**The unmet need for contraception among mothers in the extended postpartum period attending postnatal clinics in the Jaffna, MOH area**

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2024

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# Summary

Contraception is the process of preventing pregnancy. This can be a device, a medication, or a procedure. Postpartum contraception is the initiation and use of the contraceptive methods in the first six weeks following the delivery. Extended postpartum period is the one year following a child birth. It plays a major role in preventing unintended and closely spaced pregnancies, and decreasing maternal and child mortality and morbidity rates. Postpartum period is an ideal time to access contraception, contraceptive methods and advice about when to start them.

This research aims to assess the gaps in contraceptive usage and identify the sociodemographic, economic factors influencing it, as well as the knowledge, attitude and practice among women in the Jaffna MOH area during the extended postpartum period.

This community based descriptive cross sectional study will be carried out among all mothers in the extended post-partum period attending postnatal clinics in the Jaffna MOH area. Interview-administered questionnaires will be used to gather. The questionnaire will include questions about socio-demographic and economic factors; knowledge, attitude and accessibility of contraceptives; and factors influencing the contraceptive usage in the extended postpartum period. The data will be collected during the data collection period allocated by Department of Community and Family Medicine and analyzed according to its guidelines.

Ethics approval will be obtained from the Ethics Review Committee of the Faculty of Medicine, University of Jaffna. Necessary permission will be obtained from the Director of RDHS and other relevant authorities. Descriptive statistics and the results of the research will be submitted to the Department of Community and Family Medicine, University of Jaffna. The findings will be presented in a relevant research forum and submitted to the Jaffna MOH.

# Introduction

## 1.1 Background

WHO defines the women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child(Landry, 2015). As of 2020 reports the Percentage of eligible couples having unmet need for family planning is 5.7%(Family health bureau, 2020). The World Health Organization underscores the significance of a 3 to 5-year spacing between childbirths (Ndumbaro, 2022), Sri Lankan healthcare practices advocate a 2-year child spacing (Family Health Bureau, 2011). With deviations leading to increased infant mortality rates and adverse health consequences for both mothers and previous children(Omrana Pasha, 2015).

The repercussions of unmet contraceptive needs are far-reaching in SriLanka, contributing to unplanned pregnancies and prompting both legal and illegal abortions(Rajapaksa, 2002)(Sri Lanka College of Obstetricians & Gynecologists Family Health Bureau- Ministry of Health, 2015), which pose potential risks to maternal health and future fertility. Research indicates that getting pregnant within six months of the previous delivery amplifies the risk of induced abortion by 7.5 times (maternal and child health intergrated program, n.d.). Having pregnancies closely spaced together heightens the likelihood of unfavorable outcomes, such as preterm births, low birth weight infants, and infant death issues *(Family Planning/Contraception Methods, 2023)*together, brief spacing can lead to nutritional, economic, and social repercussions for women and their families, also give raises to psychological, economic, and social challenges (Kieron J. Barclaycorresponding, 2017)

Addressing unmet need of contraception and family planning requirements in the extended postpartum period—the one year period after delivery *(Mengesha, 2015)*—is paramount.

After childbirth, many women typically resume sexual activity within a few weeks. The duration of postpartum infertility varies and depends on factors such as breastfeeding. It's important to note that ovulation can occur even before the return of menstruation, sometimes as early as 25 days after giving birth. The likelihood of ovulation without menstruation increases over time.(HYGIENE, 2005)

Postpartum family planning (PPFP) is designed to prevent unintended and closely spaced pregnancies during the first 12 months after childbirth. This approach aims to address the varying fertility timelines of women after delivery, considering factors like breastfeeding status and the potential for ovulation before the resumption of regular menstrual cycles *(Navodani et al., 2017;* (Organization, 2013).

Numerous factors contribute to the unmet need for contraception, with the COVID-19 pandemic amplifying existing challenges. Family planning consultations have been disrupted during this global health crisis, leaving uncertainties about the restoration of their efficiency. Studies indicate a surge in unmet family planning needs during the pandemic, emphasizing the need for an in-depth exploration of contributing factors (Amuzie CI, 2023)**.**

Religious beliefs, social taboos, misinformation from family or media, partner disapproval, economic dynamics, income, educational status, fear of adverse reactions, and past negative experiences with contraceptives are among the myriad factors influencing this unmet need. Additionally, concerns about contraceptive impact on sexual pleasure and life, inadequate healthcare penetration, and insufficient guidance from healthcare officials further compound the issue (Tania Dehesh, 2020) (Dawn M. Kopp, 2018)

In Sri Lanka, family planning is acknowledged as a government responsibility, and the Family Health Bureau, under the Ministry of Health, coordinates the provision of family planning services through the National Family Planning Programme as an integral part of the Family Health Programme (Family health bureau, 2020).The program's objective is to empower all couples to achieve their desired number of children with optimal spacing while preventing unintended pregnancies. It facilitates informed decision-making for families and offers contraceptives through a cafeteria approach (Sri Lanka College of Obstetricians & Gynecologists Family Health Bureau- Ministry of Health, 2015)**.** Counseling and the provision of family planning services are indispensable components of the postnatal care package in Sri Lanka *(Healthcare Workers, 2011b)*.

