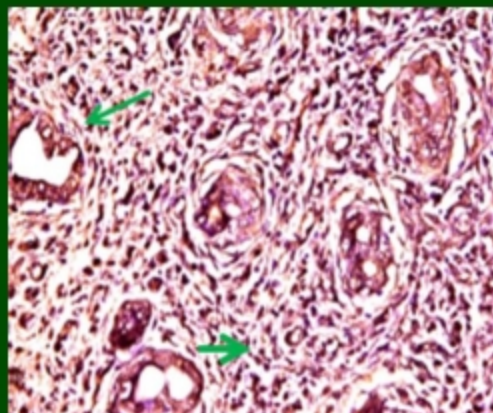


# Majalah Obstetri & Ginekologi



JOURNAL OF OBSTETRICS & GYNECOLOGY SCIENCE

Vol. 29 No. 3 December 2021



Immunohistochemistry of  $\alpha$ -SMA in ovarian endometriosis

## Original Articles

- Corellation between mother's knowledge and husband's support for the success of the Lactational Amenorrhea Method (LAM)
- Development of auditory and palpatory educational media on pregnancy danger signs for visually impaired mothers
- Relationship of pregnant mother's anxiety level with preparation for childbirth during Covid-19 pandemic in Surabaya, Indonesia
- Comparison of pain intensity, smooth muscle cells density, and  $\alpha$ -smooth muscle actin expression in ovarian and peritoneal endometriosis
- Association of age at menarche, parity, and hormonal contraceptive use with the histologic type of ovarian cancer
- Postpartum contraceptive use among pregnant women who delivered at Cipto Mangunkusumo General Hospital, Jakarta, Indonesia : A descriptive study

## Case Report

- Maternal outcome in accreta cases. Conservative surgery and hysterectomy in Cipto Mangunkusumo General Hospital, Jakarta, Indonesia, from January 2017 to January 2018

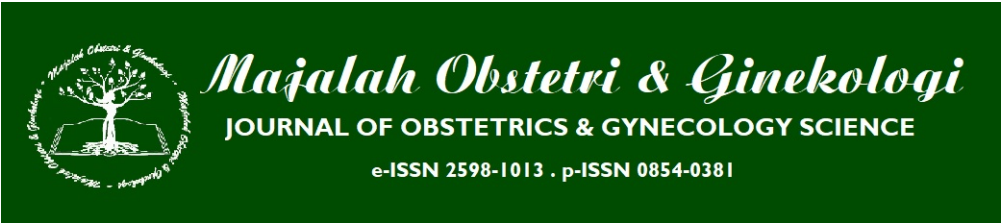
## Review Article

- Trends in delivery mode occurring during the Covid-19 pandemic and risks in long-term urogynecology cases: A narrative review

Published by

Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Airlangga  
In Collaboration with Indonesian Society of Obstetrics and Gynecology

Accredited by Ministry of Research, Technology, and Higher Education, Republic of Indonesia  
No. 30/E/KPT/2018



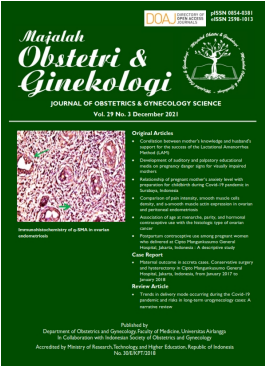
Search

- Register
- Login

Home Archives Vol. 29 No. 3 (2021): December

Vol. 29 No. 3 (2021): December

Current Issue



Vol. 29 No. 3 (2021): December

Published: 25.11.2021

Full Issue



Front Matter

Front Matter Vol. 29 No. 3 December 2021

Abstract : 50



PDF : 81

DOI : 10.20473/mog.V29I32021.%p

Original Research

Correlation between mother's knowledge and husband's support for the success of the Lactational Amenorrhea Method (LAM)

Wahyunnisa Indrarosiana , Ernawati Ernawati , Ivon Diah Wittiarika

91-95

Abstract : 484



PDF : 257

DOI : 10.20473/mog.V29I32021.91-95

Development of auditory and palpatory educational media on pregnancy danger signs for visually impaired mothers

Dian Furwasyih , Sunesni Sunesni , Ilham Akerda Eddyul

96-101

Abstract : 454



PDF : 216

DOI : 10.20473/mog.V29I32021.96-101

Relationship of pregnant mother's anxiety level with preparation for childbirth during Covid-19 pandemic in Surabaya, Indonesia

Irma Maya Puspita , Nova Elok Mardliyana

102-107

Abstract : 542



PDF : 323

DOI : 10.20473/mog.V29I32021.102-107

Comparison of pain intensity, smooth muscle cells density, and alpha-smooth muscle actin expression in ovarian and

ISSN

Printed ISSN

Electronic ISSN

Instruction for Author

Author Guidelines

Online Submission

Manuscript Template

CTA and Author Statement

Patient's Consent for Publication

Journal Policy

Focus and Scope

Publication Ethics

Article Processing Charge

Editorial Team

Peer Reviewers

Peer Review Process

Open Access Policy

Plagiarism Check

Archiving

Copyright

Repository Policy

ORCID ID Policy

Contact

Old Website

License Term

Meet Our Editorial Team



Soehartono Ds  
Founding Editor  
Universitas Airlangga  
Surabaya, Indonesia




Hendy Hendarto

peritoneal endometriosis

 Sutrisno Sutrisno , Muhammad Nooryanto , Shella Widya Gani

 108-117

 Abstract : 526

 PDF : 229



 DOI : 10.20473/mog.V29I32021.108-117

Association of age at menarche, parity, and hormonal contraceptive use with the histologic type of ovarian cancer


 Firda Azizah , Pungky Mulawardhana , Willy Sandhika

 118-123

 Abstract : 530

 PDF : 287



 DOI : 10.20473/mog.V29I32021.118-123

Postpartum contraceptive use among pregnant women who delivered at Cipto Mangunkusumo General Hospital, Jakarta, Indonesia : A descriptive study

 Junita Indarti , Lucas Christiawan , Dalri Suhartomo , Caroline Caroline , Ditha Loho

 124-128

 Abstract : 502

 PDF : 236



 DOI : 10.20473/mog.V29I32021.124-128

Case Reports

Maternal outcome in accreta cases. Conservative surgery and hysterectomy in Cipto Mangunkusumo General Hospital, Jakarta, Indonesia, from January 2017 to January 2018

 Fita Maulina , Mohammad Adya Firmansha Dilmy , Yudianto Budi Saroyo , Yuditia Purwosunu

 129-135

 Abstract : 512


 PDF : 263



 DOI : 10.20473/mog.V29I32021.129-135

Review Articles

Trends in delivery mode occurring during the Covid-19 pandemic and risks in long-term urogynecology cases: A narrative review

 Eighty Mardiyani Kurniawati , Gatut Hardianto , Hari Paraton , Azami Denas Azinar , Tri Hastono Setyo Hadi , Nur Anisah Rahmawati

