

Research Articles

Pandemic Impact of Covid 19 on Compliance of Mother for Pregnancy Reviews Dampak Pandemi Covid 19 Terhadap Kepatuhan Ibu Melakukan Kunjungan Kehamilan

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Abstract

Maternal and neonatal services have not escaped the impact of the Covid 19 pandemic. It can indirectly increase the return of mortality and morbidity to both mother and baby. This study aims to assess the impact of the Covid 19 pandemic on the compliance of pregnant women to revisit antenatal care. The sampling technique used in this study was stratified random sampling, using the Lemeshow formula with a sample count of 126 people with the inclusion criteria set by the researcher. The design of this study was analytic observational. Data collection was carried out through observation questionnaire sheets that were collected offline and online (Google Form). The test used in this study was Mann Whitney. The results of the analysis show that the significance value is 0.003 at the 2nd-trimester pregnancy visit and 0.001 at the 3rd-trimester pregnancy visit, therefore, statistically $p < 0.05$ there is a relationship between the impact of the pandemic and the 2nd and 3rd-trimester pregnancy visits. Mann Whitney with a higher ranking ratio (mean) between the affected groups (66.92) and those not affected (41.59). Thus, those who were affected by the pandemic were economically more likely to not attend pregnancy visits compared to those who were not economically affected by the pandemic. The results of the study show that there is a relationship between the impact of the COVID-19 pandemic and the unity of mothers carrying out pregnancy visits during the pandemic, this is due to government policies to limit and also anxiety of pregnant women.

Keywords: impact, Covid 19, compliance, pregnancy visit

Abstrak

Pelayanan maternal dan neonatal tidak luput dari dampak dari pandemi covid . Hal ini secara tidak langsung dapat meningkatkan kembali angka kematian dan kesakitan baik pada ibu maupun bayi. Penelitian ini bertujuan untuk menilai Dampak pandemi Covid 19 terhadap kepatuhan ibu hamil melakukan kunjungan ulang antenatal care. Teknik penarikan sampel dengan cara *stratified random sampling*, menggunakan rumus *lemeshow* dengan hasil perhitungan sampel 126 orang dengan kriteria inklusi yang telah ditetapkan oleh peneliti. Desain pada penelitian ini adalah observasional analitik. Pengumpulan data dilakukan lewat lembar kuesioner observasi yang dikumpulkan secara offline dan online (*Google Form*). Uji yang digunakan dalam penelitian ini adalah *man whitney*. Dari hasil analisis Mann Whitney menunjukkan nilai signficancy menunjukkan angka 0,003 pada kunjungan kehamilan trimester 2 dan 0,001 pada kunjungan kehamilan trimester 3, oleh karena itu $p < 0,05$ secara statistik terdapat hubungan antara dampak pandemi dengan kunjungan kehamilan trimester 2 dan 3. Uji Mann Whitney dengan perbandingan ranking (mean) antar kelompok yang terdampak lebih tinggi (66,92) dengan yang tidak terdampak (41,59). Dengan demikian responden yang terdampak pandemi secara ekonomi lebih cenderung tidak melakukan kunjungan kehamilan dibandingkan dengan yang tidak terdampak pandemi secara ekonomi. Dari hasil penelitian ada hubungan antara dampak pandemi covid 19 dengan kepatuhan

ibu melaksanakan kunjungan kehamilan selama pandemi, hal ini disebabkan karena kebijakan dari pemerintah untuk melakukan pembatasan dan juga kecemasan ibu hamil jika tertular covid 19.

Kata kunci: dampak, Covid 19, kepatuhan, kunjungan kehamilan

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INTRODUCTION

Maternal and neonatal services have not escaped the impact of the Covid 19 pandemic, both in terms of access and quality. The Covid 19 case was first reported in Indonesia in early March 2020 which then expanded to almost all Provinces in Indonesia, including the capital city of Central Sulawesi Province, Palu City (Ministry of Health, 2020).

The results of a study in the UK show that mothers with high-risk pregnancies are more likely to catch COVID-19 than healthy women. Maternal mortality in the UK since black people have dominated the Covid pandemic, Asians, women with ethnic minorities, victims of violence, and women of low socioeconomic status (Rocca-Ihenacho, 2020). Therefore, to minimize the risk of contracting, pregnant women are expected to comply with health protocols following recommendations local health (Ridgeway, 2020; Bourne, 2020).