Despite Sri Lanka's healthcare system offering free contraceptive methods, the extent of their utilization raises questions. The percentage of individuals benefiting from or aware of these services, or actively seeking them, remains uncertain.

## 1.2 Justification

Postpartum contraception and child spacing are critical for promoting the welfare of both children and mothers, reducing infant and maternal mortality rates, and preventing unintended economic, social, and health problems. The failure of postpartum contraception can lead to a lack of child spacing, resulting in unintended consequences such as seeking unsafe abortion methods, which further exacerbate health issues (Indralal De Silva, 2006)

Numerous factors contribute to the unmet need for contraception, ranging from personal preferences to healthcare system failures (Desalegn Markos Shifti, 2020). Identifying both direct and indirect factors influencing this unmet need is essential for implementing effective countermeasures to promote the health and well-being of mothers and their children.

While global(Coulson J, 2023)(Pillai, 2023), country wise(Amuzie CI, 2023), regional*(Rafiqul Huda Chaudhury, 2001; Teshale, 2022)* and SriLankanfacility based studies(Agampodi, 2009)(Dasanayake, 2018) on the unmet need for postpartum contraception exist, a detailed study specific to the Jaffna or the Northern Province of Sri Lanka is lacking. The unique demographic, socio-religious dynamics shared by all districts in the Northern Province, including Jaffna, necessitate a focused study to formulate region-specific policies.Especially considering the impact of the COVID-19 pandemic on Family planning services and contraceptive usage.

Data from 2019-2020 suggests a significant decline in the acceptance of contraception(Family health bureau, 2020), possibly affecting postpartum contraception rates. The COVID-19 pandemic's disruptions to global family planning services may be a contributing factor(Amuzie CI, 2023). Understanding the extent to which family planning services have resumed efficiency post-pandemic is crucial and requires further investigation.

Our research focuses on Child Welfare Clinics in the Jaffna MOH area, comprising strategically positioned centers totaling 10. This region encompasses a diverse population, including variations in economic status, professions, religious affiliations (Hindu, Christian, Muslim), and education levels. By collecting data from these diverse groups, we aim to conduct a comprehensive analysis, shedding light on the multifaceted factors influencing the unmet need for contraception in the extended postpartum period.

Conducting research in the Jaffna MOH area, with its strategically placed 10 postnatal clinics covering diverse socio-economic, religious, and educational backgrounds, offers a unique opportunity. This area, within a 10 km radius of Jaffna Teaching Hospital, facilitates the assessment of social, economic, religious, and educational factors affecting postpartum contraception

In conclusion, addressing the unmet need for contraception among mothers in the extended postpartum period in the Jaffna MOH area is imperative. This research will provide valuable insights into localized factors influencing contraceptive practices, enabling the development of targeted interventions and policies to improve maternal and child health in the Northern Province.

## 1.3 Objectives

### 1.3.1 General

### ` The general objective of this research is to assess the gaps in contraceptive usage and identify the sociodemographic, economic factors influencing it, as well as the knowledge, attitude and practice among women in the Jaffna MOH area during the extended postpartum period.

### 1.3.2 Specific

1. To determine the prevalence of the unmet need for contraception in the extended postpartum period among mothers visiting the postnatal clinics in the Jaffna MOH.
2. To describe the sociodemographic factors associated with the unmet needs for contraception in the extended postpartum period among mothers visiting the postnatal clinics in the Jaffna MOH.
3. To assess knowledge and attitudes towards on contraceptive methods among extended postpartum mothers visiting the postnatal clinics in the Jaffna MOH.

# Literature Review

## 2.1 Overview of Postpartum Contraception

Repeated pregnancies within a short Interval are linked with increased maternal and neonatal morbidity, and the usage of postpartum contraceptives offer primary protection against it(Rebecca L Taub, Jeffrey T Jensen, 2017). A study on the unmet need for contraceptives among postpartum women and the factors influencing it will be helpful for relevant authorities in reducing the gap in postpartum contraception.

