes
		2. No
12	If yes, what method did you or your partner use?	1. Injectable
		2. Pills
		3. IUD
		4. Condom
		5. Implant
		6.
		7. Withdrawal
		8.
		9.
13	Why did you use the contraception?	1. Space
		2. Delay
		3.
14	If no, why did you not use any contraception?	1. I wanted to have a child
		2. I did not think I could be pregnant

		3. My religion forbids	
		4. My partner objects to use	
		5. I am afraid of side effects	
		6. I am afraid of becoming infertile	
		7. Others	
15	Did you experience any problems with that contraception?	1. Yes	
		2. No	
16	If yes what problems did you face?	1. Prolonged vaginal bleeding	
		2. Headaches	
		3. Backaches	
		4. Abdominal	
		5. Dizziness	
		6. Other	

Obstetrics and Contraceptive history		
No	Question	Response
17	Who informed you about the method?	1. Friend
		2. Relative
		3. Health worker
		4. Television / Radio
		5. Internet
		6. Other (Specify).....
18	Was your last pregnancy planned?	1. Yes
		2. No
Current contraceptive use		
19	Have you menstruated after delivery of this child?	1. Yes
		2. No
20	At what age was your child when you started menstruating? (State in	
21	Have you resumed sexual intercourse	1. Yes
		2. No
22	If yes at what age was your child when you resumed sexual intercourse?	
23	Are you currently using any family	1. Yes
		2. No
24	If yes, what method are you using?	1. Injectable
		2. Pills

		3.IUD	
		4.Condom	
		5.Implant	
		6.Emergency contraception	
		7. Withdrawal	
		8. Herbal medicine	
		9. Other	
25	If no, why are you not using family planning method?	1.I want to have another child	
		2. My husband disapproves	
		3.It is harmful to the health of my child	
		4.I could not get a method of my choice	
		5.I am breastfeeding	
		6.My religion disapproves	
		7.I am afraid of side effects	
		8.I am afraid I will not become pregnant again	
		9.I intend using contraceptives later when menstruation begins	
		10. Others (Specify).....	
26	Did you and your partner talked about family planning since you delivered?	1.Yes	
		2.No	
27	Does your partner approve of contraceptive use?	1.Yes 2.No	

Factors affecting postpartum contraceptive use

28	Where did you deliver your baby?	1. Health facility
		2. At home
29	Did you attend antenatal clinic during	1. Yes
		2. No
30	How many times did you attend antenatal clinic?	1. None
		2. One
		3. Two
		4. Three
		5. Four
		6. Other (Specify)
31	Have you attended postnatal clinic?	1. Yes
		2. No
32	If yes, did you receive any information on family Planning method during the antenatal visit?	1. Yes
		2. No
33	Which methods did the providers talk about?	1. Female Sterilization
		2. Male sterilization
		3. Injectable
		4. Pills
		5. Condoms
		6. Implant
		7. IUD
		8. Emergency Contraception
		9. Exclusive breastfeeding
		10. Other (Specify)
34	Did you choose a family planning method During ANC counselling?	1. Yes
		2. No

35	If yes, are you currently using the method You chose at the ANC counselling?	1. Yes
		2. No
36	Have you change the method you chose at ANC counselling?	1. Yes
		2. No
37	If yes, why did you change the method?	1. Providers advise
		2. My husband disapproves
		3. I am afraid of side effects
		4. Other (Specify).....
38	Did you receive counselling on family planning delivery?	1. Yes
		2. No
39	During your postnatal visit did you receive any information on family planning methods which can be used to delay or prevent pregnancy?	1. Yes
		2. No
40	Which methods did the providers talk about?	1. Female Sterilization
		2. Male sterilization
		3. Injectable
		4. Pills
		5. Condoms
		6. Implant (Specify).....
		7. IUD
		8. Emergency Contraception
		9. Others (Specify).....

41	What other information was given by the providers during the counselling?	1. Return to fertility
		2. Fertility intentions
		3. Healthy timing and spacing
		4. Exclusive breastfeeding
		5. Lactation Amenorrhoea Method
		6. All family planning methods
		7. Other (Specify).....

Appendix 4: Questionnaire – Swahili version

Dodoso

Maelekezo ya muhojaji

1. Aidha zungushia jibu au jibia kwenye nafasi iliyotolewa.
2. Hakikisha unazingatia maelekezo
3. Pitia kuhakikisha kama maswali yote ya msingi yamejibiwa.

SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS		
Na.	Swali	Majibu
1	Uma umri gani (miaka kamili)
2.	Kiasi cha juu cha elimu ulichonacho	1. elimu isiyo ya darasani
		2. ya msingi
		3. ya sekondari
		4. Chuo
3	Ni ipi imani yako	1. Ukristo
		2. Uislam
		3. yakimila
		4. Nyinginezo (fafanua)
4	Umeolewa ama kuo au la	1. Umeolewa
		2. Umehamia / Haujaolewa
5	Ni ipi kazi yako kwa sasa	1. mwanafunzi
		2. mkulima
		3. hujaajiliwa
		4. mfanyabiashara
6	Ni kipi kiwango cha elimu cha mwenzako	1. siyo elimu ya darasani
		2. ya msingi
		3. sekondari
		4. chuo

7	Unaishi wapi
8	Una watoto wangapi	1. Mmoja
		2. wawili
		3. watatu
		4. nyingine
9	Ni upi umri wa mtoto wako wa mwisho
10	Ungependa kupata mwingine baada ya huyu mtoto	1. ndio
		2. hapana
11	Umewahi kutumia mbinu za kuzuia mimba	1. ndio
		2. hapana
12	Kama ndio, ni mbinu ipi mlitumia	1. sindano
		2. vidonge
		3. Kitanzi
		4. kondomu
		5. Kibandikizi
		6. dharura
		7. kujitoa
		8. dawa za mitishamba
		9. nyingine
13	Kwanini uliamua kutumia mbinu za kuzuia mimba	1. nafasi
		2. kuchelewesha
		3. nyingine
14	Kama hapana, kwanini hukutumia yoyote	1. nilitaka motto
		2. sikudhani kama ningeweza
		3. imani yangu inazua
		4. mwenzangu hapendi
		5. naogopa madhara yake
		6. naziogopa
		7. nyingine
15	Ulikumbana na changamoto zozote na mbinu izo	1. ndio
		2. hapana

16	Kama ndio, ni changamoto zipi ulikumbana nazo	1. maradhi ya uke
		2. maumivu ya kichwa
		3. maumivu ya mgongo
		4. maumivu ya tumbo
		5. kizunguzungu
		6. nyingine (eleza)

	Obstetrics and Contraceptive history	
Na	Swali	
17	Nani alikujulisha kuhusu mbinu hizo?	
18	Je, uliikusudia mimba yako yamwisho	
	Mbinu ya kuzuia mimba unayotumia kwa sasa	
19	Je, umepata hedhi baada ya kumpata mtoto huyu?	1. ndio
		2. hapana
20	Mwanao alikuwa na umri upi ulipopata hedhi
21	Je, mmeshaanza tendo la ndoa baada ya kumpata mtoto huyu.	1. ndio
		2. hapana
22	Kama ndio, alikuwa na umri upi mwanao mlipoanza tena tendo la ndoa
23	Je, kwa sasa unatumia mbinu yoyote ya uzazi wa mpango	1. ndio
		2. hapana
24	Kama ndio, ni mbinu ipi mnatumia?	1. sindano

		2. vidonge
		3. Kitanzi
		4. kondomu
		5. Kibandikizi
		6. dawa za dharura
		7. kutoa
		8. dawa za mitishamba
		9. nyingineyo
25	Kama hapana, ni kwanini hutumi uzazi wa mpango	1. nataka mtoto mwingine
		2. mme wangu hapendi
		3. ni hatarishi kwa afya ya mwanangu
		4. sikuweza kupata mbinu ya uzazi wa mpango
		5. ninanyonyesha
		6. imani yangu hairuhusu
		7. ninaogopa madhara yake
		8. naogopa naweza nisipate mimba tena
		9. nategemea kutumia nikipata hedhi tena.
		10. nyingine
26	Je , we na mwenako mmezungumzia uzazi wa mpango toka ujifungue	1. ndio
		2. hapana
27	Je, mwenzako anakubaliana na matumizi ya mbinu za uzazi wa mpango	1. ndio
		2. hapana
28	Ulijifungulia wapi?	
29	Je, ulihudhuria kliniki wakati wa ujauzito	

30	Je, ulihudhuria kliniki mara ngapi
31	Je, umehudhuria kliniki mbaada ya kujifungua
32	Kama ndio, je ulipokea ujumbe wowote juu ya uzazi wa mpango?
33	Ni mbinu zipi walizozungumzia wataalamu?
34	Je, ulichagua mbinu ya uzazi wa mpango wakati wa kliniki
35	Kama ndio, je unaitumia mbinu hiyo?
36	Je umeibadili mbinu uliyoshauriwa kliniki?
37	Kama ndio, ni kwanini ulibadili mbinu hiyo?

38	Je ulipata ushauri juu ya uzazi wa mpango
39	Wakati ukiwa kliniki, ulipata elimu yoyote juu ya mbinu za kuchelewesha au kuzuia ujauzito?
40	Je ni mbinu zipi walizozungumzia wataalamu
41	Ujumbe upi mwingine uliopewa na wataalamu