

THE STUDY OF FAMILY PLANNING PRACTICE DURING AND
POST COVID-19 PANDEMIC CRISIS AMONG MARRIED
COUPLES IN JOHOR, MALAYSIA

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POST COVID-19 PANDEMIC CRISIS AMONG MARRIED
COUPLES IN JOHOR, MALAYSIA

by

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LIST OF SYMBOLS AND ABBREVIATIONS

FP- family planning

STD- sexual transmitted disease

WHO- World Health Organization

COVID-19- Coronavirus Disease 2019

IUD- intrauterine device

MCO- Movement Control Order

HIV- Human Immunodeficiency Virus

AIDS- Acquired Immunodeficiency Syndrome

CPR- Contraceptive Prevalence Rate

**KAJIAN TERHADAP AMALAN PERANCANGAN KELUARGA SEBELUM DAN
SELEPAS PANDEMIK COVID-19 DALAM KALANGAN PASANGAN
BERKAHWIN DI JOHOR, MALAYSIA**

ABSTRAK

Kadar prevalens yang lazim bagi amalan perancang keluarga di Malaysia adalah 52.2% yang mana kadar prevalens ini adalah sedikit rendah berbanding kadar prevalens amalan perancangan keluarga secara global (60%). Adalah penting bagi pasangan berkahwin untuk mengamalkan perancang keluarga untuk mengelakkan kematian dalam kalangan bayi baru lahir, ibu-ibu muda dan golongan umur yang berisiko tinggi. Kajian keratan rentas telah dilaksanakan sepanjang Mac 2022 hingga Mei 2022. Seramai 240 responden iaitu- pasangan berkahwin, menyertai kajian ini secara sukarela atas talian melalui *GoogleForm*. Data kajian ini dikumpulkan menggunakan borang soal selidik yang mengandungi tiga bahagian yang perlu dilengkapkan oleh responden. Umur purata respondent adalah 34 tahun ($SD=7.759$), berumur antara 18 hingga 49 tahun. Ujian *Pearson's Chi-Square* digunakan untuk menentukan hubungan antara faktor yang terpilih dengan perubahan amalan perancangan keluarga. Hasil kajian menunjukkan bahawa kadar prevalens amalan perancangan keluarga selepas krisis pandemik COVID-19 adalah lebih tinggi (42.9%) berbanding amalan perancangan keluarga semasa krisis pandemik COVID-19 (32.9%) di Johor, Malaysia. Hasil kajian juga menunjukkan tiada signifikan hubungan antara semua faktor yang terpilih- tahap pendidikan, lokaliti, krisis kewangan dan kemudahan servis; kepada perubahan amalan perancangan keluarga kecuali tempoh perkahwinan ($p=0.016$). Kesimpulannya, amalan perancangan keluarga selepas krisis pandemik COVID-19 adalah tinggi dalam kalangan pasangan berkahwin di Johor, Malaysia dan tempoh perkahwinan berkait dengan perubahan amalan perancangan keluarga. Kepentingan amalan perancangan keluarga hendaklah diberikan kepada semua pasangan berkahwin dari awal tempoh perkahwinan untuk mengelakkan dan mengurangkan kadar kehamilan tidak dirancang.

THE STUDY OF FAMILY PLANNING PRACTICE DURING AND POST COVID-19 PANDEMIC CRISIS AMONG MARRIED COUPLES IN JOHOR, MALAYSIA

ABSTRACT

The current contraceptive prevalence rate in Malaysia is 52.2% which it is slightly lower than world's CPR which was 60%. It is essential for married couples to practice family planning (FP) to prevent mortality and fatality occur among newborns, young mothers and high risk age group. A cross-sectional online survey was conducted among married couples in Johor, Malaysia from March 2022 until May 2022. A total of 240 respondents which are married couples were willingly participate in this study via online (GoogleForm). The data was collected using self-administered questionnaire that require the respondents to complete all of the three section. The mean age of the respondents was 34 years old ($SD=7.759$), with age range between 18 to 49 years old. Pearson's Chi-Square test was used to determine the association of the selected factors to the changes of FP practice. Results revealed that the prevalence rate of FP practice was higher post COVID-19 pandemic crisis (42.9%) compared to FP practice during COVID-19 pandemic crisis (32.9%) in Johor, Malaysia. The result also shows that there is no significant association between all the selected factors- education level, locality, financial crisis, and access to services; to the changes of FP practice except for marriage duration ($p=0.016$) among the married couples that participate in this study. The conclusion for this study is the FP practice post COVID-19 is high among the married couples in Johor, Malaysia and marriage duration is associated with the changes of FP practice. The importance for FP practice should be given to all the married couple since young age of marriage to prevent and decrease the rate of occurrence of unmet pregnancy.

CHAPTER 1

INTRODUCTION

This study was carried out to identify the prevalence rate of family planning (FP) practice during and post COVID-19 pandemic crisis among married couple in Johor, Malaysia and the factors that influence the changes of FP practice among them. Chapter 1 details the background of the study, problem statement, research objectives, research questions, research hypothesis, the significance of this study and the definitions of the conceptual and operational terms.

