

# Analysis of the Impact of Covid-19 on Pregnant Women on Preparation for Childbirth

**Irnawati<sup>1\*</sup>, Salmiani Abdul Manaf<sup>2</sup>**

Department of Midwifery, Politeknik Kesehatan Kementerian Kesehatan, Aceh, Indonesia

## ARTICLE INFO

### *Article history:*

Received Aug 30, 2022

Revised Sep 20, 2022

Accepted Sep 28, 2022

### *Keywords:*

impact,  
pregnant mother;  
maternity mother;  
childbirth,  
pandemic,  
COVID-19

## ABSTRACT

All routine services, including maternal and newborn health services, face many constraints during this pandemic. In the early stages of pregnancy, almost every pregnant woman begins to prepare for labor. There are many things that can be done to prepare, from preparing for the needs of the baby, the needs of the mother, psychological preparation, to preparing for the choice of a birthing facility. Welcoming babies into families is a habit, but during the Covid-19 pandemic, it's another story. Objective: The purpose of this Systematic Review is to analyze the effect of immunization services during the COVID-19 pandemic. Methods: Database search includes Google Scholar, Science Direct, and Pubmed with the keywords used are impact, anxiety; pregnant mother; maternity mother; childbirth, pandemic, COVID-19. The next stage is to select articles according to the criteria, which are published in 2017-2022 with the full text of 12 articles that meet the inclusion criteria. Results: Findings from 12 articles showed that the impact of COVID-19 on the preparation of pregnant women for childbirth in health facilities differed from maternal anxiety. In addition, the anxiety of pregnant women about childbirth greatly affects the mother's readiness to carry out prenatal care and preparation for delivery. And the effects of Covid-19 on childbirth have not been shown to be contagious to the newborn. However, mothers who are infected with Covid-19 must still follow health protocols, including self-isolation or separation from their newborn babies. Conclusion: the impact of covid 19 on preparation for childbirth is the anxiety of pregnant women, This anxiety can be reduced by providing guidance, counseling and education for pregnant women about transmission and routes of transmission. How to protect yourself from COVID-19 and its prevention. It is transmitted from pregnant women to babies. More importantly, if the mother is hesitant and afraid to go for a pregnancy check-up at the hospital for fear of contracting the virus from other people, a solution can be given to check her womb at the nearest midwife or clinic so that she can avoid contact with other people as well as when the delivery process arrives.

*This is an open access article under the [CC BY-NC](#) licenses*



### *Corresponding Author:*

Irnawati,  
Department of Midwifery,  
Poltekkes Kemenkes Aceh,  
Jalan Soekarno-Hatta Kampus Terpadu Poltekkes Aceh , Aceh Besar 23352, Indonesia  
Email: [irnawati@poltekkesaceh.ac.id](mailto:irnawati@poltekkesaceh.ac.id)

## INTRODUCTION

The Covid pandemic is affecting various aspects, one of which is the health aspect. The government is implementing various regulations to reduce morbidity and mortality due to the spread of the Covid-19 virus, including regulatory changes in healthcare delivery<sup>1</sup>. In the context of the Covid-19 pandemic, the government has issued a directive to implement health protocols in the provision of public services, including health services such as B. for the provision of services and antigen swab testing and Health officials in PCR tau use hazardous materials, especially for mothers giving birth in healthcare facilities<sup>2</sup>. Pandemic times affect a person's soul widely and dramatically, starting with their way of thinking, understanding health and disease information, mood swings, and social behavior<sup>3</sup>.

The condition of the mother during pregnancy leads to a decline in immunity due to physiological changes, which makes pregnant women more susceptible to viral infection<sup>4</sup>. Pregnant women are very afraid to go to puskesmas or other medical institutions for fear of contagion. According to 2019 data on health service coverage of pregnant women in Indonesia, the number of K1 and K4 was 82.9% and 88.4%, respectively, with 83.2% of deliveries assisted by health workers and 82.1% of deliveries in health institutions. Between January and April 2020, data on antenatal services decreased from 76,000 to 59,000 for K1 and from 57,000 to 50,000 for K4<sup>5</sup>. Pregnant women are very afraid to go to health centers or other health care facilities for fear of contagion. According to the 2019 data on coverage of maternal health care services in Indonesia, the numbers of K1 and K4 were 82.9% and 88.4%, respectively, the rate of births by medical staff was 83.2%, and the rates of births in health institutions were 82,1%.