 136-140

 Abstract : 625


 PDF : 366



 DOI : 10.20473/mog.V29I32021.136-140

Back Matter

Back Matter Vol. 29 No. 3 December 2021

 Abstract : 62

 PDF : 38



 DOI : 10.20473/mog.V29I32021.%p



Editor-In-Chief  
Universitas Airlangga  
Surabaya, Indonesia  
35147760



Muhammad Ilham  
Aldika Akbar  
Associate Editor  
Universitas Airlangga  
Surabaya, Indonesia  
57196329

 Read

In Collaboration with



Accreditation Certificate



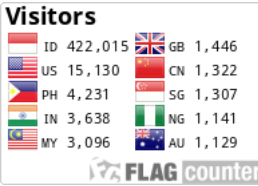
Journal Standing



Tools



Visitors



Statistic

Indexed In



Address

Kampus C UNAIR Mulyorejo, Surabaya,  
Jawa Timur, Indonesia, 60115

Contact Info:

Phone: +6281227593208  
Faks : +62315501704  
Email: [mog@journal.unair.ac.id](mailto:mog@journal.unair.ac.id)



Lembaga Inovasi, Pengembangan Jurnal,  
Penerbitan dan Hak Kekayaan Intelektual

**LIPJPHKI**

Gedung AUP, Kampus C, Universitas Airlangga, Kota Surabaya, Jawa Timur, 60115



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/)

Keywords



## ORIGINAL ARTICLE

## Relationship of pregnant mother's anxiety level with preparation for childbirth during Covid-19 pandemic in Surabaya, Indonesia

Irma Maya Puspita<sup>\*</sup>, Nova Elok Mardiyana<sup>1</sup>

Faculty of Health Sciences, Universitas Muhammadiyah Surabaya, Indonesia.

## ABSTRACT

**Objective:** Corona Virus (Covid-19) currently occurring in Indonesia greatly affects the health of the entire community, both physically and psychologically. During the pandemic period, social restrictions are required in an effort to reduce the spread of the virus, especially for pregnant women who are vulnerable to infection because of their weak immune system. This causes increased maternal anxiety during pregnancy. Therefore, good preparation for childbirth is needed so that mothers receive sufficient information and receive safe services from exposure to viruses.

**Materials and Methods:** This research used an analytic survey method with cross-sectional approach by distributing closed questions on online questionnaires to pregnant women in Surabaya, Indonesia, through social media networks. The sampling technique used simple random sampling and managed to collect a sample of 90 persons.

**Results:** This research showed that pregnant women during the Covid-19 pandemic in Surabaya, Indonesia, experienced 13% mild anxiety, 24% moderate anxiety, and 63% severe anxiety. In regard with preparation for childbirth during the Covid-19 pandemic in Surabaya, 20% were unprepared and 80% ready.

**Conclusion:** There is no relationship between the anxiety experienced by pregnant women during the Covid-19 pandemic and their preparation for delivery. Pregnant women were worried that they can be exposed to the virus. Therefore, they can prepare for childbirth properly so that they can go through delivery safely and comfortably.

**Keywords:** Pregnancy; anxiety, preparation for childbirth; Covid-19; maternal health

## ABSTRAK

**Tujuan:** Corona Virus (Covid-19) yang terjadi di Indonesia saat ini sangat berpengaruh pada kesehatan seluruh masyarakat baik secara fisik maupun psikis. Selama masa pandemi diharuskan melakukan pembatasan sosial sebagai upaya mengurangi penyebaran virus, terutama pada ibu hamil yang termasuk kelompok rentan terinfeksi karena daya tahan tubuh yang lemah. Hal tersebut menyebabkan meningkatnya rasa cemas ibu selama menjalani kehamilan. Oleh karena itu, diperlukan persiapan persalinan yang baik agar ibu mendapat informasi yang cukup dan mendapat pelayanan yang aman dari paparan virus.

**Bahan dan Metode:** Metode pada penelitian ini adalah survey analitik dengan pendekatan cross sectional. Pengambilan sampel dilakukan dengan menyebarkan pertanyaan tertutup pada kuisioner online kepada ibu hamil di Surabaya melalui jejaring media sosial dan berhasil mengumpulkan sampel sebanyak 90 orang.

**Hasil:** Penelitian ini menunjukkan bahwa pandemi Covid-19 menyebabkan ibu hamil di Surabaya mengalami kecemasan ringan 13%, kecemasan sedang 24%, kecemasan berat 63% dengan persiapan persalinan tidak siap sebanyak 20% dan siap 80%.

**Simpulan:** Tidak ada hubungan antara kecemasan yang dialami ibu hamil saat pandemi Covid-19 dengan persiapan persalinannya. Ibu hamil merasa khawatir akan terpapar virus sehingga mereka melakukan persiapan persalinan dengan baik supaya dapat menjalani persalinan dengan aman dan nyaman.

**Kata kunci:** Kehamilan; kecemasan; persiapan persalinan, Covid-19; kesehatan ibu

**\*Correspondence:** Irma Maya Puspita, Faculty of Health Sciences Universitas Muhammadiyah Surabaya, Indonesia. E-mail: [irmamayapuspita@gmail.com](mailto:irmamayapuspita@gmail.com)

- pISSN:0854-0381 • eISSN: 2598-1013 • doi: <http://dx.doi.org/10.20473/mog.V29I32021.102-107>  
• Maj Obs Gin. 2021;29:102-107 • Received 10 Mar 2020 • Revised 25 Jun 2021 • Accepted 9 Jul 2021  
• Open access under CC-BY-NC-SA license • Available at <https://e-journal.unair.ac.id/MOG/>





## INTRODUCTION

Childbirth is an event that can make a woman happy, because she has been waiting for almost 9 months for the birth of the baby she has conceived. However, some mothers feel afraid and anxious about the delivery process.<sup>1</sup> In preparing for childbirth, mothers must obtain sufficient information about the delivery process so as not to feel excessive fear and worry, especially during the Covid-19 pandemic. This pandemic is not only disturbing the physical health but also the psychological health, including those of pregnant women. The appearing psychological impact is not the same for each individual. The impact may be mild for some, but severe to others. Pregnant women may feel more anxious because they are worried about contracting the virus and the fear may interfere with the health of themselves and their fetuses.<sup>2,3</sup>

Cases of corona virus diseases were found in Indonesia in March 2020 and up to the time of this study the cases were increasing. East Java was one of the provinces with the highest cumulative Covid-19 cases in Indonesia.<sup>4</sup> The pandemic Covid-19 period requires the public to participate in breaking the transmission by implementing stringent health protocols, especially among vulnerable populations, including pregnant women. Vulnerable groups are groups of people who have low health conditions and low immunity. Therefore, they are vulnerable to being exposed to Covid-19.<sup>5</sup>

National and international studies showed the number of pregnant women who experienced anxiety were as much as 23% in Alberta, Canada, 15% in Germany and 49% in Pakistan.<sup>2</sup> The results of Hernani's research showed that 53.3% experienced anxiety in the face of childbirth.<sup>6</sup> According to METER Survey data during the pandemic, Indonesian population experienced anxiety by 55% of the 3533 respondents and 58% experienced depression. This can lead to tension in marriage and affect greatly the health of the pregnant women.<sup>7</sup>