To better understand extended postpartum contraception - a comprehensive study in both the global and regional setup is required. This highlights the unmet need for contraception globally and the regional specificities that influence it. Previously many studies have been conducted regarding the usage of contraceptives among postpartum mothers and the factors influencing it. Hence this section aims to set the foundation for more exploration of the factors influencing contraceptive use by postpartum mothers in the Jaffna zone by collecting available evidences to develop our study.

Articles for this literature review were collected using free digital platforms such as PubMed, BMC Public Health, Sri Lanka Journal of Obstetrics and Gynecology and Google Scholar. Out of several researches, the latest and most relevant studies were chosen. The authors of these researches were not contacted for further details.

### 2.1.1 Global Context

Previously, although several literatures on the general postpartum period and the unmet need for contraception were available – not many researches were done to find the connection between the two. This all changed in 2001 when Ross and Winfrey conducted a research on the contraceptive use, intention to use and the unmet need during the extended postpartum period. Data from surveys across 27 countries were analyzed with the exclusion of zero-parity women. The definition for unmet need was modified to accommodate future preferences rather than past ones. It was found that almost two thirds of women in the extended postpartum period have an unmet need for contraceptive and nearly 40% plan to use a method in the next 12 months. This study concludes that the unmet need for contraceptive was remarkably high among women who gave birth within the last year or two. (John A Ross, 2001)

A systemic review and meta-analysis on the usage of contraceptives and the factors influencing it among low- and middle-income countries was done in 2019. It included data from various articles and abstracts published between January 1997 and May 2018. The review included various types of studies (experimental, observational, reviews, reports) without restrictions on study design. The primary focus was on postpartum women who used contraceptive methods within 12 months postpartum, with the possibility of including studies with follow-up data beyond 12 months if it could be disaggregated for the initial 12-month period. The review considered outcomes such as modern Contraceptive Prevalence Rate, unmet need for family planning, fertility intentions (birth spacing/limiting), and data on barriers or facilitators of contraceptive use. Qualitative studies were also included to explore women's perspectives on contraceptive use. Exclusion criteria involved studies not in English, those without specified postpartum follow-up duration, reports from Demographic and Health Surveys due to lack of disaggregation, and unpublished articles or articles with inaccessible full-text.

In five studies spanning eight countries, unmet need for contraception among postpartum women varied significantly, ranging from 16.3% in Egypt to 96% in Pakistan. This indicates substantial variability in the risk of unintended pregnancies among women in Low- and Middle-Income Countries (LMICs). The pooled prevalence of unmet need across all regions was 48.5%, with the highest rates observed in West Africa (59.4%), followed by South Asia/South East Asia (58.4%) and East Africa (45.6%). In South Asia, unmet need ranged from 31.6% in India to 96.6% in Pakistan, while in East Africa, it ranged from 25.5% in Zambia to 66.0% in Uganda.

The study also found that commonly, the perception of a low risk of pregnancy due to breastfeeding and postpartum amenorrhea was associated with the absence of contraceptive use. In these cases, women often relied on methods such as male condoms, withdrawal, and abstinence. Those not using contraception were also less inclined to access maternal and child health services, tended to live in rural areas, expressed concerns about contraception's side effects, and received insufficient family planning counseling. (Rubee Dev, 2019)

Several researches targeting women in the postpartum period with unmet need for contraceptives have been conducted prior to 2017 globally. However, considering the time relevancy we chose to select the studies most recent and relevant to include in this literature review.

### 2.1.2 Regional Context

This study was done by including the Thimbirigasyaya Divisional Secretariat Division to investigate the prevalence of unplanned pregnancies and assess family planning preferences among antenatal mothers. This study was done by the participation of 425 antenatal mothers who met the inclusion and exclusion criteria. This study conducted as a cross-sectional study. The research focused on three randomly selected antenatal clinics in the Thimbirigasyaya Divisional Secretariat Division (Borella,Kirula,Wellawatte).The principal investigator collected data using interviewer-administered questionnaires, delving into the timing and decision-making processes of the current pregnancies. Prevalence of unplanned pregnancies and family planning preferences were analyzed based on participant responses. Among the 425 antenatal mothers, the age distribution ranged from 15 to 44 years, with 83.2% falling within the 22 to 34 age group. The study sample comprised 37.2% Sinhalese, 33.9% Moors, and 28.9% Tamils. The prevalence of unplanned pregnancies stood at 32.7%. Contraceptive practices revealed that 33% of antenatal mothers had used some form of contraception in the past, predominantly condoms and depot-medroxyprogesterone acetate (DMPA). Side effects were the primary reason cited by non-users. Looking ahead, approximately 60% of participants intended to use a contraceptive method post-pregnancy, with the majority opting for DMPA and planning to use their chosen method for two to five years. According to this study, findings underscored that one-third of pregnancies in Thimbirigasyaya Divisional Secretariat Division's antenatal clinics were unplanned. A notable proportion had employed contraceptive methods in the past, mainly for pregnancy spacing. The intention to use contraception in the future was prevalent, with DMPA being a popular choice. Side effects emerged as a significant deterrent among non-users. This study contributes valuable insights into addressing unplanned pregnancies, emphasizing the need for proactive family planning measures to enhance maternal and fetal outcomes*.* (Praveen S Nagendran, 2021)