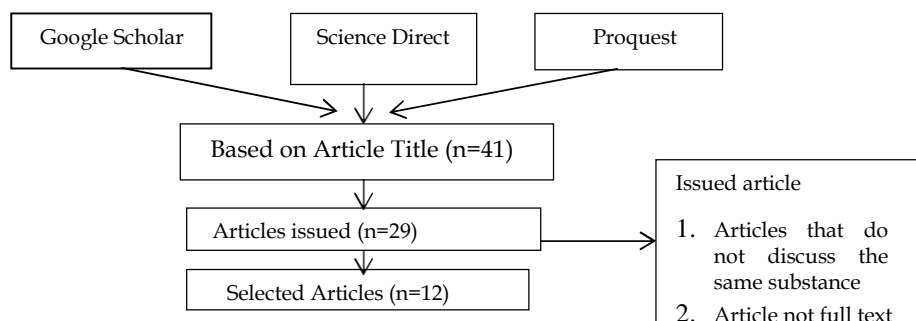
Pregnant and maternity mothers who have confirmed Covid-19 have symptoms and some do not, while the symptoms of Covid-19 generally have symptoms of fever, cough, muscle aches, sometimes accompanied by diarrhea<sup>6</sup>. Pregnant women who are confirmed to have COVID-19 and have no symptoms will continue to self-isolate and apply health protocols<sup>6</sup>. In an effort to prevent transmission or a more severe risk, WHO recommends early detection of SARS-CoV through nasopharyngeal and oropharyngeal swab (Swab PCR) in pregnant women<sup>7</sup>. The majority of pregnant women diagnosed with COVID-19 disease have mild disease and will recover without need to deliver, but the risk of critical illness and the need for mechanical ventilation are increased compared to the general population. Risk factors for death and severe disease include obesity, diabetes, and maternal age > 40 years Women in the third trimester have the highest risk for critical illness, thus requiring intensive care<sup>8</sup>. Based on this background, researchers are interested in conducting a review of the Impact Analysis of Covid-19 on Pregnant Women on Childbirth Preparation. The purpose of this systematic review is to analyze the Impact of Covid-19 on Pregnant Women on Childbirth Preparation.

## RESEARCH METHOD

Database searches include Google Scholar, Science Direct, and Pubmed with the keywords used are impact, anxiety; pregnant mother; maternity mother; childbirth, pandemic, and COVID-19. The next stage is to select articles according to the criteria limits, which are published in 2017-2022 with full text, in the preparation of Preferred Reporting Items for Systematic Reviews and Meta Analysis (PRISMA) the articles that have been found are then synthesized and analyzed according to the inclusion and exclusion criteria. The inclusion criteria in this systematic review are the complete impact of covid-19 on pregnant women in preparation for childbirth. While the exclusion criteria in this systematic review are: articles that do not describe the impact of the COVID-19 period on childbirth. The search for articles began in August 2022 with keywords that had been determined by the researcher. The articles found by the researcher were selected according to the inclusion and exclusion criteria, with the keywords impact, anxiety; pregnant mother; maternity mother; childbirth, pandemic, and COVID-19. The researcher deletes the published articles, examines the articles that meet the criteria, and groups them according to the research results to proceed to the discussion.

## RESULTS AND DISCUSSION

An initial literature search found 41 articles (Google Scholar 22 articles, Science Direct 10 articles, Proquest 9 articles) 29 articles that were issued were not in sync with the topic of discussion and did not discuss the complete impact of Covid-19 on childbirth. 12 full-text articles met the criteria as listed in Figure 1



**Figure 1.** Flow diagram and article selection

The results of 12 articles showed that the impact of COVID-19 on pregnant women on preparation for delivery in health facilities was different from the anxiety of pregnant women. In addition, the anxiety of pregnant women who will give birth greatly affects the readiness of mothers in conducting antenatal care visits and preparation for childbirth. And the impact of Covid-19 on childbirth has not been confirmed to transmit to babies born. However, mothers who are infected with Covid-19 still have to implement health protocols, including self-isolation or separation from babies who have been born.