Activity restrictions for the entire community, especially pregnant women, are needed to reduce virus exposure. However, there are some things that cannot be postponed by pregnant women to continue doing activities outside, such as continuing to do pregnancy checks in the hospital. Pregnancy examination must continue to be carried out to ensure a healthy pregnancy condition and avoid complications by adhering to strict health protocols. When coming to the hospital, the mother must ensure that she always maintains cleanliness and avoids contact with new people. People always wear a mask, wash the hands regularly or carry

hand sanitizer and wear closed clothes.<sup>8</sup> The frequency of visits by pregnant women to the hospital has also been reduced and more online or virtual consultations with midwives or obstetricians have been conducted. This method can be used by pregnant women and their families to be more comfortable and receive psychological support during pregnancy, especially for pregnant women who are approaching delivery.<sup>9</sup>

Delivery is a physiological event and experienced by all women that can make that process a good experience and sometimes bad. Unpleasant experiences are usually caused by physical and psychological problems that can make the mother feel guilty, anxious, panic, lose the ability to control emotions so that sexual desire decreases for fear of getting pregnant again.<sup>10</sup>

Preparation of giving a birth is one of the measures that can reduce maternal anxiety. Anxiety often appears at the time of delivery because the mother is afraid and worried about childbirth.<sup>11</sup> During the Covid-19 pandemic, the anxiety can increase that can be apart from facing the delivery process, mothers are also more worried about being infected with the Covid-19 virus. Therefore, it is necessary to prepare for childbirth to reduce anxiety so that the delivery process becomes safe and comfortable. This research aimed to determine the relationship between anxiety levels in pregnant women and preparation for childbirth during the Covid-19 pandemic in Surabaya, Indonesia.

## MATERIALS AND METHODS

The method in this research was an analytical survey with a cross sectional approach. This was done by distributing closed-ended questions in an online questionnaire to pregnant women in Surabaya through social media networks. This research was carried out in April – May 2020. The sampling technique used was simple random sampling and obtained a sample of 90 persons.

The instruments used the HARS (Hamilton Anxiety Rating Scale) questionnaire to determine the level of anxiety of pregnant women and a questionnaire about the Childbirth Preparation and Complications Prevention Program (P4K) to determine the mother's preparation for delivery.

## RESULTS AND DISCUSSION

Characteristics of research respondents included age, education, occupation, parity, and gestational age can be seen in [Table 1](#). Data of respondents of young

reproductive age was 13% (12 persons), healthy reproductive age was 82% (73 persons), old reproductive age was 5% (5 persons). The education of the pregnant women were elementary 7% (6 persons), intermediary 54% (49 persons) and higher education 39% (35 persons). Respondents' occupation were employed of 47% (43 persons) and 43% (47 persons) were unemployed. The parity of multigravida respondents was 58% (52 persons) and primigravida 42% (38 persons). In terms of gestational age, respondents in the first trimester were 22% (20 persons), in the second trimester 37% (33%), in the third trimester 41% (37 persons).

Table 1. Characteristics of the respondents

Characteristics	Frequency	Percentage (%)
Age		
Young reproductive	12	13
Healthy reproductive	73	82
Old reproductive	5	5
Education		
Elementary	6	7
Intermediary	49	54
High	35	39
Occupation		
Employed	43	47
Unemployed	47	43
Parity		
Multigravida	52	58
Primigravida	38	42
Gestational age		
Trimester I	20	22
Trimester II	33	37
Trimester III	37	41
Total	90	100

Table 2. Frequency distribution of pregnant women anxiety levels

Anxiety	Frequency	Presentation (%)
Mild Anxiety	12	13
Moderate Anxiety	22	24
Severe Anxiety	56	63
Total	90	100

Table 2 shows that during the pandemic the anxiety level of pregnant women was mild anxiety 13% (12 persons), moderate anxiety 24% (22 persons), and severe anxiety 63% (56 persons).

Table 3. Frequency distribution of childbirth

Preparation	Frequency	Presentation (%)
Not Ready	18	20
Ready	72	80
Total	90	100

Table 3 shows that preparation for delivery of pregnant women during the Covid-19 pandemic in Surabaya is classified as not ready as much as 20% (18 persons), 80% ready (72 persons).

Table 4. Data tabulation and analysis of the relationship between anxiety levels and preparation for giving a birth

Preparation of delivery	Anxiety levels						<i>P value</i>
	Mild		Moderate		Severe		
	n	%	n	%	n	%	
Not Ready	8	8.6	2	2.2	1	1.2	0.49
Ready	4	4.4	20	21.8	55	61.8	

Table 4 shows that the Fisher's exact statistical analysis revealed p value of  $0.49 > 0.05$ .

## DISCUSSION

### Anxiety level in pregnant women

Almost all pregnant women experienced moderate and severe levels of anxiety. According to Angesti<sup>12</sup>, the diseases caused by the SARS-CoV-2 virus caused the pregnant women to experience more anxiety because there was no cure or vaccine for this virus (until this research was conducted). Therefore, they can be worried about contracting this disease and endanger their health and their future baby. The anxiety of pregnant women, especially during the third trimester affected greatly the preparation for childbirth.

The Covid-19 pandemic had resulted in restrictions on health services, including a reduction in prenatal care and classes for pregnant women.<sup>13</sup> The condition also can trigger anxiety in pregnant women. Anxiety is a normal response to a threat or danger from the human experience, but it can interfere with mental health in everyday life if the response is excessive. During pregnancy, the level of anxiety will increase and if it is not handled properly, there is a risk of complications such as excessive nausea and vomiting, premature birth, low birth weight and impaired fetal growth.<sup>14</sup>

Mothers who are expecting their first child exhibit higher levels of anxiety than mothers who have given birth before. Most mothers have less understanding and information about pregnancy during their first pregnancy, which causes anxiety in primigravida, especially before birth. Anxiety can emerge as a result of the belief that childbirth is a frightening experience. Many accounts or personal experiences depict childbirth as frightening, especially when experiencing pains while giving birth. As a result, it may heighten the mother's worry.<sup>11,15,16</sup>

Based on the research of Sahin and Kabakci<sup>17</sup> Covid-19 pandemic has the potential to induce enormous anxiety and fear in pregnant women, which can lead to bad emotional outcomes. This occurs due to pregnant women's increased concern for their own and their fetus' health, a decreased schedule for antenatal care with health care providers, a lack of access to health information, and a loss of social interaction as a result of having to stay at home more.<sup>17</sup>

### Preparation for delivery in pregnant women

This study found that 80% of pregnant women were ready to give birth during the Covid-19 pandemic. Based on the data on the characteristics of the respondents (parity), most respondents of 58% were multigravida, meaning that they had previous experience of giving birth. In addition, currently there are many CIE (Communication, Information, and Education) that can be provided online, do not require face-to-face contact, pregnant women can still consult with health workers or share childbirth experiences with others through electronic media. Therefore, they can help mothers in preparing childbirth properly. This was in accordance with Aggraini's research<sup>18</sup> that there was an increase in knowledge and good behavior in pregnant women after receiving electronic CIE.