1.1 Background of the Study

According to the World Health Organization (WHO), family planning (FP) is defined as “the ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through use of contraceptive methods and the treatment of involuntary infertility”. FP addresses three essential needs which are it helps couples avoid unintended births, reduces the spread of sexually transmitted diseases (STDs) and helps reduce rates of infertility by addressing the STD problem. (Institute of Medicine (U.S.). Committee on a Comprehensive Review of the HHS Office of Family Planning Title X Program. Et al., 2009).

Unintended pregnancies is referred to mistimed or unintended pregnancy as an unexpected pregnancy. Unintended pregnancies most likely to affect women of all socioeconomic backgrounds, educational levels, and ages. Unintended pregnancy has a number of negative consequences, including a delay in starting prenatal care, a lower likelihood of breastfeeding, and a higher risk of maternal depression and parenting stress. Unintended pregnancy children are more likely to have poor mental and physical health as

children, as well as lower educational attainment and more behavioral disorders as teenagers. Unintended pregnancy prevention helps to reduce maternal illness and the number of pregnancy-related fatalities (*Contraception*, n.d.). Thus, FP services must continue to be given to avoid the complications associated with unintended pregnancy (K. A. Sharma et al., 2020).

The perfect time to have children is when a woman is between the ages of 20 and 35, has had her last kid at least 2 years ago, has no medical concerns that could influence the mother's or the baby's wellness, and the couple wishes to have a child (Paimin, 2019). When births are separated by less than two years, infant mortality is 45% greater than when births are separated by two to three years, and 60% higher than when births are separated by four or more years (*Family Planning/Contraception Methods*, 2020). If the above factors are not met the women and the baby would be at risk. According to estimation from 2017, 214 million women of reproductive age in developing countries have unmet FP needs. Limited contraception access, a limited range of contraception, a fear or experience of adverse effects, cultural or religious opposition, low quality of available services, and gender-based barriers are all reasons for this (*Contraception*, n.d.) . Therefore these women are encouraged to use a form of effective contraceptive method that they prefer to use in planning their pregnancy.

Contraceptive methods comes in a variety of forms, each with various degrees of efficacy depending on how they are used. Some methods are available over the counter, while others may necessitate physician consultation or even surgical intervention. Contraceptive method in FP can be either the married couples utilize the modern contraception or the traditional contraception. In choosing the contraceptive use, health care practitioners play a vital role in assisting patients in locating and implementing an effective and acceptable strategy (*Contraception*, n.d.).

Methods of contraception include the hormonal contraceptive method that most commonly we know is the oral contraceptive pills or implants, patches or the vaginal rings. This type of contraception will release small amounts of one or more hormone which these hormones will prevent ovulation from occurring. Some women would choose the intrauterine devices (IUDs) which this device will be inserted into the uterus and releasing of a copper component or a small amount of hormone called Levonorgestrel which this hormone prevent the release of an egg from the ovary or preventing fertilization of the egg by sperm. Lactational amenorrhea method also is being used by the married women where this method is a temporary method of contraception for the new mothers whose monthly bleeding has not returned. During this period, the female eggs (ovum) are not release so that the pregnancy cannot be occur. Surgical procedure such as tubal ligation and vasectomy also being choose by some of the married couples that decided to permanently blocked or remove their part of reproductive system to prevent any unintended pregnancy occur in the future.

However, when COVID-19 pandemic crisis occur, it have result in a lot of disruptions to various industries including FP services in many countries including Malaysia. During COVID-19, Malaysian Government have implemented Movement Control Order (MCO) that started from March 18, 2020 and it ended few months ago on August 1st, 2021. They ordered the closure of public and private industries, as well as the shutdown of most economic operations in the country, with the exception of a few essential public services. As a result, many employees were forced to work from home as a strategy to preserve their employees' health and safety (Tumin, 2020).

The COVID-19 crisis may deprive a large number of women and couples of essential contraception methods (Dasgupta et al., 2020). According to UNFPA research, the COVID-19 crisis might result in the loss of contraception for more than 47 million women, resulting in 7 million unintended pregnancies. Unintended pregnancy has a devastating impact on

maternal and neonatal morbidity and mortality (Aly et al., 2020). In Malaysia, over half of all pregnancies (42.9%) are unintended during pandemic COVID-19 (Jorgensen, 2021).

In addition to it, there is also a statistic stated that due of the epidemic, 34% of women in the United States said they wanted to get pregnant later or have fewer children. According to research from Kenya, Burkina Faso, and the Democratic Republic of the Congo, between 9% and 14% of women have changed their minds about becoming pregnant due to COVID-19 concerns, emphasising the needs of FP during the pandemic (Mickler et al., 2021).

1.2 Problem statement

According to a recent survey conducted by the World Health Organization (WHO), 90 percent of 105 nations have reported health service interruptions as a result of the pandemic. FP services are one of the most regularly interrupted areas, with 68 percent of nations reporting service interruptions (Mickler et al., 2021). Research has shown that during lockdowns that completely restrict movement and when people spend more time at home, couples are less occupied by other recreational activities outside of the home or under stress, there is a possibility of increased unprotected sex or increased sexual activity (V. Sharma et al., 2020).