Before Covid 19 entered Indonesia, the maternal mortality rate in Indonesia was still a high problem, one of the factors that caused it. It can be seen from the indicators of women's health in Indonesia which are still below average. It is proven that there are still pregnant women with HIV, AIDS in homemakers, HIV infection at age 15-49 years, breast cancer, early marriage, cervical cancer, anemia in pregnant women and women, hypertension in WUS, Chronic Energy Deficiency, even violence 1:3 that occurs in women. It causes poor maternal health services (BPS, 2016).

The results of the *Rapid assessment* used Rapidpro, a real-time monitoring instrument with health workers as a target at the primary health service level in 34 provinces in Indonesia starting from April and May from 9,195 health facilities that received SMS, 2,740 health workers responded with an average of 86 completeness. % stated that 46% of Antenatal care services stopped due to the COVID-19 pandemic. At the Puskesmas level, services that were disrupted include family planning services, immunization, IMCI, and HIV prevention services, namely PMTCT and routine maternal and child health routine service is caused due to community concerns (64%), concerns of health workers (43%), sick/absent health workers (3%), and local PSBB (46%) (Ministry of Health, 2020).

Decrease in the number of first pregnancy check-ups in the first trimester (K1), the number of fourth visits to antenatal care in the third trimester (K4), and administration of blood-added tablets in the February-April 2020 period in 5 regions of Indonesia, especially a very significant decrease in K1 in Maros Regency, from 666 visits to 438 visits (34,23%), followed by the City of East Jakarta (30,62%) and Badung Regency (18,19%). The decrease in the number of K4 occurred in East Jakarta City (31,65%), Bekasi Regency (6,6), and Badung Regency (3,89%), while the increase in K4 only occurred in Maros Regency. Changes in service methods are the main factor causing the decrease in the number of antenatal care visits. In March 2020, parts of Indonesia were advised not to

implement Posyandu to prevent the spread of the Covid 19 virus. Efforts were made to increase the number of pregnancy visits, including home visits and online services (Saputri, 2020).

The target of performance achievement of district and city governments specifically for pregnant women services is 100% (Ministry of Health, 2016). The proportion of pregnancy examinations K1 (first pregnancy check-up), K1 Ideal and K4 (return pregnancy check-up) in Indonesia for women aged 10-54 years based on Rikesdas 2018 K1 96,1%, K1 Ideal 86%, and K4 74,1%, in Central Sulawesi the achievement of K1 was 93,1%, K1 Ideal 71.3% and K4 58,7% (Ministry of Health, 2018). It can be concluded that before the Covid 19 pandemic entered Indonesia, the proportion of antenatal care services had not yet reached the national target according to the Indonesian Minister of Health regulation number 43 of 2016.

The decline in maternal and child health services will have the potential to increase morbidity and mortality, this is due to antenatal care visits whose initial purpose was to screen for early detection of high risks that could arise during pregnancy, this will indirectly affect the health status of mothers during pregnancy, which in turn will increase maternal and infant mortality rates (Saputri, 2020).

Puskesmas Sangurara is one of the Puskesmas to Plenary in Palu City, the proportion of achievement is K1 95%, K4 is 78%. The number of visits by pregnant women starting from the Covid pandemic 19 March 2020-May 2020 has fluctuated. March 182 pregnant women, April 98 pregnant women, May decreased to 85 pregnant women. Entering the new habit adaptation (New Normal), pregnancy visits increased from June with 144 pregnant women, July 181 pregnant women, August 163 pregnant women, and September 182 pregnant women. Implementation (UPTD Puskesmas Sangurara, 2020).

From the description of this background, reviewing the achievement of the proportion of antenatal care visits that occurred before and after the COVID-19 pandemic, researchers are interested in conducting research related to the impact of the Covid 19 pandemic on pregnant women's compliance with antenatal care (K4) return visits.

METHODS

The population in this study were all pregnant women in the second and third trimesters who were in the working area of the Sangurara Health Center. The population of this study were 182 pregnant women, the sampling technique of this study was *stratified random sampling*, using the *Lemeshow* formula with a significance level of 95% and a test power of 80% with a sample count of 126 pregnant women, the inclusion criteria of this study is a pregnant woman in the 2nd and third trimesters and is willing to be a in this study. The design used in this research is analytic observational using a quantitative approach in the form of numbers to eliminate ivity from the study. Data collection was carried out through observation questionnaire sheets that were collected offline and online (*Google Form*). After the data was collected from each research variable, an analysis was carried out to assess the frequency distribution and percentage distribution of each variable. Then the results of the data were carried out for statistical tests using the SPSS program. The test used in this study was *Mann Whitney*.