Recommendations from the Ministry of Health of the Republic of Indonesia<sup>19</sup> during the Covid-19 pandemic, pregnancy examination at health service facilities are also limited by continuing to carry out health protocols, ie. wearing masks, washing hands, maintaining distance and making prior agreements with the health workers concerned. Pregnant women are advised to study the book on Maternal and Child Health (KIA). Filling out P4K stickers is also guided by health workers through communication tools. At the end of pregnancy, the mother should check her pregnancy to prepare for delivery. Pregnant women must also continue to apply a clean and healthy lifestyle.

Preparation for childbirth can be done from the beginning of the pregnancy which includes mother's knowledge about the estimated date of delivery, mother's physical condition, maternal risk factors, signs of giving a birth and completeness of delivery needs for mothers and prospective babies. One of the government's efforts in realizing safe delivery is the Delivery Planning and Complication Prevention Program or commonly known as P4K. This activity is carried out by midwives or health workers by involving the role of husbands, families and the community with P4K stickers which are affixed in front of pregnant women's homes.<sup>20</sup> Mothers were declared ready to face childbirth after filling out the P4K sticker because they

automatically knew the estimated time of delivery, and determined birth attendants, birth attendants, delivery places, transportation used when going to health care facilities, preparation for maternity savings and blood donations. Good preparation in giving a birth is expected to reduce the occurrence of complications during delivery.<sup>21,22</sup>

### The relationship between anxiety levels and childbirth preparation

Analysis of research data showed that the  $p$  value was  $0.49 > 0.05$  or not significant. This research showed that there was no relationship between the level of anxiety of pregnant women and preparation for childbirth during the Covid-19 pandemic in Surabaya. This research showed that most pregnant women experienced severe anxiety levels (63%) and 80% were ready to give birth. The absence of a relationship may be caused by other variables not examined in this research, such as support from husbands, family and health workers in the form of emotional support, appreciation and information. The role of the family, especially the husband, is very important, which helps to reduce maternal anxiety in preparing for childbirth. The higher the husband's support given to pregnant women, the better the preparation for childbirth.<sup>23-25</sup>

According to Nurdianti<sup>26</sup> there is a relationship between age, knowledge and income with preparation of delivery in third trimester pregnant women. Data on the characteristics of the respondents in this research stated that most of the mothers were of young and healthy reproductive age, having secondary and higher education levels, and more working. Therefore, it was possible that these factors influenced the mother's readiness to face childbirth.

Preparations for maternity mothers to face childbirth must have been started since pregnancy, especially during the Covid-19 pandemic. There were many ways to prepare mothers to be ready for childbirth, including the provision information about pregnancy, preparation for delivery, and social support.

### CONCLUSION

There was no relationship between the level of anxiety of pregnant women and preparation for childbirth during the Covid-19 pandemic in Surabaya, Indonesia. Pregnant women in Surabaya mostly experienced moderate and severe anxiety during Covid-19 pandemic but stated that they were ready to prepare for childbirth. Good and planned delivery preparation was expected to



help mothers in obtaining safe and comfortable services during the Covid-19 pandemic.

## REFERENCES

1. Lovatt A, Selby V. Preparing for the birth: where to give birth [internet]. [cited 2021 Jan 25]. Available from: <https://www.nhs.uk/pregnancy/labour-and-birth/preparing-for-the-birth/where-to-give-birth-the-options/>
2. Wu Y, Zhang C, Liu H, et al. Perinatal depressive and anxiety symptoms of pregnant women during the coronavirus disease 2019 outbreak in China. *Am J Obstet Gynecol*. 2020;223(2):240.e1-240.e9. doi: 10.1016/j.ajog.2020.05.009. Epub 2020 May 11. PMID: 32437665; PMCID: PMC7211756.
3. Puspita IM, Rozifa AW, Nadhiroh AM. Gambaran kecemasan dan kepatuhan remaja putri terhadap kebiasaan baru pada masa pandemi covid-19 di Surabaya [Anxiety and adherence of female adolescents to new normal during Covid-19 Pandemics in Surabaya]. *Journal of Midwifery Science*. 2020;5(1):52-61. doi: 10.36341/jomis.v5i1.1492
4. Tambunan L. Covid-19 di Surabaya masuk kategori 'Zona Hitam', perilaku warga seperti tidak PSBB [Covid-19 in Surabaya is in 'Black Zone', but the people are negligent] [internet]. Available from: <https://www.bbc.com/indonesia/indonesia-52905012>
5. Pradana AA, Casman C, Nur'aini N. Pengaruh kebijakan social distancing pada wabah Covid-19 terhadap kelompok rentan di Indonesia [Effect of social distancing policy during Covid-19 among vulnerable people in Indonesia]. *Jurnal Kebijakan Kesehatan Indonesia*. 2020;9(2):61-67. doi: 10.22146/jkki.55575
6. Heriani H. Kecemasan dalam menjelang persalinan ditinjau dari paritas, usia, dan tingkat pendidikan [Anxiety before delivery by parity, age, and level of education]. *Jurnal Aisyah: Jurnal Ilmu Kesehatan*. 2016;1(2):01-08. doi: 10.30604/jika.v1i2.14
7. Eni K. Menjaga keluarga tetap harmonis di masa pandemi [Keeping harmonious family during pandemics] [internet]. *Media Indonesia*. 2020. Available from: <https://mediaindonesia.com/humaniora/358990/menjaga-keluarga-tetap-harmonis-di-masa-pandemi>
8. Gugus Tugas Percepatan Penanganan Covid-19 [National Task Force for Handling Covid-19]. Protokol B-4 petunjuk praktis layanan kesehatan ibu dan BBL selama pandemi Covid-19 [Practical guidance of health service for mothers and neonates during Covid-19 pandemics]. [Cited: 2020 Apr 4]. Available from: <https://covid19.go.id/p/protokol/protokol-b-4-petunjuk-praktis-layanan-kesehatan-ibu-dan-bbl-pada-masa-pandemi-covid-19>
9. Moyer CA, Compton SD, Kaselitz E, Muzik M. Pregnancy-related anxiety during COVID-19: a nationwide survey of 2740 pregnant women. *Arch Womens Ment Health*. 2020;23(6):757-765. doi: 10.1007/s00737-020-01073-5. Epub 2020 Sep 29. PMID: 32989598; PMCID: PMC7522009.
10. Cunningham GF, Leveno KJ, Bloom SL. *William Obstetrics*. New York: McGraw Hill Medical; 2010
11. Mardiyana NE, Raden A, Umu Hani EN. Effect of ice gel compress towards labor pain during active phase stage I at private midwifery clinics in Surabaya city area. *Majalah Obstetri & Ginekologi*. 2018;25(1):21. doi: 10.20473/mog.V25I12017.21-24
12. Angesti EPW. Hubungan tingkat kecemasan dan pengetahuan ibu hamil trimester 3 dengan kesiapan menghadapi persalinan di masa pandemi Covid-19 di Puskesmas Benowo dan Tenggilis [Correlation between anxiety and knowledge with readiness for delivery among trimester 3 pregnant women during Covid-19 pandemics in Benowo and Tenggilis health centers]. Undergraduate thesis. Surabaya: Universitas Airlangga; 2020.
13. Direktorat Kesehatan Keluarga [Directorate of Family Health]. Pedoman bagi ibu hamil, ibu nifas, dan bayi baru lahir di era pandemi Covid-19 [Guidelines for mothers with pregnancy, puerperium, and neonates]. [cited: 2020 Dec 30] Available from: [http://www.kesga.kemkes.go.id/imag/es/pedoman/Pedoman bagi Ibu Hamil, Bersalin, Nifas dan BBL di Era Pandemi Covid 19.pdf](http://www.kesga.kemkes.go.id/imag/es/pedoman/Pedoman%20bagi%20Ibu%20Hamil,%20Bersalin,%20Nifas%20dan%20BBL%20di%20Era%20Pandemi%20Covid-19.pdf).
14. Deklava L, Lubina K, Circenis K, et al. Causes of anxiety during pregnancy. *Procedia – Social and Behavioral Sciences*. 2015;205:623-6. doi: 10.1016/j.sbspro.2015.09.097
15. Shodiqoh ER, Syahrul F. Perbedaan tingkat kecemasan dalam menghadapi persalinan antara primigravida dan multigravida [Anxiety Level differences between the face of labor and multigravida primigravida]. *Jurnal Berkala Epidemiologi*. 2014;2(1):141-150. doi: 10.20473/jbe.V2I12014.141-150
16. Manuaba IBG. *Ilmu obstetri dan ginekologi untuk kebidanan*. Jakarta: EGC; 2015
17. Mizrak Sahin B, Kabakci EN. The experiences of pregnant women during the COVID-19 pandemic in Turkey: A qualitative study. *Women Birth*. 2021;34(2):162-169. doi: 10.1016/j.wombi.2020.09.022. Epub 2020 Oct 1. PMID: 33023829; PMCID: PMC7528828.
18. Angraini DI, Karyus A, Kania S, et al. Penerapan eKIE (komunikasi, informasi, dan edukasi elektronik) dalam upaya meningkatkan kesehatan