Commonly used contraceptive methods (especially modern contraceptive methods, such as condoms or oral contraceptive pills) are likely to be available for a limited time in such conditions, and couples are likely to run out of stock after a period of time. Couples who had not used a method previously and were planned to start one around this time may face a more difficult scenario. Replacement of contraceptive methods due to the side effects, problems, or the end of the duration or moving to another methods may be necessary for couples utilising modern contraceptive methods. Going out to get a contraception during such situations may

be difficult because to the lockdown's limitations on access to health services, as well as the fear of contracting the infection if they leave the house. This could result in a decrease in contraceptive method use and an increase in unexpected and unintended pregnancies (V. Sharma et al., 2020).

As MCO has been finished and regular activity in economic and health sector has begun, they will expected of changes in FP pattern or behavior among couples post COVID-19 pandemic. For instance, when Zika outbreak occur, that this virus primarily spread through an infected *Aedes aegypti* mosquitoes. However, it also has been affected pregnant mothers where the virus can be passed to her fetus. Infection during pregnancy can cause a birth defect called microcephaly (CDC, 2019). When this case has been confirmed, couples will started to consider their pregnancy and take precautions to protect themselves from Zika with the practice of FP by using any contraceptive method such as condom during sexual intercourse to prevent pregnancy besides to reduce the risk of the fetus from developing Zika virus and get the effect from the Zika virus. As this COVID-19 can infected pregnant women which considered had low immunity and get worse if they not vaccinated.

1.3 Research Questions

- i. What is the prevalence rate of FP practice during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia?
- ii. Is there any changes of FP practice pattern during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia?
- iii. What is the factor influence changes of FP practice during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia?

1.4 Research Objectives

General Objectives

To determine the prevalence rate and pattern of FP practice during and post COVID-19 pandemic crisis and factors associated with changes of FP practice among married couples in Johor, Malaysia.

Specific Objectives

1. To determine prevalence rate of FP practice during and post COVID-19 pandemic crisis among married couple in Johor, Malaysia.
2. To determine FP practice pattern during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia.
3. To examine factor influence changes of FP practice during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia.

1.5 Research Hypothesis

Hypothesis 1

H₀: There is no significant association between selected factors with the prevalence rate of FP practice during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia.

H_A: There is significant association between selected factors with the prevalence rate of FP practice during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia.

Hypothesis 2

H₀: There is no significant association selected factors with changes of FP pattern during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia.

H_A: There is significant association between the selected factors with changes of FP pattern during and post COVID-19 pandemic crisis among married couples in Johor, Malaysia.

1.6 Significance of the Study

As we can see, the COVID-19 pandemic has impacted negatively on the healthcare systems all over the world, including the FP services. From my point of view, this study is very important due to the increase of unintended pregnancy during MCO despite the condition of the couples. According to the research made by the National Population and Family Development Board's (LPPKN), 43.1% of married women in Malaysia have unintended pregnancy throughout the pandemic (*Penemuan Tinjauan Pendapat: Amalan Perancangan Keluarga Sepanjang Tempoh Pelan Pemulihan Negara (PPN) – Malaysia Population Research Hub*, 2021).

Fear of contracting the virus may discourage women and couples from seeking contraceptive supplies at health clinics or pharmacies thus this will increase unintended pregnancy among the married couples (V. Sharma et al., 2020). For instance, practice of FP declined by 65% in Liberia and 23% in Sierra Leone during the West African Ebola epidemic. The reason is because infectious outbreaks may potentially devastate some regular medical services, such as FP programs (Roy et al., 2021).

Besides that, due to COVID-19 pandemic, there is also an increasing in anxiety, depression and stress level among Malaysian. Based on study made by Ping Wong et al., (2021), the depression rate was reported to be the highest (59.2%), followed by anxiety then stress symptoms (55.1% and 30.6%, respectively). Perceived of health status was the strongest significant predictor of depressive and anxiety symptoms. By demographics, young people- particularly students, females and people with poor financial conditions were more vulnerable to mental health symptoms. Hence, this factor also can affect the married couples in practicing FP.

Thus, this research will find out is there any changes of behaviour in term of FP as this pandemic crisis may effect health conditions of certain community. This study also may contribute information and findings that can be used for future research as a baseline data and references.

1.7 Conceptual and Operational Definitions

Table 1.1 Conceptual and Operational Definitions

Family planning pattern	FP is a deliberate attempt of couples or individuals to control the amounts of children they have and the spacing and timing of their births by using contraception and treating involuntary infertility. Contraceptive measures, such as condoms or similar barrier devices, the contraceptive pill, or, again, using the natural FP method to detect when the woman is ovulating and avoid having sexual intercourse at that time, are commonly used to avoid undesired pregnancy (Glossary of Key Terms Related to Family Planning, 2013).
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	<p>In this study, FP will include the types of contraceptive method use for FP and the pattern of FP practice among married couples in Johor, Malaysia.</p>
Prevalence rate	<p>Prevalence or sometime known as prevalence rate is the proportion of people in a population who have a specific condition or attribute at a specific point in time or over a specific period of time (CDC, 2012).</p> <p>In this study, we want to determine the impact of COVID-19 to the prevalence rate of FP practices among married couples in Johor, Malaysia.</p>
Married couple	<p>Married couple is two people who are married to each other or oftenly known as husband and wife (Married Couple - Dictionary Definition : Vocabulary.Com, n.d.).</p> <p>In this study, the research population that will be study on the FP practices are married couples all over Johor.</p>

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discussing the current literature related to the impact of COVID-19 pandemic crisis to the practice of FP among married couples in Johor, Malaysia. Finally, this chapter will provide a detail description of the conceptual framework chosen for this study.

