

Differences in Contraceptive Use Before and During the COVID-19 Pandemic at One of Community Health Center in Surabaya

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ABSTRACT

Introduction: The COVID-19 pandemic has caused limitations, one of which is contraceptive services. The impact of this pandemic is different in each region. In Indonesia, there was a decrease in family planning acceptors at the beginning of the pandemic and it is feared that there will be a baby boom after the pandemic. During the pandemic, Surabaya was one of the areas with high COVID-19 cases. However, contrary to existing concerns, the number of pregnancies in Surabaya has actually decreased during 2020 (during the pandemic). One of the contraceptive health services in this area is at Jagir Community Health Center. **Objectives:** This study aims to determine the differences in contraceptive use before and during the COVID-19 pandemic at Jagir Community Health Center. **Methods:** This research method is quantitative through an observational analytic design. The sample size was 269 acceptors with a sampling technique using total sample method from family planning acceptors at the Jagir Health Center for the period March 2019 - February 2021 which included inclusion criteria. Data collection using medical records. **Results:** The results showed that the majority of acceptors before and during the pandemic were 20-35 years old with parity ≤ 2 . Based on the chi-square test, the difference in contraceptive use before and during the COVID-19 pandemic (p -value < 0.05), where during the pandemic there was a decrease in non-MKJP acceptors and an increase in MKJP acceptors. **Conclusions:** There is a significant difference in contraceptive use before and during the COVID-19 pandemic at Jagir Community Health Center.

Introduction

At the end of 2019, COVID-19 was first discovered. COVID-19 is an infectious disease that infects the respiratory tract caused by the SARS-CoV-2 coronavirus with air as the medium of spread making COVID-19 transmission very fast. On March 11, 2020, the World Health Organization (WHO) announced that the coronavirus disease 2019 (COVID-19) constituted a global pandemic. On March 31 and April 13, 2020, COVID-19 was further classified as a public health emergency under Presidential Decree No. 11 of 2020 and as a national disaster without natural disasters under Presidential Decree No. 12 of 2020. (JDIH Marves, 2022).

In Indonesia, as a handling effort, the PSBB or Large-Scale Social Restrictions policy was issued as stipulated in Government Regulation Number 21 of 2020. In some regions, PSBB began in April 2020. Followed by the new normal policy which began to be implemented in June 2020. The COVID-19 handling policy continued until in early January 2021 the Enforcement of Restrictions on Community Activities (PPKM) which continued until the end of 2022, but with looser restrictions than before. This series of policies has an impact on limiting access to public services and outdoor activities, one of which is at health facilities. Along with the guidance to avoid visiting health facilities unless in urgent and emergency situations, the execution of the



Family Planning Program, particularly in terms of services and the ongoing use of contraceptives, has been impacted.

The effect of COVID-19 on contraceptive services is not only experienced by Indonesia. During 2020 to April 2021, France experienced a decrease in contraceptive acceptors of the pill, emergency contraception, IUD and implant at different time periods during the observation period (Roland *et al*, 2022). In contrast to France, in Ghana from before the pandemic the majority of people used natural contraception and during the pandemic remained the same, and some used short-term contraception, but there were no barriers to accessing contraception (Biney *et al*, 2023). In Africa, four sub-saharan regions were observed. The data show minimal impact on contraceptive coverage. In Kenya and rural Burkina Faso, the availability of contraceptives remained relatively constant, whereas in Lagos and Kinshasa there was a rise in the likelihood of unintended pregnancies resulting from a decline in contraceptive access, although not significant (Wood *et al*, 2021).

In Indonesia, the Head of BKKBN stated that in March 2020, there was a reduction in family planning participants when compared to February 2020, this condition is feared to cause a baby boom after the pandemic (Utama A., 2020). During the pandemic, Surabaya has become one of the areas with high COVID-19 cases and has become a black zone for the spread of COVID-19. The first reporting of COVID-19 cases in Surabaya was on March 18, 2020 with the first reported case of 6 cases (Dinas Kesehatan Provinsi Jawa Timur, 2021). However, in contrast to the concerns expressed by BKKBN, the number of pregnancies in Surabaya has actually decreased, during 2019 or before the COVID-19 pandemic there were 46,359 pregnancies, to 45,994 pregnancies during 2020 or during the COVID-19 pandemic (Dinas Kesehatan Kota Surabaya, 2020; Dinas Kesehatan Kota Surabaya, 2021). The presence of this phenomenon resulted in discovering the variations in contraceptive use prior to and throughout the COVID-19 pandemic in Surabaya. The condition of Surabaya as a large city may have different patterns of contraceptive use compared to other regions. This research is expected to contribute to understanding the characteristics of contraceptive users and methods in urban areas, particularly prior to and throughout the COVID-19 pandemic. The results of this research can be used as comparative data for other large cities in developing evidence-based policies.