This study was done to determine the contraceptive prevalence, prevalence of unmet need for family planning and its correlates among 15-49 year old ever married women in the Kalutara district, Sri Lanka. This study is a community based descriptive cross-sectional study done by participation of 1200 ever married females in 15-49 age group. They were selected by a cluster sampling technique. Final sample size for the prevalence survey was calculated using the latest prevalence rate of unmet need available in DHS 2000.Final sample size of 1200 was selected from 60 clusters. Pre tested Interviewer Administered Questionnaire(IAQ) was used as the study strument. Data for the study collected by trained public health nursing sisters of all MOH areas. According to results of the study, overall contraceptive prevalence was 69.4% with a prevalence of for modern methods and 8.9% for natural & traditional methods. Prevalence of unmet need was 9.4 % with 1.5 % for spacing and 7.9% for limiting. Unmet need for modern methods was 18.7%. These findings reveal that the high risk of unmet need was found to be associated significantly with age above 35 years, education below grade 05, unemployment, less frequent sex, not willing to use modern methods in future and lack of counselling services. (Malwenna, 2019)

A study has been conducted in Kalutara, Sri Lanka among postpartum mothers by using community based, descriptive cross sectional study. This study based on postpartum family planning missed opportunities across the continuum of care was conducted among Kalutara, Sri Lanka in 2014. 1200 mothers were recruited by using cluster sampling method. data collection was done by using an interviewer administered questionnaire at their residence after obtaining written informed consent. 70 (64.6%) were practicing contraceptive methods during the postpartum period. the analysis revealed that women with higher education, lower family income and parity exceeding 3 were significantly more prone to use contraception. According to this study, prevalence of contraception among postpartum women is not satisfactory. (K T Navodani, 2017)

## 2.2 Socio Demographic Factors

### 2.2.1 Age

### 2.2.2 Household Economic status

The family’s economic status emerged as one of the determinants of women’s family planning literacy. Firstly, discussion participants reported that economic hardships a family with many children faces made it difficult for them to take care of all the children. Such hardships compelled women to consider using family planning to reduce the number of unintended pregnancies and have manageable family sizes. Thus, gathering information on family planning from different sources becomes crucial. (Ndumbaro, 2022)

### 2.2.3 Religious Beliefs

Religious beliefs were also found to affect women’s family planning literacy. In this regard, study participants reported that some religions discouraged them to use family planning because doing so prevented eggs fertilization by the sperm thus preventing pregnancy. This, according to them, is against God’s will for people to fill the earth. Family planning thus constitutes interfering with God’s plan. (Ndumbaro, 2022)

### 2.2.4 Fertility preferences

Some women are desired to have a large family. So they avoid family planning methods. And also some think that the modern family planning methods have negative side effects  harmful to the body such as irregular menses, weight gain or loss , cervical cancer, continuous bleeding and becoming infertile. (Ndumbaro, 2022)

### 2.2.5 Limited access to reliable source of family planning information

Inability to access family planning related information from reliable sources could affect family planning literacy. This problem was attributed to the shortage of health facilities and limited number of professionals health care service providers in some remote rural areas. (Ndumbaro, 2022)

### 2.2.6 Impact on Women’s Empowerment and Employment

Women's ability to participate in the workforce and pursue educational opportunities is often hindered by unplanned pregnancies. This not only affects individual women but also hinders broader societal progress towards gender equality and economic development. “This might be explained by the fact that the educational status of either partner plays a crucial role in empowering both spouses, reducing gender inequality, and promoting discussion and support within a household. (Jumaine Gahungu, 2021)