2.2 Family planning needs during COVID-19 pandemic

FP services aim is to improve pregnancy planning and spacing while also preventing unintended pregnancies. It allows people to have the family size and birth spacing they choose, and it helps children, women, and families live healthier lives. FP practice for clients who want to avoid pregnancy and space births, pregnancy testing and counselling, pregnancy assistance, STD care (including HIV/AIDS), and other preconception health services are all included in FP services (K. A. Sharma et al., 2020) . Increased FP practice in developing countries has resulted in a 40% reduction in maternal fatalities due to fewer unintended pregnancies over the previous 20 years (Aly et al., 2020).

According to the research that be made by Roy et al., (2021), 20.92% of married women said that they practice FP due to intention of spacing or deferring pregnancy, and 14.02% said it was due to already having a complete family size. We discovered that "in-laws' disapproval" was the top reason for not using FP, followed by "other" (21.46 percent and 12.06 percent , respectively).

Meanwhile, study that made by National Population and Family Development Board's (LPPKN) in 2021, about 52.2% of married couples in Malaysia did not utilize FP due to 31.9% of them are or wanted to pregnant, 11.4% is because their partner did not agree to

utilize FP and another 10.5% is couples that currently are in long distance marriage. This study involving 2,613 married women that age 15 to 49 years old all around the Malaysia and this study being carried out from August 16 until August 29, 2021 via online survey throughout National Recovery Plan (PPN) 2021 (Penemuan Tinjauan Pendapat: Amalan Perancangan Keluarga Sepanjang Tempoh Pelan Pemulihan Negara (PPN) – Malaysia Population Research Hub, 2021)

In this research also, about half of the women (58.8%) agreed that the birth rate of Malaysia in 2021 increased in number compared on year 2020. FP also aimed to prevent unintended pregnancy that can lead to abortion of the fetus. In the same study, there is only small amounts of women which is 18.6% agreed that unintended pregnancy will end up with abortion among the married couples.

According to Ferreira-Filho et al., (2020) couples may be more likely to increase the amount of time they spend on sexual intercourse when they are physically separated, isolated, or working from home. Lockdowns and other restrictions are also making it difficult to get contraceptive supplies and services. These factors might result in millions more unintended births, millions more unsafe abortions, and thousands of fatalities as a result.

2.3 Prevalence rate during COVID-19 pandemic

Contraceptive prevalence is the percentage of women who state they or their partners are currently utilizing at least one contraceptive method (WHO | Contraceptive Prevalence, n.d.) Global data regularly reveal that the Contraceptive Prevalence Rate (CPR) is the lowest among women with the lowest level of education, socioeconomic status, and those who live in rural areas. The lowest CPR is found in the oldest age groups, such as married adolescence and perimenopausal women. Malaysia's low CPR has been unchanged over the past two to

three decades (Making Sense Of Malaysia's Contraceptive Prevalence Rate – Dr John Teo – CodeBlue, 2020).

According to the study that made by Roy et al., (2021), stated there before the pandemic, the prevalence of FP usage in Bangladesh was 62% which is very close to prevalence of world contraceptive usage (64%). However, this rate is higher than in other South Asian countries. For example, FP use rate is 58% in India, 50% in Nepal, 35% in Pakistan, and 23% in Afghanistan. This rate is low compared to Thailand (79%) and Singapore (74%). The COVID-19 pandemic has lowered the FP use rate in the study areas by 23%, giving a current rate of 36.03%.

Over the last two decades, the number of women who want to utilize FP has risen dramatically, from 900 million in 2000 to approximately 1.1 billion in 2020. As a result, the number of women who use a modern contraceptive technique has increased from 663 million to 851 million, and the CPR has increased from 47.7% to 49.0%. an additional 70 million women are expected to be added by 2030 (Family Planning/Contraception Methods, 2020).

The percentage of women who wish to postpone or delay birth for at least two years but are not utilizing any contraceptive method is known as unmet need for FP. The unmet demand for FP exemplifies the gap between women's reproductive desires and contraceptive use. It is the percentage of women who wish to avoid or delay having children but are not utilizing any form of contraception. It is presented as a percentage with reference to women of various marital statuses and ages. Malaysia's unmet needs for FP is estimated to be about 25%.