**Table 1.** Analysis of the impact of COVID-19 on pregnant women on preparation for childbirth.

No	Title, author, year	Results
1	Analysis of the Relationship between Anxiety in Pregnant Women and Readiness for Childbirth During the Covid-19 Pandemic in Palembang City  Septa Wulandari, Rico Januar, Pitri Noviadi (2021) <sup>9</sup>	The results of the study found that the frequency of respondents was more than 155 people (81.6%) and respondents who were less anxious were 163 people (85.8%). There is a relationship between anxiety (p value 0.045) and readiness to face childbirth during the Covid19 pandemic in Palembang City.
2	Relationship between Anxiety Levels and Knowledge of Pregnant Women About Antenatal Care During the Covid-19 Pandemic  Renny Aditya, Yanti Fitria . (2021) <sup>10</sup>	The results showed that pregnant women's anxiety scores varied during the pandemic, from non-anxiety, mild anxiety, moderate to severe anxiety. As many as 62.5% of respondents had severe anxiety. Data were analyzed using Spearman's test to determine differences in maternal anxiety. Anxiety of pregnant women who will give birth greatly affects the readiness of mothers in conducting antenatal care visits & preparation for childbirth. The results show that there is a correlation between each variable of the level of anxiety and knowledge of pregnant women about antenatal care during the Covid-19 pandemic with a significant correlation with a positive and strong correlation direction.
3	Effects of the COVID-19 pandemic on anxiety and depressive symptoms in pregnant women: a preliminary study.  Durankuş F, Aksu E. (2022) <sup>11</sup>	Among the respondents, 35.4% (n = 92, case group) obtained scores higher than 13 on the Edinburgh Postpartum Depression Scale (EPDS). The comparison of the groups by years of education indicated statistically significant effects of COVID-19 on psychology, social isolation, and mean scores in the Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI). These effects were more severe in the case group than in the control group (psychology: 8,369 ± 2,003, social isolation: 8,000 ± 2,507, mean BDI and BAI scores: 20,565 ± 6.605 and 22,087 ± 8,689, respectively). A regression analysis revealed that the BDI scores and the disease's psychological effects, as well as the BAI scores and the illness's social isolation effects, exerted a statistically significant influence on the EPDS scores of the participants.