RESULTS AND DISCUSSION

Subject characteristics

Characteristics are characteristics inherent in s. In this study, the characteristics displayed are age, education, number of children, gravida, gestational age, places to visit during the pandemic, number of visits during pregnancy, number of ANC visits during

the pandemic, implementation of health protocols during the pandemic, telemedicine during pregnancy, forms of midwifery services received during a pandemic.

Table 1. Frequency distribution of

Characteristics	Frequency	%
Age		
<20 Years	7	5,6
20-35 years	91	72,2
> 35 years	28	22,2
Education		
SD	4	3,2
Junior High	13	10,3
High school	70	55,6
S1 / S2	39	31
Number of children		
No children yet	44	34,9
1	64	50,8
> 2	18	14,3
Gestational Age		
2nd trimester (14-26 weeks)	7	5,6
3rd trimester (> 27 weeks)	119	94,4
First Trimester Pregnancy Visit		
Never	27	21,4
One time	99	78,6
Second Trimester Pregnancy Visit		
Never	54	42,9
One time	70	55,6
> 1 time	2	1,6
Third Trimester Pregnancy Visit		
Never	46	36,5
One time	77	61,1
> 1 time	3	2,4
Telemedicine During the Pandemic		
There is	69	54,8
There is no	57	45,2
The impact of the pandemic from an economic point of view		
Impacted	117	86,5
Not Affected	17	13,5

Source: Primary Data, 2020

Table 1 showed that the majority were 20-35 years old as many as 95 subjects (72,2%) and the minority subjects aged <20 years were seven subjects (5,6%). The education level of the majority of subjects has high school education as many as 70 subjects (55,6%) and a minority with elementary school education (SD) as many as four subjects (3,2%).

The number of children of the majority of subjects who had one child was 64 subjects (50,8%), and the minority of subjects had more than two children as many as 18 subjects (14,3%). The majority of subjects' gestational age entered into the third trimester of pregnancy was 119 subjects (94,4%), and the minority of subjects was

seven subjects (5,6%). The first-trimester pregnancy visit, the majority of subjects, had had one pregnancy visit as many as 99 subjects (78,65), and a minority of 27 subjects (21,4%) did not have a pregnancy visit in the first trimester.

In the second trimester of pregnancy, the majority of subjects had had one pregnancy visit. It was 70 subjects (55,6%), and a minority of subjects had had pregnancy visits more than once as many as two subjects (1,6%). In the third-trimester of pregnancy, the majority of subjects had pregnancy visits as many as 79 subjects (62,7%), and the minority of subjects had had pregnancy visits > once as many as three subjects (2,4%).

The implementation of telemedicine, the majority of subjects answered they were contacted by midwives and 69 subjects (54,8%), and the minority answered that they were not contacted by midwives during the pandemic as many as 57 subjects (45,2%). Pregnant women are prone to psychological changes after social restrictions, among them experiencing saturation, boredom or more distress and anger, which is worrying about having the mind to hurt themselves and the need to commit suicide (Muhaidat et al, 2020).

Subjects who were impacted from an economic perspective on the COVID-19 pandemic in the second trimester of pregnancy as many as 41 respondents (37,6%) did not attend pregnancy visits. The Second and Third trimester pregnancy visit, the main reason is the fear of contracting Covid 19 from the Puskesmas or health workers in charge of health services, besides that pregnant women are worried that when they are pregnant, contracting Covid will have a bad impact on their fetus, this is following the results of research stated that pregnant women had higher levels of anxiety during the pandemic (Durankuş,2020).

In Jordan, the impact of the decline in employment due to the COVID-19 pandemic has resulted in a decrease in family income for most subjects. This causes financial difficulties for pregnant women to prioritize their health and maintain a healthy lifestyle during pregnancy also becomes influential (Muhaidat et al, 2020)

Research conducted during the covid 19 pandemics on 554 women showed that almost half of respondents (46%) reported loss of revenue during the pandemic compared to before the covid 19 pandemic. The study suggests that subjects already living with low economies may experience a loss of income during the pandemic (Lin et al, 2021).

The Impact of the Covid 19 Pandemic on Compliance

Table 2 showed that the impact of the Covid 19 pandemic on compliance for the second and third trimester of pregnancy visit. From the results of the Mann-Whitney analysis, the significance value shows the number 0,003, therefore $p < 0,05$ is statistically a relationship between the impact of the pandemic and the 2nd-trimester pregnancy visit. The Mann Whitney test with the ranking ratio (mean) between the affected groups is higher (60,6%) than those who were not affected (76,5%). Thus, respondents who were affected by the pandemic were more likely to not make pregnancy visits compared to those who were not economically affected by the pandemic.