Methods

The type of research employed in this study is quantitative via an analytical observational design with a retrospective longitudinal approach to identify variations in the use of contraceptives at the Jagir Community Health Center prior to and during the COVID-19 pandemic, utilizing secondary data from medical records. The study population comprised all family planning acceptors at the Jagir Community Health Center from March 2019 to February 2021, totaling 367 acceptors. Sampling for this research utilized a non-probability sampling technique applying a total sampling method. The research sample used was acceptors who were included in the research inclusion criteria with a total of 269 acceptors. The sample criteria that have been determined are IUD acceptors, female surgical methods (MOW), male surgical methods (MOP), condoms, implants, injections and pills; family planning acceptors whose demographic data (age and parity) were recorded; active family planning acceptors from the March 2019-February 2021 period (excluding new acceptors starting in the March 2020 period). Data were analyzed using univariate analysis for user characteristics and bivariate analysis utilizing the Chi Square test to identify differences in contraceptive use prior to and during the COVID-19 pandemic at the Jagir Surabaya Community Health Center.

Results



The total sample was 269 acceptors. These acceptors were followed by their contraceptive use in March 2019-February 2021, this period was divided into the period before the pandemic (March 2019-February 2020) and the period during the pandemic (March 2020-February 2021). However, in the period during the pandemic there were acceptors who experienced drop out contraceptives so that active acceptors during the pandemic period there were 180 acceptors. The medical record data obtained were age, parity, and contraceptives used.

Table 1 Characteristics of acceptors

Characteristics	Before Pandemic		During Pandemic	
	(n)	(%)	(n)	(%)
Age				
<20 years old	5	1.9	4	2.2
20-35 years old	192	71.4	121	67.2
>35 years old	72	26.8	55	30.6
Total	269	100	180	100
Parity				
≤ 2	211	78.4	141	78.3
>2	58	21.6	39	21.7
Total	269	100	180	100

Based on Table 1, it is found that the largest age group of acceptors in the period before and during the pandemic is in the same category, namely in the age range of 20-35 years, while the rarest age group both before and during the pandemic is at the age of <20 years. Also, the majority of acceptors before and during the pandemic had a history of parity ≤ 2, which means having less than or equal to 2 children.

Table 2 Differences in contraceptive use before and during the COVID-19 pandemic

Contraceptive Methods	Before Pandemic		During Pandemic		P-value
	(n)	(%)	(n)	(%)	
MKJP	106	39.4	110	61.1	0.000
Non MKJP	163	60.6	70	38.9	
Total	269	100	180	100	

Based on Table 2, in the period before the pandemic, non-MKJP contraceptives were more widely used than MKJP. However, during the pandemic, MKJP experienced an increase, while non-MKJP experienced a decrease in acceptors. The results of the chi square test used to see differences in contraceptive methods that have been classified based on the duration of the protection period show a p-value of 0.000 where the p-value is <0.05, so it can be concluded that there is a significant difference in the use of contraceptive methods before and during the COVID-19 pandemic. According to Table 2, in the period before the pandemic, non-MKJP contraceptives were more widely used than MKJP. However, during the pandemic, MKJP experienced an increase, while non-MKJP experienced a decrease in acceptors. The results of the chi square test used to see differences in contraceptive methods that have been classified based on the duration of the protection period show a p-value of 0.000 where the p-value is <0.05, so it can be concluded that there is a significant difference in the use of contraceptive methods before and during the COVID-19 pandemic.

Discussion



Acceptor characteristics

According to the findings of the research, it was found that most acceptors at Jagir Community Health Center before and during the pandemic were in the age range of 20-35 years. Age is one of the factors that affect an individual's actions regarding the use of contraceptives. (Ibrahim, W. W., *et al*, 2019). Age 20-35 years is an active reproductive age so that women of childbearing age at this age use more contraceptives with the aim of spacing pregnancies. In addition, at this age many couples are emotionally and economically established, so the use of contraception supports good family planning. Most acceptors at Jagir Community Health Center before and during the pandemic had a parity of ≤ 2 . The number of children that women of childbearing age have is also one of the factors that influence a person in using contraceptives. In the current era, health-related information is increasingly abundant and easily accessible, this has an impact on increasing awareness of maternal and child health, one of which is related to family planning. In addition to being adjusted to family planning, participation in using contraception tends to occur when the number of children born alive is equal to or exceeds the number of children the family wants (Jaksa, S., *et al*, 2023).