4	Anxiety of Pregnant Women and Postpartum Mothers During the Covid-19 Pandemic In Baturraden District  Diki Retno Yuliani, Fajaria Nur Aini (2020) <sup>12</sup>	The results of this study indicate that pregnant women and postpartum mothers in Baturraden District, during the COVID-19 pandemic, the majority experienced mild-moderate anxiety.
5	COVID-19 during pregnancy: Potential risk for neurodevelopmental disorders in neonates?  Yeşim Aksoy Derya, Sümeyye Altıparmak, Emine Akça , Nilay Gökbulut, Ayşe Nur Yılmaz (2020) <sup>13</sup>	The results of this study showed that the total posttest mean scores of pregnant women in the experimental and control groups were $8.75 \pm 5.10$ and $11.50 \pm 4.91$ , respectively, where the difference between the groups was statistically significant ( $t = -2.689$ , $p = 0.008$ ). In addition, the difference between the mean scores on the PRAQ-R2 and the "fear of childbirth" and "worry of giving birth to a child with physical or mental disability" subscales was statistically significant.
6	Increased Knowledge About Mental Readiness of Pregnant Women Facing Childbirth During the Covid-19 Pandemic at Posyandu  Evi Zulfiana, Adevia Maulida Cikmah, Ulfatul Latifah (2021) <sup>14</sup>	The results of the study showed that from the activities carried out by all pregnant women who took part in the class for pregnant women, they already knew about the readiness to face childbirth during the pandemic.
7	The Impact of the Covid-19 Pandemic on Pregnant Women on Preparation for Childbirth in Public Health Facilities  Wa ode Hasriati, Gusriani (2021) <sup>15</sup>	The results of the Chi Square test showed that there was a relationship between age and anxiety, $p$ value $0.010 < (0.05)$ , there was a relationship between education and anxiety, $p$ value $0.001 < (0.05)$ and there was a relationship between work and anxiety, $p$ value $0.024 < (0.05)$ .
8	The Effectiveness of Prenatal Gantle Yoga Through Online Methods Against Anxiety Levels in Facing Childbirth during the Covid-19 Pandemic in the Independent Practice of Midwives in Kediri  Dili Ekasari. (2021) <sup>16</sup>	The results showed that the level of anxiety before being given prenatal gantle yoga was in the moderate category as many as 22 people (55%). The level of anxiety after being given prenatal gantle yoga was in the mild pain category as many as 25 people (62.5%). The results of statistical tests show that the correlation between the two variables is 6.025 with a significance of 0.000. This indicates that the correlation between the two variables on average before and after is strong and significant. This indicates that the correlation between the two variables on average before and after is strong and significant.
9	Factor Analysis of Anxiety Levels for Third Trimester Pregnant Women in Facing the Delivery Process During the Covid-19 Pandemic In Kotamobagu City  Muzayyana Muzayyana, Sitti Nurul Hikma Saleh (2021) <sup>17</sup>	Results:It can be seen that maternal education has a very strong relationship with the anxiety of pregnant women in the third trimester during the COVID-19 pandemic with a significant value ( $PV=0.028 < =0.05$ ). The level of stress in the mother has a very strong relationship with the anxiety of pregnant women in the third trimester during the COVID-19 pandemic with a significant value ( $PV = 0.013 < = 0.05$ ).
10	Anxiety of Third Trimester Pregnant Women Facing Childbirth and Breastfeeding Practices in the Era of the Covid-19 Pandemic  Nur Hidayah, Tria Puspita Sari, Wiwik Puspita Dewi (2021) <sup>18</sup>	Results: 84% of respondents did not feel anxious, 8% of respondents experienced mild anxiety, and 8% of respondents experienced severe anxiety when facing childbirth and breastfeeding practices in the era of the covid-19 pandemic.
11	Relationship between Family and Community Support and Anxiety Levels of Pregnant Women in Facing Childbirth Preparation During the Covid-19 Pandemic in the Working Area of the Want Jaya Health Center, Aceh Besar District  Lisa Magfirah, Nopa Arlianti, Agustina	The results showed that pregnant women with mild anxiety were 3.70%, moderate anxiety was 40.74%, severe anxiety was 11.11% while panic was 44.44 %. Bivariate test results on family support ( $p$ value 0.080), community support ( $p$ value 0.567), age ( $p$ value 0.064), education ( $p$ value 0.770), environmental status ( $p$ value 0.644) the level of anxiety in pregnant women in facing childbirth preparation during the Covid-19 pandemic in the Work Area of the Want Jaya Health Center, Aceh Besar District

(2022)<sup>19</sup>

in 2021

12	Characteristics of Pregnant Women with Covid-19 and their Delivery Outcomes at Kasih Ibu Hospital Surakarta	The results show thatAs many as 62 pregnant women with confirmed COVID-19 gave birth at the Kasih Ibu Hospital in Surakarta with the sectio caesarea procedure. Of all pregnant women, most were asymptomatic and had mild symptoms, only 3.2% had moderate symptoms and no severe or critical symptoms were found. Out of 20 of the 62 babies born (32%) were confirmed with COVID-19. All babies were born with good APGAR scores and found 4 babies with low birth weight, one of which also had hypospadias.
	Nabila Arnest Amorita, Ira Syahriarti(2021) <sup>20</sup>	

## Discussion

Findings from 12 articles suggest that COVID-19 has had a variable impact on pregnant women giving birth in health facilities, with mothers concerned about contracting the virus and endangering their unborn children. In addition, prenatal fears of pregnant women have a strong impact on mothers' willingness to perform prenatal care and preparation for delivery. And the effects of Covid-19 on childbirth have not been shown to be contagious to newborns. However, mothers with Covid-19 must still follow health protocols, including self-isolation or separation from their newborns. Principles for prevention of COVID-19 in pregnant women, mothers, childbirth, and newborns in the community include universal precautions including frequent hand washing, wearing a mask, maintaining physical fitness through diligent exercise and adequate rest, a balanced diet, and cough and sneeze etiquette practices<sup>21</sup>.