- ibu hamil di era new normal [Application of eKIE in improving pregnant women's health in new normal]. *Jurnal Pengabdian Masyarakat Ruwa Jurai*. 2020;5(1). doi: 10.23960/jpm.v5i1.2807
19. Ministry of Health, Republic of Indonesia. Pedoman bagi ibu hamil, bersalin, nifas, dan bayi baru lahir [Practical guidance of health service for mothers and neonates]. 2020
  20. Hidayati N. Analisis implementasi program perencanaan persalinan dan pencegahan komplikasi (P4K) dalam menyiapkan calon pendonor darah siap pakai oleh bidan desa di kabupaten Pekalongan [Analysis of P4K program implementation in preparing . *Indonesian Journal for Health Sciences*. 2018;2(2):115-28
  21. Kamidah K. Program perencanaan persalinan dan pencegahan komplikasi (P4K) sebagai upaya menurunkan angka kematian ibu [Delivery planning and complication prevention program to reduce maternal mortality rate]. *Gaster | Jurnal Ilmu Kesehatan*. 2018;16(1):24. doi: 10.30787/gaster.v16i1.245
  22. Ziogou R, Zografou K. Homebirth and homecare during COVID-19. *Eur J Midwifery*. 2020;4:14. doi: 10.18332/ejm/120972. PMID: 33537616; PMCID: PMC7839141.
  23. Gildner TE, Thayer ZM. Birth plan alterations among American women in response to COVID-19. *Health Expect*. 2020;23(4):969-971. doi: 10.1111/hex.13077. Epub 2020 May 24. PMID: 32449262; PMCID: PMC7283869.
  24. Agustina R, Utami FS. Faktor-faktor yang berhubungan dengan kesiapan persalinan di puskesmas Kasihan I, Kabupaten Bantul Yogyakarta tahun 2017 [Factors related to delivery preparedness in a health center, Bantul, Yogyakarta, 2017]. Undergraduate thesis. Yogyakarta: Universitas 'Aisyiyah Yogyakarta; 2017
  25. Farida I, Kurniawati D, Juliningrum PP. Hubungan dukungan suami dengan kesiapan persalinan pada ibu hamil usia remaja di Sukowono, Jember [Correlation between husband's support and delivery preparedness in adolescent pregnant women in Sukowono, Jember]. *E-Journal Pustaka Kesehatan*. 2019;7(2):127-34. doi: 10.19184/pk.v7i2.19125
  26. Nurdianti D. Hubungan dukungan keluarga pada ibu hamil trimester III dengan persiapan persalinan di wilayah kerja puskesmas Cigeureung kota Tasikmalaya tahun 2017 [Correlation between family support in delivery preparedness among trimester III pregnant women in Tasikmalaya, 2017]. *Jurnal Kebidanan UMTAS*. 2017;V(2):36-43.

# Relationship of pregnant mother's anxiety level with preparation for childbirth during Covid-19 pandemic in Surabaya, Indonesia

*by* Nova Elok

---

**Submission date:** 27-Jan-2023 12:52PM (UTC+0700)

**Submission ID:** 2000371818

**File name:** MOG\_Maya\_dan\_Elok.pdf (251.44K)

**Word count:** 3804

**Character count:** 21587

## ORIGINAL ARTICLE

### Relationship of pregnant mother's anxiety level with preparation for childbirth during Covid-19 pandemic in Surabaya, Indonesia

Irma Maya Puspita<sup>\*</sup> , Nova Elok Mardiyana<sup>\*</sup> 

Faculty of Health Sciences, Universitas Muhammadiyah Surabaya, Indonesia.

#### ABSTRACT

**Objective:** Corona Virus (Covid-19) currently occurring in Indonesia greatly affects the health of the entire community, both physically and psychologically. During the pandemic period, social restrictions are required in an effort to reduce the spread of the virus, especially for pregnant women who are vulnerable to infection because of their weak immune system. This causes increased maternal anxiety during pregnancy. Therefore, good preparation for childbirth is needed so that mothers receive sufficient information and receive safe services from exposure to viruses.

**Materials and Methods:** This research used an analytic survey method with cross-sectional approach by distributing closed questions on online questionnaires to pregnant women in Surabaya, Indonesia, through social media networks. The sampling technique used simple random sampling and managed to collect a sample of 90 persons.

**Results:** This research showed that pregnant women during the Covid-19 pandemic in Surabaya, Indonesia, experienced 13% mild anxiety, 24% moderate anxiety, and 63% severe anxiety. In regard with preparation for childbirth during the Covid-19 pandemic in Surabaya, 20% were unprepared and 80% ready.

**Conclusion:** There is no relationship between the anxiety experienced by pregnant women during the Covid-19 pandemic and their preparation for delivery. Pregnant women were worried that they can be exposed to the virus. Therefore, they can prepare for childbirth properly so that they can go through delivery safely and comfortably.