Unmet needs for FP are usually high especially among groups such as adolescent, migrant, urban slum dwellers, refugees and women in the postpartum period. Unwanted pregnancies, abortions, and maternal or fetal difficulties during pregnancy are all

consequences of unmet needs of FP. In order to reduce unmet needs of FP, increasing access to contraceptives and related services, destigmatizing and decriminalizing sexuality, and tackling contraceptive misconceptions and mistruths are all crucial (Making Sense Of Malaysia's Contraceptive Prevalence Rate - Dr John Teo - CodeBlue, 2020).

2.4 Contraceptive method use during COVID-19 pandemic

The impact of the COVID-19 pandemic on meeting the demand for FP will be influenced by many factors, one of them being the types of contraceptive methods used by women in each country. Individual contraceptive methods may differ in terms of the need for contact with health-care providers, the periodicity of renewal, the susceptibility to stock-outs and global supply chains disruptions, and their effectiveness in preventing unintended pregnancies (Dasgupta et al., 2020). Estimates suggest that if a high level of FP service disruptions persist for over a year, approximately 51 million women may not be able to access modern contraceptives, leading to an estimated 15 million unintended pregnancies (Mickler et al., 2021).

Women and their partners have the freedom to use any modern contraceptive technique that they find acceptable and safe. If a couple does not wish to become pregnant, they should begin or continue using their preferred contraceptive technique (Ferreira-Filho et al., 2020). Some contraceptive techniques (such as condoms, spermicides, diaphragms, tablets, and emergency contraceptive pills) are accessible without a prescription, although not in all circumstances. If a woman is comfortable with her existing approach, she should stick with it. Despite the fact that access to all contraceptive methods may be difficult due to restrictions on movement, a shortage of supplies, and increased demands on health practitioners and services, starting a new contraceptive technique during the COVID-19 pandemic is nevertheless viable.

A study made by Hassan et al., (2019) among married Orang Asli women, stated that the most common form of FP was oral contraceptive pills (68.3%), followed by injectable contraceptives (23.6%), implants (2.4%), condoms (1.9%), and intrauterine devices (1.4%). However, based on the study on the FP practice during National Recovery Plan (PPN), there is about 47.8% of married couples that used any contraceptive methods which 38.4% of them using modern contraceptive methods such as condom (10.9%), oral contraceptive pills (OCP) (9.0%), intrauterine contraceptive device (IUCD) (4.9), tubal ligation (4.5%), implants (4.1%) and vasectomy (0.3%) respectively. Meanwhile the other 9.4% of them choose to use traditional contraceptive method such as pull-out method which the partner ejaculate outside the vagina (5.1%), tracking and calculating period calendar (3.6%) and sexual abstinence and other (0.7%) respectively. 80.0% of women that practicing FP stated that majority of them are using modern contraceptive methods and they claimed that condom still the popular one that being used followed by OCP and IUCD (Penemuan Tinjauan Pendapat: Amalan Perancangan Keluarga Sepanjang Tempoh Pelan Pemulihan Negara (PPN) – Malaysia Population Research Hub, 2021).

Meanwhile finding based on research made by Roy et al., (2021), OCP was used by 40.95%, injectable by 8.04%, condom by 6.53%, and norplant by 5.03%. A safe period and withdrawal from the usual approach were adopted by 44.67% and 1.01%, respectively.

2.5 Changes of FP practice post COVID-19 pandemic

COVID-19's devastating consequences on women and girls have been explored in a number of research and organizations. These include job losses, forced and early marriages, gender-based violence, and increased poverty. Furthermore, the pandemic has had an

influence on the sexual and reproductive health of women and girls, as well as their access to health care. According to UNFPA, approximately 12 million women may have lost access to contraception as a result of the pandemic's health disruptions, with the poorest and most vulnerable being the most impacted.

The factors that affecting these married couples to have the difficulties to access to FP are due to the MCO that being implement by the Malaysia's government which they are restricted to go out from their house (57.4%), the nearby clinics did not operate during MCO (35.2%), limited stock of contraception methods (22.2%), run out of contraceptive stock (13%) and expensive price (7.4%) respectively.

On the other hand, due to this pandemic crisis, over half of the married women (55.0%) intentionally delaying their pregnancy because they are worried towards the COVID-19 infection being spread to them and they died during giving birth. Meanwhile 38.5% are planning to spacing their pregnancy and the other 2.8% is due to age factor where this factor can lead to high-risk pregnancy.

2.5.1 Education level

Accocring to Roy et al., (2021), There is a link between educational achievement and contraceptive usage, according to certain research. It is probable that less educated women are less likely to have greater career objectives and a lack of health knowledge, resulting in a lack of desire to use family planning. However, other research, on the other hand, found that education has no influence on FP usage. For instance, studies of 9,134 Australian women and Bangladeshi women, found no link between total FP usage and education. According to this survey which a total of 1990 women aged between 15 and 49 years were included in the study with a response rate of (74.93%), current family usage was greater among women with

a secondary education than among women with a bachelor's degree or above which one-fourth of the respondents (25.93%) had an education level of bachelor's degree or above.