### 2.2.7 Quality of Maternal Health Services

The quality of maternal health services, including the availability of a range of contraceptive options and the competency of healthcare providers, is crucial. Comprehensive antenatal and postnatal care that includes family planning counselling can enhance contraceptive use. “ANC and PNC services and ‘FP counselling’ provided by health care providers have been identified as major contributing factors to the unmet need for PPFP methods in the majority of the studies included in this review. Women who did not receive ANC and/or PNC were significantly less likely to adopt any modern contraceptive during their postpartum period.” (Jumaine Gahungu, 2021)

### 2.2.8 Access to Healthcare Services

The availability and accessibility of healthcare Services, including family planning services, significantly affect contraceptive use. Women who lack access to healthcare facilities or reside in areas with poor healthcare infrastructure are less likely to use contraceptives. “These data suggest that postpartum family planning programs need to prioritize provision of care to Young mothers, for whom delaying a subsequent pregnancy could be potentially Life-saving.” (Omrana Pasha, 2015)

# Methodology

## 3.1 Study Design

This is a community based descriptive cross-sectional study. It is purely observational and not an interventional study.

## 3.2 Study settings

It is set across 10 postnatal clinics run in the Jaffna MOH area.

## 3.3 Study period

This study will be carried out from October 2023 to April 2025 and the data collection will happen from August 2024 to November 2024.

## 3.4 Study population

Mothers in the extended post-partum period (within 2 years of giving birth) attending the postnatal clinics at the Jaffna MOH area.

### 3.4.1 Inclusion criteria

All mothers in the extended post-partum period attending the postnatal clinics in the Jaffna MOH area.

### 3.4.2 Exclusion criteria

Mothers from whom data has already been collected who are visiting the clinic again during the data collection period.

Mothers attending a postnatal clinic at a different MOH who are visiting a postnatal clinic in the Jaffna MOH Zone just this once during the data collection period.

## 3.5 Sample size

The sample size was calculated, using the following formula

where,

n = Sample size

Z = Critical value for 95% confidence interval (1.96)

P = Estimated prevalence – 76% (prevalence of the mothers who have knowledge on postpartum contraception in Sri Lanka based on previous studies (Kariyavasam, 2009)

d = Acceptable margin of error at 5% (0.05)

Sample size = 1.962 × 0.76(1 − 0.76) 0.052 = 3.8416 × 0.25 0.0025 = 280

10 % of sample size will be added to compensate the non-responded participants.

So, expected sample size: = *384 x 100 / 90 = 311*

## 3.6 Sampling technique

Approximately, on average the number of mothers in the extended postpartum period attending one postnatal clinic in the Jaffna zone is 31 per month. According to this, we are expecting to collect data from about 310 mothers during our data collection period. Hence we are not employing any sampling technique. We have planned to use all the data collected.

## 3.7 Study Instruments

Interview-administered questionnaire will be used for data collection to ensure mothers from varying educational levels can partake in this research. The questionnaire contains mainly three sections.

Section - A: Sociodemographic and economic factors

Section - B: Knowledge in contraceptives

Section - C: Knowledge in Child spacing / postpartum contraceptive and factors influencing it

Total number of questions = 23 questions

Data extraction sheet will be used to collect the details of mothers. This will be filled by the investigators.

It was first prepared in English and then translated to Tamil and Sinhala. Mostly the Tamil questionnaire will be used as Tamil is the main spoken language in Jaffna.

## 3.8 Pilot study

To assess the feasibility and procedure of our study instrument. A pilot study will be conducted in a clinic at the Nallur MOH area. This pilot study aims to identify and address any problems related to the questionnaire & data collection. Permission to do this study will be obtained from relevant authorities.

## 3.9 Data collection

Data collection will be done between 8:00am - 12 noon during the data collection period. We will utilize the help of our freely volunteering juniors in helping with our data collection.

The purpose of research and study procedures will be clearly explained to the participants. Informed written consent will be obtained from mothers by giving the consent form on that day of data collection. We will also inform them that they have right to refuse or withdraw from the study during data collection. After getting both consent and ascent, data collection procedure will begin.

## 3.10 Validation

Face validation and content validation will be done by supervisors.

## 3.11 Study variables

1. Age at last birthday

2. Highest educational level

3. Whether mother is employed or not

4. Marital status

5. Nuclear / extended family

6. Ethnicity

7. Religion

8. Average monthly income of family (Rs)

9. Knowledge on availability of contraception

10. Knowledge on postpartum contraception methods

and effects on contraceptive usage

11. Attitude towards the knowledge on postpartum

contraception

12. Knowledge on risks of not doing postpartum

contraception

Knowledge of contraception methods refers to the study participants’ spontaneously.

## 3.12 Data processing and analysis

All the information collected from the respondents will be checked by the researchers before the data entry.