**Keywords:** Pregnancy; anxiety, preparation for childbirth; Covid-19; maternal health

#### ABSTRAK

**Tujuan:** Corona Virus (Covid-19) yang terjadi di Indonesia saat ini sangat berpengaruh pada kesehatan seluruh masyarakat baik secara fisik maupun psikis. Selama masa pandemi diharuskan melakukan pembatasan sosial sebagai upaya mengurangi penyebaran virus, terutama pada ibu hamil yang termasuk kelompok rentan terinfeksi karena daya tahan tubuh yang lemah. Hal tersebut menyebabkan meningkatnya rasa cemas ibu selama menjalani kehamilan. Oleh karena itu, diperlukan persiapan persalinan yang baik agar ibu mendapat informasi yang cukup dan mendapat pelayanan yang aman dari paparan virus.

**Bahan dan Metode:** Metode pada penelitian ini adalah survey analitik dengan pendekatan cross sectional. Pengambilan sampel dilakukan dengan menyebarkan pertanyaan tertutup pada kuisioner online kepada ibu hamil di Surabaya melalui jejaring media sosial dan berhasil mengumpulkan sampel sebanyak 90 orang.

**Hasil:** Penelitian ini menunjukkan bahwa pandemi Covid-19 menyebabkan ibu hamil di Surabaya mengalami kecemasan ringan 13%, kecemasan sedang 24%, kecemasan berat 63% dengan persiapan persalinan tidak siap sebanyak 20% dan siap 80%.

**Simpulan:** Tidak ada hubungan antara kecemasan yang dialami ibu hamil saat pandemi Covid-19 dengan persiapan persalinannya. Ibu hamil merasa khawatir akan terpapar virus sehingga mereka melakukan persiapan persalinan dengan baik supaya dapat menjalani persalinan dengan aman dan nyaman.

**Kata kunci:** Kehamilan; kecemasan; persiapan persalinan, Covid-19; kesehatan ibu

**\*Correspondence:** Irma Maya Puspita, Faculty of Health Sciences Universitas Muhammadiyah Surabaya, Indonesia. E-mail: [irmamayapuspita@gmail.com](mailto:irmamayapuspita@gmail.com)

- pISSN:0854-0381 • eISSN: 2598-1013 • doi: <http://dx.doi.org/10.20473/mog.V29I32021.102-107>
- Maj Obs Gin. 2021;29:102-107 • Received 10 Mar 2020 • Revised 25 Jun 2021 • Accepted 9 Jul 2021
- Open access under CC-BY-NC-SA license • Available at <https://e-journal.unair.ac.id/MOG/>



## INTRODUCTION

Childbirth is an event that can make a woman happy, because she has been waiting for almost 9 months for the birth of the baby she has conceived. However, some mothers feel afraid and anxious about the delivery process.<sup>1</sup> In preparing for childbirth, mothers must obtain sufficient information about the delivery process so as not to feel excessive fear and worry, especially during the Covid-19 pandemic. This pandemic is not only disturbing the physical health but also the psychological health, including those of pregnant women. The appearing psychological impact is not the same for each individual. The impact may be mild for some, but severe to others. Pregnant women may feel more anxious because they are worried about contracting the virus and the fear may interfere with the health of themselves and their fetuses.<sup>2,3</sup>

Cases of corona virus diseases were found in Indonesia in March 2020 and up to the time of this study the cases were increasing. East Java was one of the provinces with the highest cumulative Covid-19 cases in Indonesia.<sup>4</sup> The pandemic Covid-19 period requires the public to participate in breaking the transmission by implementing stringent health protocols, especially among vulnerable populations, including pregnant women. Vulnerable groups are groups of people who have low health conditions and low immunity. Therefore, they are vulnerable to being exposed to Covid-19.<sup>5</sup>

National and international studies showed the number of pregnant women who experienced anxiety were as much as 23% in Alberta, Canada, 15% in Germany and 49% in Pakistan.<sup>2</sup> The results of Hernani's research showed that 53.3% experienced anxiety in the face of childbirth.<sup>6</sup> According to METER Survey data during the pandemic, Indonesian population experienced anxiety by 55% of the 3533 respondents and 58% experienced depression. This can lead to tension in marriage and affect greatly the health of the pregnant women.<sup>7</sup>

Activity restrictions for the entire community, especially pregnant women, are needed to reduce virus exposure. However, there are some things that cannot be postponed by pregnant women to continue doing activities outside, such as continuing to do pregnancy checks in the hospital. Pregnancy examination must continue to be carried out to ensure a healthy pregnancy condition and avoid complications by adhering to strict health protocols. When coming to the hospital, the mother must ensure that she always maintains cleanliness and avoids contact with new people. People always wear a mask, wash the hands regularly or carry

hand sanitizer and wear closed clothes.<sup>8</sup> The frequency of visits by pregnant women to the hospital has also been reduced and more online or virtual consultations with midwives or obstetricians have been conducted. This method can be used by pregnant women and their families to be more comfortable and receive psychological support during pregnancy, especially for pregnant women who are approaching delivery.<sup>9</sup>

Delivery is a physiological event and experienced by all women that can make that process a good experience and sometimes bad. Unpleasant experiences are usually caused by physical and psychological problems that can make the mother feel guilty, anxious, panic, lose the ability to control emotions so that sexual desire decreases for fear of getting pregnant again.<sup>10</sup>

Preparation of giving a birth is one of the measures that can reduce maternal anxiety. Anxiety often appears at the time of delivery because the mother is afraid and worried about childbirth.<sup>11</sup> During the Covid-19 pandemic, the anxiety can increase that can be apart from facing the delivery process, mothers are also more worried about being infected with the Covid-19 virus. Therefore, it is necessary to prepare for childbirth to reduce anxiety so that the delivery process becomes safe and comfortable. This research aimed to determine the relationship between anxiety level in pregnant women and preparation for childbirth during the Covid-19 pandemic in Surabaya, Indonesia.

## MATERIALS AND METHODS

The method in this research was an analytical survey with a cross sectional approach. This was done by distributing closed-ended questions in an online questionnaire to pregnant women in Surabaya through social media networks. This research was carried out in April – May 2020. The sampling technique used was simple random sampling and obtained a sample of 90 persons.

The instruments used the HARS (Hamilton Anxiety Rating Scale) questionnaire to determine the level of anxiety of pregnant women and a questionnaire about the Childbirth Preparation and Complications Prevention Program (P4K) to determine the mother's preparation for delivery.

## RESULTS AND DISCUSSION

Characteristics of research respondents included age, education, occupation, parity, and gestational age can be seen in Table 1. Data of respondents of young



reproductive age was 13% (12 persons), healthy reproductive age was 82% (73 persons), old reproductive age was 5% (5 persons). The education of the pregnant women were elementary 7% (6 persons), intermediary 54% (49 persons) and higher education 39% (35 persons). Respondents' occupation were employed of 47% (43 persons) and 43% (47 persons) were unemployed. The parity of multigravida respondents was 58% (52 persons) and primigravida 42% (38 persons). In terms of gestational age, respondents in the first trimester were 22% (20 persons), in the second trimester 37% (33%), in the third trimester 41% (37 persons).