In the new normal era of the COVID-19 pandemic, healthcare services must continue to operate optimally and safely for patients and midwives, with various adjustments based on COVID handling guidelines or healthcare protocols. Mothers about to give birth must carry proof in the form of an antigen or PCR swab<sup>22</sup>. Choosing where to give birth, whether at home, in a clinic or in a hospital, pregnant women must also carefully consider and weigh the risks and benefits. Discuss this with your doctor first. If a pregnant woman wishes to give birth in a clinic or at home, make sure that an ambulance or vehicle can reach the birthing site<sup>23</sup>. This is only if you need to be hospitalized immediately. Pregnant women should not give birth at home if they have COVID 19 or have certain medical conditions

It is safer to give birth in a hospital, so you can monitor your condition closely and protect your baby as much as possible during and after delivery. To give birth in a hospital, first determine which hospital you were giving birth in a long time ago. Pregnant women should also consult their obstetrician to find out their due date. Mothers can be with you during hospital deliveries, whether by caesarean section or normal delivery. However, the accompaniment should be limited to one person as much as possible. Even if an escort has symptoms of COVID-19 or is feeling unwell, they are not allowed to enter the delivery room. This is done to protect pregnant women, babies and doctors or midwives who assist in childbirth from contracting the coronavirus<sup>24</sup>. Pregnant women's anxiety can affect their own health and that of their baby.

Pregnant women can experience excessive anxiety, especially in the third trimester, as all the mother's attention and thoughts will be focused on the upcoming labor process. In this case, readiness may be influenced by previous pregnancy and childbirth experience. If the mother is already pregnant and gives birth, the mother is more confident about the next delivery. In such cases, counseling on childbirth preparation is required so that the mother does not feel overly anxious and is better prepared for delivery<sup>20, 22, 25</sup>. One of the concerns is the reported increase in infection and death rates from COVID-19, which has increased anxiety among pregnant women<sup>26</sup>. This leads to issues such as a high risk of contracting COVID-19 in pregnant women, risk of pregnancy complications and death, risk of mother-to-child transmission, and potential effects of COVID-19 on the fetus<sup>27</sup>.

Some case reports suggest that pregnant women are at high risk of contracting the COVID-19 virus. As a result, they implemented strict quarantines, restricted activities, and made lifestyle changes, while closely monitoring their health and implementing health protocols to break chains of transmission and prevent the spread of COVID-19 to them and their infants<sup>28</sup>. In addition, they have reduced the use of equipment to avoid

news of the spread of COVID-19 cases and deaths, which may increase fears<sup>29</sup>. One of the triggers for anxiety and depression in pregnant women is social support. The more effective the social support provided, the fewer anxiety and depressive symptoms the pregnant woman experienced. Social support is an important factor in physical and mental health. This fear can be reduced by informing, counseling and educating pregnant women about transmission and how it is transmitted. How to protect yourself from COVID-19 and how to prevent it<sup>30</sup>. It is passed from pregnant woman to baby. if the mother is reluctant to go to the hospital for a pregnancy test because she is afraid of spreading the virus to others, she can give a solution to have her uterus checked by the nearest midwife or clinic, so as to avoid contact with other people, When the labor process comes, the mother should plan the labor carefully.

## CONCLUSION

Pregnant women are a group of high risk factors that are vulnerable to a health problem or disorder, one of which is mental health. Factors that cause anxiety during the pandemic include: access to health services, fear of the risk of being exposed to the virus, and lack of emotional support from family. The impact of covid 19 on childbirth preparation is the anxiety of pregnant women, this anxiety can be reduced by providing direction, counseling and education for pregnant women about transmission and transmission routes. How to protect yourself from covid-19 and its prevention. It is transmitted from pregnant women to babies. What is more important if the mother is hesitant and afraid to go to the hospital for a pregnancy check for fear of contracting the virus from other people.