2.5.2 Locality

The usage of FP varies by location, depending on whether it is used at the administrative or domain level. Due to differences in socioeconomic situations, FP worker visits, women's autonomy, and other community-level features, these studies consistently found that urban regions had a greater incidence of FP usage than rural areas. The present study discovered similar findings, indicating that FP usage varies by location, with rural regions having a greater incidence of FP use than urban ones. However, according to the study made by Roy et al., (2021), women that live in rural areas had a 65 percent lower risk of using FP than women in urban areas.

In another study, there is also increases in use of contraception among women who had partial economic losses in Kenya and rural Burkina Faso. These changes might represent stronger intentions to delay or limit pregnancy in the COVID-19 pandemic among women who have access to FP, whereas those who cannot afford such services could benefit from focused outreach programmes and free contraception. (Wood et al., 2021).

2.5.3 Financial crisis

The COVID-19 pandemic's negative impacts on women's sexual and reproductive health are predicted to be particularly severe in low- and middle-income countries, which already confront plenty of challenges in providing sexual and reproductive health services. According to one simulation, if COVID-19 related health-care service disruptions affected 10% of women in need of FP services in low- and middle-income countries, 15 million more unintended births would occur over the course of a year, resulting in 28000 maternal deaths (Wood et al., 2021).

The United Nations Population Fund (UNFP) has published a technical note on April 27, 2020, saying that in 114 prioritised low- and middle-income countries, an estimated 450 million women were utilising modern contraceptive methods as of March 2020 (*Covid-19 And Unplanned Pregnancies: The Silent Pandemic - Dr John Teo - CodeBlue*, 2020). However, due to disruptions, it is predicted that between 13 million and 51 million women who would otherwise utilize modern contraceptives may be unable to continue in the COVID-19 pandemic. As for three months of lockdown, this might result in 325,000 unwanted pregnancies. In a study made by LPPKN, they found that 46.5% of the married women agreed that financial crisis also a part of why couples did not practice FP throughout the National Recovery Plan (PPN) 2021 (Penemuan Tinjauan Pendapat: Amalan Perancangan Keluarga Sepanjang Tempoh Pelan Pemulihan Negara (PPN) – Malaysia Population Research Hub, 2021).

2.5.4 Services

Lockdowns have adversely affected the production and distribution of products and availability of commodities, while the restrictions in movement have limited individuals' access to services (V. Sharma et al., 2020). According to the research made by the National Population and Family Development Board's (LPPKN), 2021, stated that only small numbers of women (4.8%) have difficulties to access to the contraceptive methods that they used. However, one out of three of the women (32.2%) agreed that unintended pregnancy throughout this pandemic occur due to the difficulties to access the method that they used to use.

Sources or basic information of family that these married couple access is also crucial. According to (Roy et al., 2021), in a prior study done in Kenya, access to media, such as the frequency with which people read newspapers, was anticipated to influence FP usage. Reading newspapers was a major predictor of current FP usage in our study, which supports

this viewpoint. Healthcare services is the main sources for the married couples to access FP device. These married couples usually attain the FP devices from pharmacy (30.6%), hospital or government clinic (26.0%), Nur Sejahtera LPPKN clinic (11.3%), private hospital or clinic (10.9%), convenience store (9.1%), attain the contraceptive devices earlier (7.7%) and online (4.4%) respectively (Penemuan Tinjauan Pendapat: Amalan Perancangan Keluarga Sepanjang Tempoh Pelan Pemulihan Negara (PPN) – Malaysia Population Research Hub, 2021).

2.5.5 Duration of marriage

Based on previous study by Shree et al., (2017), they stated that those with duration of marriage between 10-20 years have high contraceptive use especially the permanent method which were sterilization method- tubal ligation. The study is in agreement with another study conducted in Delhi by Bhasin et al., the duration of a marriage was a significant factor of the usage of contraceptives.