Table 1. Characteristics of the respondents

Characteristics	Frequency	Percentage (%)
Age		
Young reproductive	12	13
Healthy reproductive	73	82
Old reproductive	5	5
Education		
Elementary	6	7
Intermediary	49	54
High	35	39
Occupation		
Employed	43	47
Unemployed	47	43
Parity		
Multigravida	52	58
Primigravida	38	42
Gestational age		
Trimester I	20	22
Trimester II	33	37
Trimester III	37	41
Total	90	100

Table 2. Frequency distribution of pregnant women anxiety levels

Anxiety	Frequency	Presentation (%)
Mild Anxiety	12	13
Moderate Anxiety	22	24
Severe Anxiety	56	63
Total	90	100

Table 2 shows that during the pandemic the anxiety level of pregnant women was mild anxiety 13% (12 persons), moderate anxiety 24% (22 persons), and severe anxiety 63% (56 persons).

Table 3. Frequency distribution of childbirth

Preparation	Frequency	Presentation (%)
Not Ready	18	20
Ready	72	80
Total	90	100

Table 3 shows that preparation for delivery of pregnant women during the Covid-19 pandemic in Surabaya is classified as not ready as much as 20% (18 persons), 80% ready (72 persons).

Table 4. Data tabulation and analysis of the relationship between anxiety levels and preparation for giving a birth

Preparation of delivery	Anxiety levels						<i>P value</i>
	Mild		Moderate		Severe		
	n	%	n	%	n	%	
Not Ready	8	8.6	2	2.2	1	1.2	0.49
Ready	4	4.4	20	21.8	55	61.8	

Table 4 shows that the Fisher's exact statistical analysis revealed p value of  $0.49 > 0.05$ .

## DISCUSSION

### Anxiety level in pregnant women

Almost all pregnant women experienced moderate and severe levels of anxiety. According to Angesti<sup>12</sup>, the diseases caused by the SARS-CoV-2 virus caused the pregnant women to experience more anxiety because there was no cure or vaccine for this virus (until this research was conducted). Therefore, they can be worried about contracting this disease and endanger their health and their future baby. The anxiety of pregnant women, especially during the third trimester affected greatly the preparation for childbirth.

The Covid-19 pandemic had resulted in restrictions on health services, including a reduction in prenatal care and classes for pregnant women.<sup>13</sup> The condition also can trigger anxiety in pregnant women. Anxiety is a normal response to a threat or danger from the human experience, but it can interfere with mental health in everyday life if the response is excessive. During pregnancy, the level of anxiety will increase and if it is not handled properly, there is a risk of complications such as excessive nausea and vomiting, premature birth, low birth weight and impaired fetal growth.<sup>14</sup>

Mothers who are expecting their first child exhibit higher levels of anxiety than mothers who have given birth before. Most mothers have less understanding and information about pregnancy during their first pregnancy, which causes anxiety in primigravida, especially before birth. Anxiety can emerge as a result of the belief that childbirth is a frightening experience. Many accounts or personal experiences depict childbirth as frightening, especially when experiencing pains while giving birth. As a result, it may heighten the mother's worry.<sup>11,15,16</sup>



Based on the research of Sahin and Kabakci<sup>17</sup> Covid-19 pandemic has the potential to induce enormous anxiety and fear in pregnant women, which can lead to bad emotional outcomes. This occurs due to pregnant women's increased concern for their own and their fetus' health, a decreased schedule for antenatal care with health care providers, a lack of access to health information, and a loss of social interaction as a result of having to stay at home more.<sup>17</sup>

### Preparation for delivery in pregnant women

This study found that 80% of pregnant women were ready to give birth during the Covid-19 pandemic. Based on the data on the characteristics of the respondents (parity), most respondents of 58% were multigravida, meaning that they had previous experience of giving birth. In addition, currently there are many CIE (Communication, Information, and Education) that can be provided online, do not require face-to-face contact, pregnant women can still consult with health workers or share childbirth experiences with others through electronic media. Therefore, they can help mothers in preparing childbirth properly. This was in accordance with Aggraini's research<sup>18</sup> that there was an increase in knowledge and good behavior in pregnant women after receiving electronic CIE.

Recommendations from the Ministry of Health of the Republic of Indonesia<sup>19</sup> during the Covid-19 pandemic, pregnancy examination at health service facilities are also limited by continuing to carry out health protocols, ie. wearing masks, washing hands, maintaining distance and making prior agreements with the health workers concerned. Pregnant women are advised to study the book on Maternal and Child Health (KIA). Filling out P4K stickers is also guided by health workers through communication tools. At the end of pregnancy, the mother should check her pregnancy to prepare for delivery. Pregnant women must also continue to apply a clean and healthy lifestyle.

Preparation for childbirth can be done from the beginning of the pregnancy which includes mother's knowledge about the estimated date of delivery, mother's physical condition, maternal risk factors, signs of giving a birth and completeness of delivery needs for mothers and prospective babies. One of the government's efforts in realizing safe delivery is the Delivery Planning and Complication Prevention Program or commonly known as P4K. This activity is carried out by midwives or health workers by involving the role of husbands, families and the community with P4K stickers which are affixed in front of pregnant women's homes.<sup>20</sup> Mothers were declared ready to face childbirth after filling out the P4K sticker because they

automatically knew the estimated time of delivery, and determined birth attendants, birth attendants, delivery places, transportation used when going to health care facilities, preparation for maternity savings and blood donations. Good preparation in giving a birth is expected to reduce the occurrence of complications during delivery.<sup>21,22</sup>

### The relationship between anxiety levels and childbirth preparation

Analysis of research data showed that the  $p$  value was  $0.49 > 0.05$  or not significant. This research showed that there was no relationship between the level of anxiety of pregnant women and preparation for childbirth during the Covid-19 pandemic in Surabaya. This research showed that most pregnant women experienced severe anxiety levels (63%) and 80% were ready to give birth. The absence of a relationship may be caused by other variables not examined in this research, such as support from husbands, family and health workers in the form of emotional support, appreciation and information. The role of the family, especially the husband, is very important, which helps to reduce maternal anxiety in preparing for childbirth. The higher the husband's support given to pregnant women, the better the preparation for childbirth.<sup>23-25</sup>

According to Nurdianti<sup>26</sup> there is a relationship between age, knowledge and income with preparation of delivery in third trimester pregnant women. Data on the characteristics of the respondents in this research stated that most of the mothers were of young and healthy reproductive age, having secondary and higher education levels, and more working. Therefore, it was possible that these factors influenced the mother's readiness to face childbirth.

Preparations for maternity mothers to face childbirth must have been started since pregnancy, especially during the Covid-19 pandemic. There were many ways to prepare mothers to be ready for childbirth, including the provision information about pregnancy, preparation for delivery, and social support.

### CONCLUSION

There was no relationship between the level of anxiety of pregnant women and preparation for childbirth during the Covid-19 pandemic in Surabaya, Indonesia. Pregnant women in Surabaya mostly experienced moderate and severe anxiety during Covid-19 pandemic but stated that they were ready to prepare for childbirth. Good and planned delivery preparation was expected to

help mothers in obtaining safe and comfortable services during the Covid-19 pandemic.