## References

- [1] Kemenkes. Pedoman Pencegahan dan Pengendalian COVID-19, Jakarta: Kementerian Kesehatan RI, 2020.
- [2] Agustino L. Analisis Kebijakan Penanganan Wabah Covid-19: Pengalaman Indonesia. *Jurnal Borneo Administrator*. 2020 Aug 24;16(2):253-70.
- [3] Pradana A.A. & Casman C., Pengaruh Kebijakan Social Distancing pada Wabah COVID-19 terhadap Kelompok Rentan di Indonesia, *Jurnal Kebijakan Kesehatan Indonesia: JKKI*, 2020;9(2):61-67.
- [4] Asnuriyati W. & Fajri L., Gambaran Tingkat Kecemasan Ibu Hamil Trimester III Dalam Menghadapi Persalinan Di Puskesmas Cempaka Tahun 2020, *Journal Nurshing Army*, 2020;1(2):1-8.
- [5] Kemenkes. Pedoman Bagi Ibu Hamil, Bersalin, Nifas, dan Bayi Baru lahir di Era Pandemi COVID-19, Jakarta: Kementerian Kesehatan RI, 2020.
- [6] Khoirunisa Sh. Hubungan Tingkat Pengetahuan Covid-19 Terhadap Kecemasan Ibu Hamil Saat Pandemi Di Wilayah Kerja Puskesmas Borobudur (Doctoral dissertation, Universitas Muhammadiyah Magelang).
- [7] Nasriyah, Islami, and N. Asiyah, Prevalensi Ibu Hamil TM III yang Terkonfirmasi Covid-19 di Puskesmas Mayong II Jepara Tahun 2021, *Urecol* 13, pp. 1-5, 2021
- [8] M. N. Boushra, A. Koyfman, and B. Long, Covid-19 in Pregnancy and puerperium: A review for emergency physician, *Am. J. Emerg. Med.*, vol. 40, no. January, pp. 193-198, 2020
- [9] Wulandari S, Sitorus RJ, Noviadi P. Analisis Hubungan Kecemasan Ibu Hamil Dengan Kesiapan Menghadapi Persalinan Di Masa Pandemi Covid-19 Di Kota Palembang. *JAMBI MEDICAL JOURNAL" Jurnal Kedokteran dan Kesehatan"*. 2021 Nov 1;9(3):324-32.
- [10] Aditya R, Fitria Y. Hubungan Tingkat Kecemasan dan Pengetahuan Ibu Hamil Tentang Antenatal Care Saat Pandemi Covid-19. In *Seminar Nasional Psikologi UM 2021 (Vol. 1, No. 1, pp. 437-443)*.
- [11] Durankuş F, Aksu E. Effects of the COVID-19 pandemic on anxiety and depressive symptoms in pregnant women: a preliminary study. *The Journal of maternal-fetal & neonatal medicine*. 2022 Jan 17;35(2):205-11.
- [12] Yuliani DR, Aini FN. Kecemasan Ibu Hamil Dan Ibu Nifas Pada Masa Pandemi Covid-19 Di Kecamatan Baturraden. *Jurnal Sains Kebidanan*. 2020 Nov 27;2(2):11-4.
- [13] Martins-Filho PR, Tanajura DM, Santos HP, Santos VS. COVID-19 during pregnancy: Potential risk for neurodevelopmental disorders in neonates?. *European Journal of Obstetrics and Gynecology and Reproductive Biology*. 2020 Jul 1;250:255-6.
- [14] Zulfiana E, Cikmah AM, Latifah U. Peningkatan Pengetahuan Tentang Kesiapan Mental Pada Ibu Hamil Menghadapi Persalinan Saat Pandemi Covid-19 di Posyandu. *JPM: Jurnal Pengabdian Masyarakat*. 2021 Mar 30;1(3):75-7.
- [15] ode Hasriati W, Suiyarti W. Dampak Pandemi Covid-19 Pada Ibu Hamil Terhadap Persiapan Persalinan Di Fasilitas Kesehatan Masyarakat. *JURNAL ANTARA KEBIDANAN*. 2021 Dec 16;4(4):207-13.