There was a decrease in pregnancy visits, one of which was due to changes in service methods at several integrated service posts and service limitations that occurred in Community Health Centers, especially for pregnant women services. This indirectly caused services for pregnant women to be hampered due to the Covid 19 pandemic. To overcome the problems that occurred, the Sangurara Community Health Center conducted home visits to several homes of pregnant women and besides that midwives also conducted telemedicine to several pregnant women who did not make visits pregnancy to the Puskesmas. This program is implemented following the guidelines for

services for pregnant women during the Covid pandemic (Directorate of Family Health, 2020)

Table 2. The Impact of the Covid 19 pandemic on compliance

Impact of the Pandemic	Second-trimester pregnancy visit compliance						Value p
	Never		1 time		> 1 time		
	n	%	n	%	n	%	
Not Affected	13	76,5	4	23,5	0	0	0,003
Yes Affected	41	37,6	66	60,6	2	1,8	
Total	54	42,9	70	55,6	2	1,6	

Source: Primary Data, 2020

Non-compliance that occurs at pregnancy visits is due to government regulations to implement restrictions during the Covid pandemic, including pregnancy visits. It has resulted in missed visits to K1 and K4 that should be carried out by pregnant women at the Puskesmas. It will have an impact on increasing cases of death and illness for both mother and fetus. Therefore, the Puskesmas needs to conduct socialization both offline (home visits) and online to the community, especially pregnant women, of the need for a pregnancy visit, one of which is to screen pregnant women from danger signs that can occur later in labor (Saputri, 2020)

Table 3. The Impact of the Covid 19 pandemic on compliance for 3rd Trimester pregnancy visits

Impact of the Pandemic	Third-trimester pregnancy visit compliance						Value p
	Never		1 time		> 1 time		
	n	%	N	%	n	%	
Not Affected	12	70,6	5	29,4	0	0	0,001
Yes Affected	34	31,2	72	66,1	3	2.8	
Total	46	36,5	77	61,1	3	2,4	

Source: Primary Data, 2020

In developing countries, a 10% reduction in services can lead to an increase in mortality and morbidity in both pregnant and neonatal mothers, especially in pregnant women and babies with complications. For example in pregnant women with complications of hypertension, diabetes mellitus, placenta previa, history of bleeding pervagina (Muhaidat et al, 2020).

Table 3 showed that the results of the Mann-Whitney analysis show that the significance value is 0,001; therefore, $p < 0,05$, statistically, there is a relationship between the impact of the pandemic and the 3rd-trimester pregnancy visit. Restrictions on health workers who are assigned to health services at the Puskesmas are also one of the factors causing the delay in pregnancy visits to pregnant women at Sangurara Health Center. Therefore, efforts have been made by the community health centre in Sangurara to implement telemedicine for several pregnant women. Which aims to ensure the health status of pregnant women during pregnancy and screen for high-risk pregnancies in pregnant women with high-risk criteria. It is under research that telemedicine or telehealth

has a very good impact on being implemented during the Covid 19 pandemic to prevent death and illness in both mothers and babies and also ensure that the mother's mental state normally runs during the pandemic (Aziz, 2020).

Pregnant women continue to carry out pregnancy visits to the Sangurara Health Center, generally come with an agreement with a health worker, one of which is for mandatory examinations that must be carried out in the 2nd and third trimesters, one of which is checking hemoglobin, urine protein, and urine glucose and giving Fe tablets to pregnant women. Pregnant women are encouraged to come to health care centers in Sangurara while still paying attention to health protocols by diligently washing their hands, using masks, and maintaining distance during pregnancy examinations. Research carried out related to pregnancy checks should still be carried out even though using online media or direct visits while still implementing the health protocol (Ridgeway, 2020).

Although the risk of transmission from mothers infected with covid 19 has not been scientifically proven, but international literature shows that pregnant women with covid 19 can cause aneurism in neonates (Chang, 2020). In Indonesia, pregnancy visits are recommended 6 times during pregnancy. However, pregnancy visits are limited during the covid 19 pandemic, but this does not cover the possibility of telemedicine from pregnant women by health workers (Nurjasmi, 2020). Another study recommended antenatal visits at 12 weeks gestation, 20 weeks, 28 weeks, and 36 weeks (Goyal, Singh, and Melana, 2020).

CONCLUSION

The results showed that there was a relationship between the impact of the COVID-19 pandemic and pregnancy visits in the second and third trimesters of pregnant women in the working area of the Community Health Center in Sangurara, Palu City. It is due to the implications of government policies that limit community activities, including health services for pregnant women

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CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest.

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