## 3.13 Maintenance and fate of data

The data will be used only for this research purpose and they will be stored in the private computers of investigators. The computerized data will be deleted after relevant the publication or presentation at any scientific forum.

## 3.14 Dissemination of results

The report along with the questionnaires will be submitted to the Department of Community and family medicine, faculty of Medicine, University of Jaffna. The result will be disseminated by presentation or by publishing in a journal.

# Gantt Chart

A graph with black squares

Description automatically generated

# Budget

|  |  |
| --- | --- |
| Expenditures | Amount (LKR) |
| Questionnaires + Consent forms | 500 x 25 = 12,500 |
| Transport | 5,000 |
| Research documents printing + binding | 3,000 |
| Allowance for data collectors | 5,000 |
|  |  |
| Total | 25,500 |

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# Annexures

## Annexure I – Informed consent form (English)

1. **Information sheet**
2. **Introduction**

We, Chathuni Imasha Kalubovila (2021/FM/193), Abdul Marsook Shukra Anaqath (2021/FM/004), Mohamed Ikram Sara (2021/FM/181), Muralitharan Thanushan (2020/FM/090), from 44th batch are doing a research titled, “The unmet need for contraception among mothers in the extended postpartum period who are attending postnatal clinics in the Jaffna MOH area”. We wish to give you the information about the research and invite you to participate in this research. This research will be done as a requirement for fulfillment of 2nd Examination for Medical Degrees. If you do not understand any words, you can stop me and ask for explanation. You need not necessarily decide now whether to participate or not. Before you decide you may talk to anyone you feel comfortable about the research. You are free not to participate or withdraw from the study at any time of the study without any loss or compromise. If you have any questions / doubts about the research / procedures, you may ask anyone from the research team you are comfortable with now or later.

1. **Participant selection**

The reason why we deemed you suitable for this research is because you are a mother in the extended postpartum period attending a postnatal clinic in the Jaffna MOH area – which is our study population.

1. **Duration of study**

The study will be carried out from 2023 to 2025. Data collection will begin on august 2024 and ends on November 2024. The study period may vary.

1. **Nature of the benefits and potential hazards and discomforts**

Although this research is not directly beneficial to you, this research could be of use to the relevant authorities in minimizing the unmet need for contraception among postpartum mothers. There will be no any potential or actual risks, hazards and discomforts for you. No personally identifiable data will be collected.

1. **Procedures of the study and participant’s responsibilities**

You will be required to spend at least 20 minutes answering the questionnaire truthfully to gather accurate information for this research.

1. **Confidentiality**

The information collected will be kept confidentially. Personal details and any information that identify you will not be disclosed or published. The data will be used only for this research purpose. The data will be destroyed at the end of the research. No any biological samples will be collected. Data obtained from you will be stored in our protected personal computer. It won’t be used for any other purpose. If you have any questions / doubts about the research, you are free to contact the following people who involved in this research.

**Research group members**

**Ethics Review Committee(ERC)**

ERC Office,

Faculty of Medicine,

University of Jaffna,

Adiyapatham Road,

Kokuvil.

Contact Number: 0212222073

**Supervisors:**

Dr. K. Guruparan

MBBS ( Jaffna ) , MD ( Obstetrics & Gynecology )

Consultant of Obstetrician & Gynecologist,

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Dr. Ramya Kumar

MBBS (Pera), MSc( Colombo)

SM (Harvard), PhD ( Toronto )

Senior Lecturer,

Department of Community and Family Medicine,

Faculty of Medicine,

University of Jaffna

**Investigators:**

Chathuni Imasha Kalubovila (2021/FM/193)

Contact Number: 0766002867

Muralitharan Thanushan (2020/FM/090)

Contact Number: 0766648824

Abdul Marsook Shukra Anaqath (2021/FM/004)

Contact Number: 0777407079

Mohamed Ikram Sara (2021/FM/181)

Contact Number: 0774831250

1. **Consent form (English)**

**Consent declaration**

I have read the above information/ the above information has been read to me and I understand it thoroughly. I have been allowed to ask questions regarding this study and all the questions are being answered satisfactorily. I am aware of the benefits and risk of this study and confidentiality of my details. I voluntarily give my consent to participate in this study and understand that I have the right to withdraw from the study at any time without loss of benefit otherwise I am entitled.

Name of the participant: …………………………………….

…………………………….

Signature of the participant

……………………………

Date

Name of the participant: …………………………………

I confirm that the participant was given an opportunity to ask questions about the study and all the questions asked by the participant have been answered to the satisfaction of the participant. I confirm that the consent has been given freely and voluntarily.