- [16] Ekasari D. Efektivitas Prenatal Gantle Yoga melalui Metode Daring terhadap Tingkat Kecemasan dalam Menghadapi Persalinan Masa Pandemi Covid-19 di Praktik Mandiri Bidan Kota Kediri. *Jurnal Bidan Komunitas*. 2021 Sep 26;4(3):139-44.
- [17] Muzayyana M, Saleh SN. Analisis Faktor Tingkat Kecemasan Ibu Hamil Trimester III Dalam Menghadapi Proses Persalinan Di Masa Pandemi Covid-19 Di Kota Kotamobagu. *Jurnal Keperawatan Muhammadiyah*. 2021 Sep 1;6(3).
- [18] Hidayah N, Sari TP, Dewi WP. Kecemasan Ibu Hamil Trimester III Menghadapi Persalinan Dan Praktek Menyusui Di Era Pandemi Covid-19. *Medika Respati: Jurnal Ilmiah Kesehatan*. 2021 Nov 30;16(4):299-306.
- [19] Magfirah L, Nopa Arlianti A. Hubungan Dukungan Keluarga Dan Masyarakat Dengan Tingkat Kecemasan Ibu Hamil Dalam Menghadapi Persiapan Persalinan Pada Saat Pandemi Covid-19 Di Wilayah Kerja Puskesmas Ingin Jaya Kabupaten Aceh Besar. *Journal of Health and Medical Science*. 2022 Aug 25:164-72.
- [20] Amorita NA, Syahriarti I. Karakteristik Ibu Hamil dengan Covid-19 dan Luaran Persalinannya di Rumah Sakit Kasih Ibu Surakarta. *Jurnal Kesehatan Reproduksi*. 2021;8(1):31-6.
- [21] Amalia R. Buku Kia Dalam Masa Pandemi Covid-19. *Jurnal Paradigma (Pemberdayaan & Pengabdian Kepada Masyarakat)*. 2021 Nov 6;3(2):39-44.
- [22] Kemenkes. Situasi Terkini COVID-19 di Indonesia Kementerian Kesehatan Republik Indonesia, 2020.
- [23] Ahmad M, Usman AN, Arifuddin S, Patmahwati P. Persiapan Persalinan dan Kelahiran Di Masa Pandemi COVID-19. *Jurnal Pengabdian Masyarakat Indonesia*. 2021 May 12;1(3):109-13.
- [24] Anjani AD, Santi YD, Purba YA. Persiapan Persalinan Di Masa Pandemi Pada Ibu Trimester 3. *Zona Kebidanan: Program Studi Kebidanan Universitas Batam*. 2022 May 26;12(2).
- [25] Rahmadani R, Utami FS. Faktor-faktor yang berhubungan dengan kesiapan persalinan di puskesmas banguntapan II bantul Yogyakarta (Doctoral dissertation, Universitas' Aisyiyah Yogyakarta).
- [26] Mukhlis H, Yunitasari E, Febriyanti H, Fauziah N, Rinjani Rh, Putri RH. Factor Analysis of Third Trimester Pregnant Women Readiness in Preparing for Childbirth: A Cross-Sectional Study. *International Journal of Pharmaceutical Research*. 2020 Oct;12(4).
- [27] Sari IN, Susanti S. Pendidikan kesehatan tentang pentingnya antenatal care pada masa pamdemi COVID-19. *Pengabdian Masyarakat Cendekia (PMC)*. 2022 Jul 1;1(2):44-50.
- [28] Meylda YA. Kecemasan Ibu Hamil Menghadapi Persalinan Di Era Pandemi Covid-19 (Doctoral dissertation, STIKES Insan Cendekia Medika Jombang).
- [29] Fadila PR, Soediono MR, Dzakiyyah SA, Eugenia AO, Laksanadi AR, Aurelia C, Prasetyawati CD, Novianisa FA, Poempida FP, Maureen JQ, Faizah Z. Hidup Berdampingan dengan Pandemi COVID-19. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (Pkm)*. 2022 May 1;5(5):1517-26.
- [30] Tomfohr-Madsen L, Cameron EE, Dunkel Schetter C, Campbell T, O'Beirne M, Letourneau N, Giesbrecht GF. Pregnancy anxiety and preterm birth: The moderating role of sleep. *Health psychology*. 2019 Nov;38(11):1025.