2.6 Theoretical and Conceptual Framework of the Study

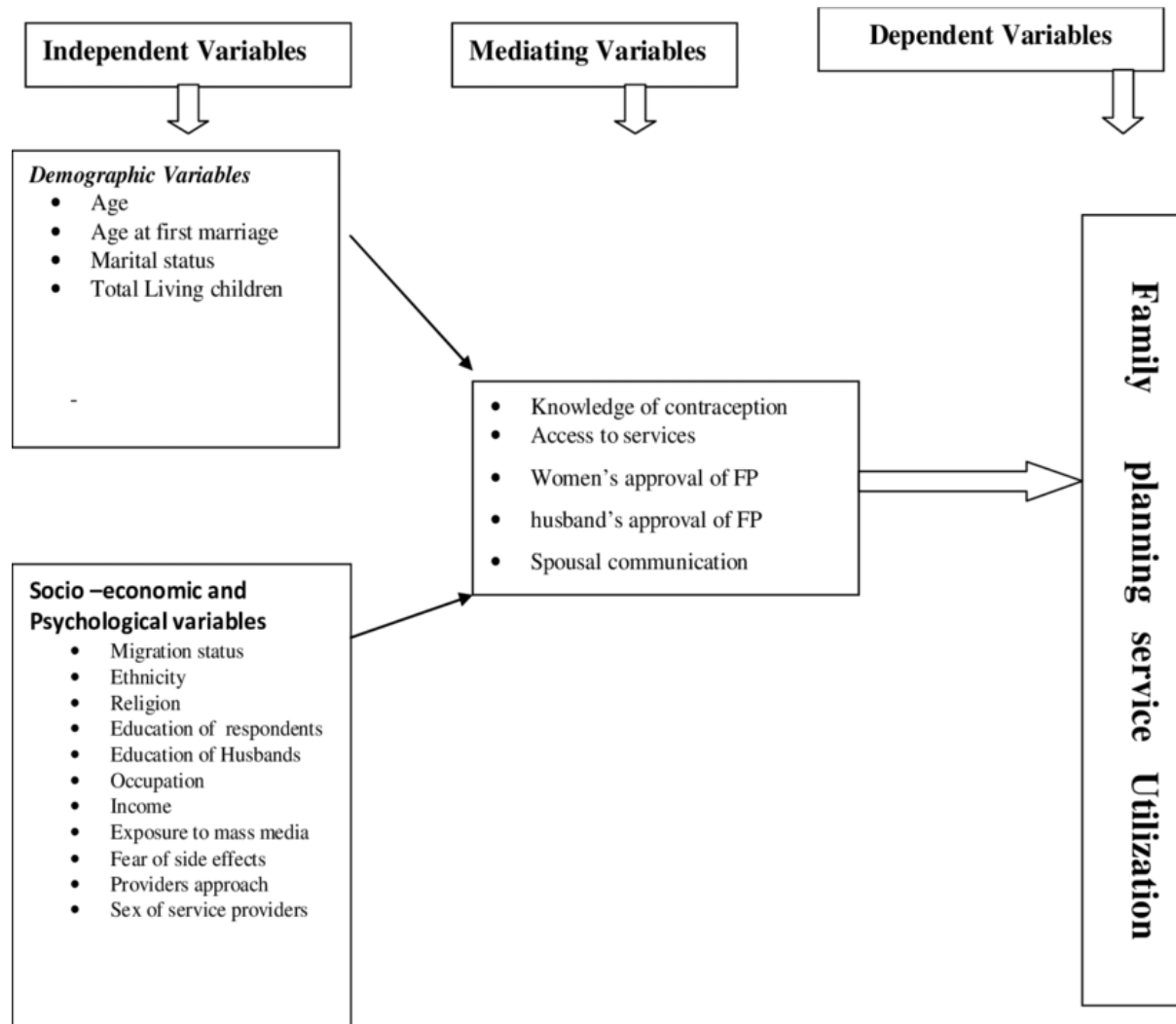


Figure 1 Conceptual framework showing the determinants of contraceptive service utilization (Geda et al., 2011).

In this study, the conceptual framework that will be used is adapted by the framework made by previous research on FP service utilization in Mojo town, Ethiopia (Geda et al., 2011). This study aims at examining both the level and barriers to utilization of FP services in one of the fast growing town of Ethiopia, Mojo town. According to the findings, there are a variety of reasons and barriers that women report for not using FP services. The most common reasons given are reproductive issues, spouse opposition, method issues, and a lack of understanding of the method and sources. In addition to these factors, there was the issue of FP services availability and accessibility.

This framework is about to understand the determinants of contraceptive utilization and the variables that associated with it. We hypothesized that the factor associated with contraceptive utilization operate at different levels. In this study, this conceptual framework describe how selected sociodemographic and socioeconomic such as educational level, occupation and age will influence the FP practices. In addition to it, the FP practices can be affected by the mediating variables such as the access to FP services and also the contraceptive method use (Geda et al., 2011b).