A copy of this information and consent sheet has been provided to the participant.

Name of the investigator: ……………………………..

………………………………

Signature of the investigator

………………………………

Date

**Consent declaration from illiterate participants**

I have witnessed that the above information are clearly and accurately read to the participant and she has understood it thoroughly. The participant was allowed to ask questions and all the questions have been answered to the satisfaction of the participant. I confirm that the participant has given the consent voluntarily to participate in this study and has understood that she has the right to withdraw from the study at any time without loss of benefit otherwise she is entitled.

…………………………………

Signature of the witness

………………………………....

Date

Name of the witness …………………………………

Thumb print of participant

Name of the participant: ……………………………………

I have read the information sheet to the participant clearly and accurately. I confirm that the participant was given an opportunity to ask questions about the study and all the questions asked by the participant have been answered to the satisfaction of the participant. I confirm that the consent has been given freely and voluntarily.

A copy of this information and consent sheet has been provided to the participant.

………………………………….

Signature of the investigator

………………………………….

Date

………………………………….

Name of the investigator

## Annexure II – Questionnaire (English)

**Title :** The unmet need for contraception among mothers in the extended postpartum period attending postnatal clinics in the Jaffna MOH area.

Serial no:- …………

**Section - A**

**This section is about your sociodemographic and economical factors**

Please respond to the followings by marking (X) within appropriate box/es or by writing the relevant information/s.

1. Clinic number : ……………………………………..
2. Age : ………………………………

3.Sex

* Male
* Female
* Others : ……..………………………….

4.Ethnicity

* Tamil
* Sinhala
* Muslim
* Others : ……………………………………

5.Religion

* Hindu
* Christian
* Muslim
* Buddhist
* Others : ……………………………………

6. Marital status

* Married
* Unmarried
* Divorced
* Separated
* Live-in
* Others : ………………………………………

5.Married/Together for (Months /Years) : ……………………

6.Education

* Yours
* < Grade 5
* Grade 6 to 10
* O/L qualified
* A/L qualified
* A/L qualified + Diploma
* Undergraduate
* Spouse’s
* < Grade 5
* Grade 6 to 10
* O/L qualified
* A/L qualified
* A/L qualified + Diploma
* Undergraduate
* Postgraduate

7.Employment status of

* Wife
* Student
* Employed
* Retired
* Unemployed
* Husband
* Student
* Employed
* Retired
* Unemployed

1. Monthly income of your family

* <25,000
* 25,000 - 50,000
* 50,000 - 75,000
* 75,000 - 100,000
* >100,000

1. Type of family = Nuclear / Extended

Number of members in the household = ………………

10. Number of children : ……………………………………

11.Birth dates of each children

* Child 01 : ….dd…..mm………yy
* Child 02 : ….dd…..mm………yy
* Child 03 : ….dd…..mm………yy
* Child 04 : ….dd…..mm………yy
* Other : ……………………………

**Section - B**

**This section is about your practice and attitude in Child spacing / postpartum contraceptive and factors influencing it.**

1. Number of pregnancy you went through………………….
2. number of children you have……………………………..
3. Age of your youngest child

……..Years and ……… Months

1. Current maternity status ( Multiple answers allowed )

* Postpartum mother.
  + <6 Month
  + 6 months - 1 year
  + 1 year - 1.5 years
  + 2 or more years
* Recently miscarried.
  + <6 Month
  + 6 months - 1 year
  + 1 year - 1.5 years
  + 2 or more years

1. Are you Currently Pregnant? (Y/N)
   1. If yes, Your period of amenorrhea……….
   2. If No, Are you trying to conceive? (Y/N
2. Have you ever come across the concept of child spacing or postpartum contraception

* Yes
* No

If yes,

8.1. How did you get to know about this concept

* Self-learned
* Family/Friends
* Midwife
* Consulting VOG
* Media's
* Others : …………
  1. At which point of your pregnancy you got to know about this concept
* Pre pregnancy
* Pregnancy / antenatal
* Postpartum
* Postnatal clinic visit
* Others : ………….

09. What do you think an ideal spacing period between two child

* 6 months
* 1 year
* 1.5 year
* 2 year
* 2.5 years
* 3 years
* Others : ………

10. What is your contraceptive status

* Currently on contraception
* Contraceptive/s Preferred
* Progestin Only Pill
* Combined Oral Contraceptive pill
* Intrauterine Contraceptive Device
* Injectable contraception (DMPA)
* Implants
* Male condoms
* Male sterilization
* Female sterilization
* As a lactating mother will use contraceptive in future
* Used contraceptive for a while and then discontinued it
* Contraceptive used
  + Progestin Only Pill
  + Combined Oral Contraceptive pill
  + Intrauterine Contraceptive Device
  + Injectable contraception (DMPA)
  + Implants
  + Male condoms
  + Male sterilization
  + Female sterilization
* Reason for discontinuing
  + - Adverse effect

Specify: ………………………………….