Differences in contraceptive use before and during the COVID-19 pandemic

Based on differences in the duration of their effectiveness, contraceptive methods are categorized into two groups, namely long-term contraceptive methods (MKJP) and short-term contraceptive methods (non-MKJP). In this study, MKJP included IUD, implants, and MOW, while non-MKJP included pills, injections, and condoms. Active acceptors referred to in sample determination are acceptors who have not been off contraception for more than 3 months.

In Table 2, there are changes in the pattern of contraceptive methods used during the COVID-19 pandemic. There is an increase in MKJP acceptors and a decrease in non-MKJP acceptors during the pandemic. This phenomenon is similar to what happened in Central Java, Wijayanti, U. T., *et al*, (2021) in their research said that where there was an increase in IUD and implant acceptors and a decrease in non-MKJP acceptors such as pills and injections during the pandemic. Padlilah, R., *et al*, (2023) in their research said that MKJP is also a contraceptive recommended by BKKBN during the COVID-19 pandemic because acceptors are not required to visit contraceptive service facilities frequently and do not need to remove contraceptives while infected with COVID-19. In addition, Hartati, D., (2023) in her research said that there is a possibility of switching methods to MKJP because they only want to delay pregnancy for a long time. In contrast to MKJP, for non-MKJP acceptors who are required to visit contraceptive service facilities regularly, the COVID-19 pandemic has hampered access to contraceptive service facilities. Ermi. N., (2021) in her research stated that these obstacles include PUS who are reluctant to visit health facilities, restrictions on visiting days and hours from family planning service providers, to changes in family planning service patterns to adjust to the conditions of the COVID-19 pandemic where mobile family planning services that are usually centralized in one area and gather many people must be limited by health protocols. Even so, health workers are still striving to be able to provide contraceptive services during the pandemic, especially for contraceptive methods that require the assistance of health workers in their use, so that the flow of contraceptive services during the pandemic is arranged, such as ensuring that you are not symptomatic of COVID-19, making appointments to avoid too many clients in the waiting room, ensuring clients keep their distance and use PPE (Padlilah, R., *et al*, 2023).

In the period before to during the COVID-19 pandemic, there were several family planning acceptors who dropped out. There are several reasons that influence the increase in dropouts during the pandemic. Anggriani Y., (2024) in her research classified broadly two reasons for dropping out acceptors during the COVID-19 pandemic. First, the fear of contracting COVID-19,



in addition to restrictions on access to health facilities at the beginning of the pandemic, facing these conditions, psychologically the community also feels afraid and worried about contracting COVID-19 when traveling, especially to health services which are prone to being a place of transmission of the COVID-19 virus. Second, the low knowledge of acceptors of contraceptives. Different levels of acceptor knowledge lead to different perceptions regarding the importance and complexity of contraceptive use. Medhin *et al.*, (2019) in their research said that minimal knowledge of contraceptives and lack of counseling affect acceptors in making contraceptive dropout decisions. Sholichah & Artika, (2021) in their research said that information regarding the importance of conducting family planning revisits during the COVID-19 pandemic is needed to avoid a spike in pregnancy rates and dropouts during the COVID-19 pandemic. In addition to these two reasons, the feeling of fear and discomfort about the side effects of contraceptives and the declining economic conditions due to the many layoffs during the pandemic that hampered access to health facilities also contributed to the dropout rate during the pandemic (Maydianasari L., *et al.*, 2023).

The limitation of this study is that it uses secondary data, namely medical records. Contraceptive medical records at Jagir Community Health Center are divided into new visit data and re-visit data which are recorded manually with different data collection formats so that there are some incomplete data and hinder the research process. In addition, this study only recapitulates data from visits at the health center, so that contraceptive access of acceptors in other places is not calculated.

Conclusion

The results of this study indicate that the majority of acceptors at the Jagir Community Health Center before and during the COVID-19 pandemic were 20-35 years old and parity ≤ 2 , and there were significant differences in contraceptive use based on the duration of the protection period before and during the COVID-19 pandemic at the Jagir Community Health Center. Future researchers are expected to make the results of this study as reference material and enrich the discussion by using primary data, adding research duration and expanding research locations.

Ethics approval and consent to participate

In this study, an ethical review was carried out by the ethics committee on August 5, 2024 at the Faculty of Medicine, Airlangga University with Ethical Number: 72/EC/KEPK/FKUA/2024.

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