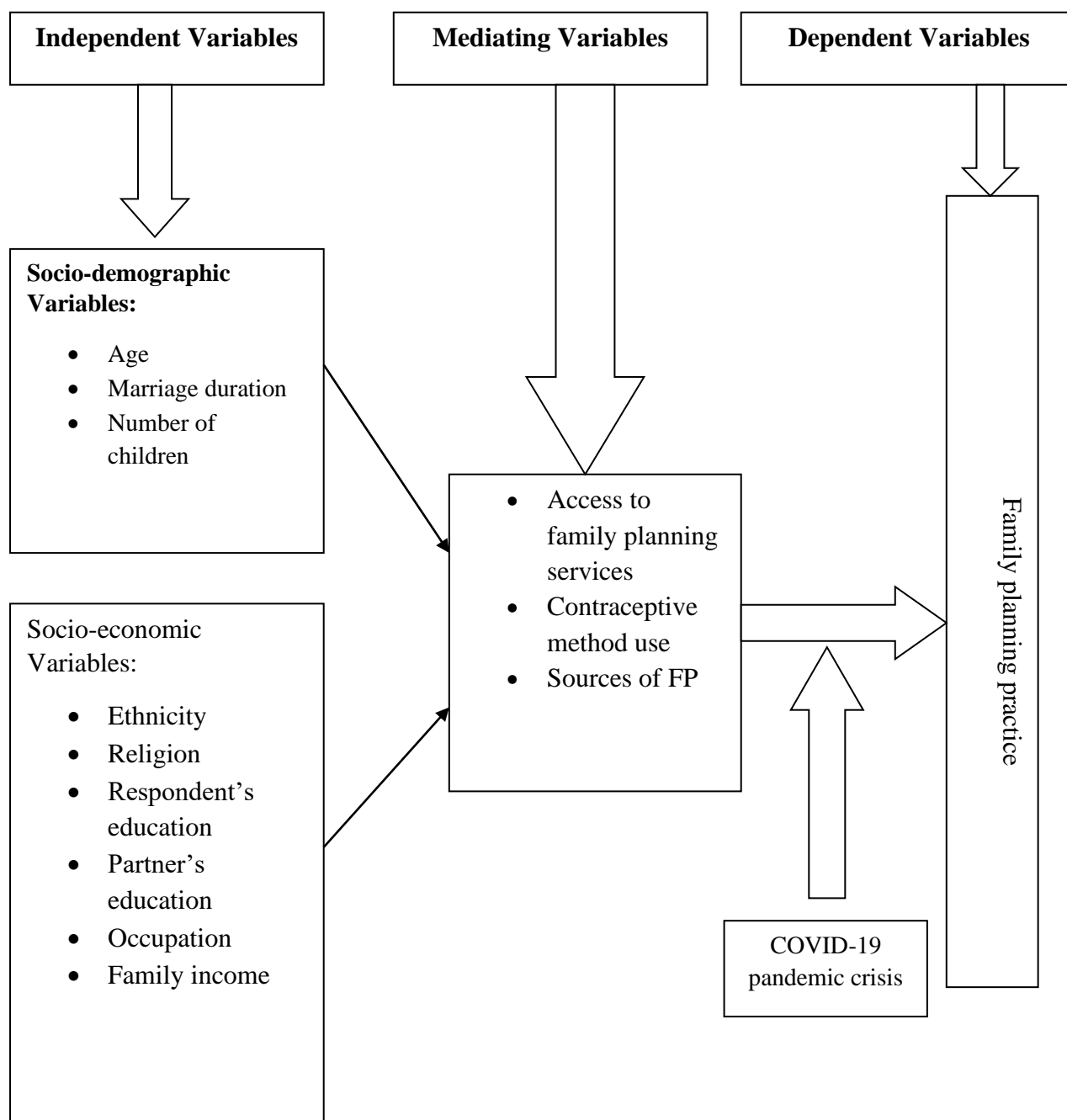


Figure 2 Conceptual framework that being adapted based on the conceptual framework by research made (Geda et al., 2011a) that show the determinants of contraceptive service utilization

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

In this section, research methodology such as research design, research duration, sampling plan, instrumentation, data analysis, expected outcome of the study and ethical consideration are discussed.

3.2 Research Design

This study apply a cross-sectional online survey. Cross-sectional study is a type of research design in which we collect data from many different individuals at a single point in time (Lauren, 2020). Meanwhile online survey is a structured questionnaire that the target population needs to complete over the internet generally by filling out a form (*Online Surveys / Usability.Gov*, 2020).

3.3 Study Setting and Population

The study is conducted among married couples in Johor, Malaysia. The target population is the all married couples in Johor, Malaysia regardless what district they are living in. There is an estimation of 3.48 million population in Johor with the mean age is 30 years old (Johor, Malaysia — Perangkaan 2022, n.d.).

3.4 Sampling Plan

Sampling is the process of selecting responses from a large population. Sampling ensures that the sample chosen is representative of the population being researched, preserving the study's validity and reliability and minimizing measurement inaccuracies.

3.4.1 Sample Criteria

This study involved married couples in Johor, Malaysia that fulfilled inclusion and exclusion criteria:

Table 3.1 Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none">• Aged above 18 years old until 49 years old.• Women or men• Able to understand, read and write in Bahasa or English	<ul style="list-style-type: none">• Menopause

3.4.2 Sample Size Estimation

The sample size of this study is determined firstly by calculating sample size for each research objectives. The sample size for objective 1 and 2 are estimated by using single proportion formula taken based on previous study,

$$n = \left[\frac{Z}{\Delta} \right]^2 p(1 - p)$$

Where,

n = minimum required sample size

Z = 96% confidence interval (CI) = 1.96

Δ = precision = 0.05

P = anticipated population proportion

Table 3.2 Sample size calculation for Objective 1 and 2

Objectives	p	n (sample size)	n + 40% non response rate	References
Objective 1: To determine prevalence rate of FP practice post COVID-19 pandemic crisis among married couple in Johor, Malaysia.	0.328	339	475	The Bangladeshi women that are not pregnant and practicing FP during COVID-19 is 32.86% (Roy et al., 2021).
Objective 2: To determine changes of FP practice pattern post of COVID-19 pandemic crisis among married couples in Johor, Malaysia.	0.487	384	538	Married couples that using any contraceptive method during COVID-19 is 47.8% (<i>Penemuan Tinjauan Pendapat: Amalan Perancangan Keluarga Sepanjang Tempoh Pelan Pemulihan Negara (PPN) – Malaysia Population Research Hub, 2021</i>)