* + - Trying for a child
    - Didn't find it important
* Never used contraception
* Mark the reasons
  + I don't have enough knowledge to use contraceptive
* I don't think it's necessary
* Past experiences
* Fear of adverse reactions
* Religious reasons
* Social reasons
* Disapproval from partner

**Section - C**

**This section is about your knowledge in contraceptives**

1. Grade the followings based on your knowledge regarding each contraceptive methods

( **1-** Very poor / Never heard about , **2 -** poor / heard about it but have no further knowledge , **3 -** Fair / Heard and have some knowledge, **4 -** Good / have good knowledge about it , **5 -** Very good / used it / know in and outs )

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **1**  **( V.Poor )** | **2**  **( Poor )** | **3**  **( Fair )** | **4**  **( Good )** | **5**  **( V.Good )** |
| Progestin Only Pill |  |  |  |  |  |
| Combined Oral Contraceptive pill |  |  |  |  |  |
| Intrauterine Contraceptive Device |  |  |  |  |  |
| Injectable contraception (DMPA) |  |  |  |  |  |
| Implants(Jadelle) |  |  |  |  |  |
| Male condoms |  |  |  |  |  |
| Male sterilization |  |  |  |  |  |
| Female sterilization |  |  |  |  |  |

1. Mark “X” based on how you learned about each contraceptive methods

(Multiple answers are allowed)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Self-learned | Health care  Professionals | Family /  Friends | Media /  Social media | **Others**  ( Specify) |
| Progestin Only Pill |  |  |  |  |  |
| Combined Oral Contraceptive pill |  |  |  |  |  |
| Intrauterine Contraceptive Device |  |  |  |  |  |
| Injectable contraception (DMPA) |  |  |  |  |  |
| Implants(Jadelle) |  |  |  |  |  |
| Male condoms |  |  |  |  |  |
| Male sterilization |  |  |  |  |  |
| Female sterilization |  |  |  |  |  |

1. Grade the followings based on your preference on each contraceptive methods

( **1-** Strongly dislike, **2-** Dislike, **3-** Neutral, **4-** Preferred, **5-** strongly Preferred)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** |
| Progestin Only Pill |  |  |  |  |  |
| Combined Oral Contraceptive pill |  |  |  |  |  |
| Intrauterine Contraceptive Device |  |  |  |  |  |
| Injectable contraception (DMPA) |  |  |  |  |  |
| Implants(Jadelle) |  |  |  |  |  |
| Male condoms |  |  |  |  |  |
| Male sterilization |  |  |  |  |  |
| Female sterilization |  |  |  |  |  |

1. Do you aware that free contraceptives are issued by government health sector

* Yes
* No

If yes,

* 1. Mark the contraceptive that you know have been provided by government.
* Progestin Only Pill
* Combined Oral Contraceptive pill
* Intrauterine Contraceptive Device
* Injectable contraception (DMPA)
* Implants(Jadelle)
* Male condoms
* Male sterilization
* Female sterilization

1. Have you ever benefited from above mentioned contraceptives

* Yes
* No

If yes,

* 1. mark contraceptive methods you used and your experience with it

(**A-**Good availability, **A\*-** Low availability, **B-** Good product quality, **B\*-**Bad product quality, **C-** Does Not affect sexual life/ pleasure, **C\*-**Affect sexual life/ pleasure  **D-**Never faced adverse reaction, **D\*-** Faced adverse effect

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** | **A\*** | **B** | **B\*** | **C** | **C\*** | **D** | **D\*** |
| Progestin Only Pill |  |  |  |  |  |  |  |  |
| Combined Oral Contraceptive pill |  |  |  |  |  |  |  |  |
| Intrauterine Contraceptive Device |  |  |  |  |  |  |  |  |
| Injectable contraception (DMPA) |  |  |  |  |  |  |  |  |
| Implants(Jadelle) |  |  |  |  |  |  |  |  |
| Male condoms |  |  |  |  |  |  |  |  |
| Male sterilization |  |  |  |  |  |  |  |  |
| Female sterilization |  |  |  |  |  |  |  |  |

If no,

5.2. Mark the reasons

* Availability low
* I had no idea that government is providing
* Concerns about the product quality
* I have never been offered
* Bad reputation of those product in society