## REFERENCES

1. Lovatt A, Selby V. Preparing for the birth: where to give birth [internet]. [cited 2021 Jan 25]. Available from: <https://www.nhs.uk/pregnancy/labour-and-birth/preparing-for-the-birth/where-to-give-birth-the-options/>
2. Wu Y, Zhang C, Liu H, et al. Perinatal depressive and anxiety symptoms of pregnant women during the coronavirus disease 2019 outbreak in China. *Am J Obstet Gynecol*. 2020;223(2):240.e1-240.e9. doi: 10.1016/j.ajog.2020.05.009. Epub 2020 May 11. PMID: 32437665; PMCID: PMC7211756.
3. Puspita IM, Rozifa AW, Nadhiroh AM. Gambaran kecemasan dan kepatuhan remaja putri terhadap kebiasaan baru pada masa pandemi covid-19 di Surabaya [Anxiety and adherence of female adolescents to new normal during Covid-19 Pandemics in Surabaya]. *Journal of Midwifery Science*. 2020;5(1):52-61. doi: 10.36341/jomis.v5i1.1492
4. Tambunan L. Covid-19 di Surabaya masuk kategori 'Zona Hitam', perilaku warga seperti tidak PSBB [Covid-19 in Surabaya is in 'Black Zone', but the people are negligent] [internet]. Available from: <https://www.bbc.com/indonesia/indonesia-52905012>
5. Pradana AA, Casman C, Nur'aini N. Pengaruh kebijakan social distancing pada wabah Covid-19 terhadap kelompok rentan di Indonesia [Effect of social distancing policy during Covid-19 among vulnerable people in Indonesia]. *Jurnal Kebijakan Kesehatan Indonesia*. 2020;9(2):61-67. doi: 10.22146/jkki.55575
6. Heriani H. Kecemasan dalam menjelang persalinan ditinjau dari paritas, usia, dan tingkat pendidikan [Anxiety before delivery by parity, age, and level of education]. *Jurnal Aisyah: Jurnal Ilmu Kesehatan*. 2016;1(2):01-08. doi: 10.30604/jika.v1i2.14
7. Eni K. Menjaga keluarga tetap harmonis di masa pandemi [Keeping harmonious family during pandemics] [internet]. *Media Indonesia*. 2020. Available from: <https://mediaindonesia.com/humaniora/358990/menjaga-keluarga-tetap-harmonis-di-masa-pandemi>
8. Gugus Tugas Percepatan Penanganan Covid-19 [National Task Force for Handling Covid-19]. Protokol B-4 petunjuk praktis layanan kesehatan ibu dan BBL selama pandemi Covid-19 [Practical guidance of health service for mothers and neonates during Covid-19 pandemics]. [Cited: 2020 Apr 4]. Available from: <https://covid19.go.id/p/protokol/protokol-b-4-petunjuk-praktis-layanan-kesehatan-ibu-dan-bbl-pada-masa-pandemi-covid-19>
9. Moyer CA, Compton SD, Kaselitz E, Muzik M. Pregnancy-related anxiety during COVID-19: a nationwide survey of 2740 pregnant women. *Arch Womens Ment Health*. 2020;23(6):757-765. doi: 10.1007/s00737-020-01073-5. Epub 2020 Sep 29. PMID: 32989598; PMCID: PMC7522009.
10. Cunningham GF, Leveno KJ., Bloom SL. *William Obstetrics*. New York: McGraw Hill Medical; 2010
11. Mardiyana NE, Raden A, Umu Hani EN. Effect of ice gel compress towards labor pain during active phase stage I at private midwifery clinics in Surabaya city area. *Majalah Obstetri & Ginekologi*. 2018;25(1):21. doi: 10.20473/mog.V25I12017.21-24
12. Angesti EPW. Hubungan tingkat kecemasan dan pengetahuan ibu hamil trimester 3 dengan kesiapan menghadapi persalinan di masa pandemi Covid-19 di Puskesmas Benowo dan Tenggilis [Correlation between anxiety and knowledge with readiness for delivery among trimester 3 pregnant women during Covid-19 pandemics in Benowo and Tenggilis health centers]. Undergraduate thesis. Surabaya: Universitas Airlangga; 2020.
13. Direktorat Kesehatan Keluarga [Directorate of Family Health]. Pedoman bagi ibu hamil, ibu nifas, dan bayi baru lahir di era pandemi Covid-19 [Guidelines for mothers with pregnancy, puerperium, and neonates]. [cited: 2020 Dec 30] Available from: [http://www.kesga.kemkes.go.id/imag es/pedoman/Pedoman bagi Ibu Hamil, Bersalin, Nifas dan BBL di Era Pandemi Covid 19.pdf](http://www.kesga.kemkes.go.id/imag es/pedoman/Pedoman%20bagi%20Ibu%20Hamil,%20Bersalin,%20Nifas%20dan%20BBL%20di%20Era%20Pandemi%20Covid-19.pdf).
14. Deklava L, Lubina K, Circenis K, et al. Causes of anxiety during pregnancy. *Procedia – Social and Behavioral Sciences*. 2015;205:623-6. doi: 10.1016/j.sbspro.2015.09.097
15. Shodiqoh ER, Syahrul F. Perbedaan tingkat kecemasan dalam menghadapi persalinan antara primigravida dan multigravida [Anxiety Level differences between the face of labor and multigravida primigravida]. *Jurnal Berkala Epidemiologi*. 2014;2(1):141-150. doi: 10.20473/jbe.V2I12014.141-150
16. Manuaba IBG. *Ilmu obstetri dan ginekologi untuk kebidanan*. Jakarta: EGC; 2015
17. Mizrak Sahin B, Kabakci EN. The experiences of pregnant women during the COVID-19 pandemic in Turkey: A qualitative study. *Women Birth*. 2021;34(2):162-169. doi: 10.1016/j.wombi.2020.09.022. Epub 2020 Oct 1. PMID: 33023829; PMCID: PMC7528828.
18. Anggraini DI, Karyus A, Kania S, et al. Penerapan eKIE (komunikasi, informasi, dan edukasi elektronik) dalam upaya meningkatkan kesehatan



- ibu hamil di era new normal [Application of eKIE in improving pregnant women's health in new normal]. *Jurnal Pengabdian Masyarakat Ruwa Jurai*. 2020;5(1). doi: 10.23960/jpm.v5i1.2807
19. Ministry of Health, Republic of Indonesia. Pedoman bagi ibu hamil, bersalin, nifas, dan bayi baru lahir [Practical guidance of health service for mothers and neonates]. 2020
  20. Hidayati N. Analisis implementasi program perencanaan persalinan dan pencegahan komplikasi (P4K) dalam menyiapkan calon pendonor darah siap pakai oleh bidan desa di kabupaten Pekalongan [Analysis of P4K program implementation in preparing . *Indonesian Journal for Health Sciences*. 2018;2(2):115-28
  21. Kamidah K. Program perencanaan persalinan dan pencegahan komplikasi (P4K) sebagai upaya menurunkan angka kematian ibu [Delivery planning and complication prevention program to reduce maternal mortality rate]. *Gaster | Jurnal Ilmu Kesehatan*. 2018;16(1):24. doi: 10.30787/gaster.v16i1.245
  22. Ziogou R, Zografou K. Homebirth and homecare during COVID-19. *Eur J Midwifery*. 2020;4:14. doi: 10.18332/ejm/120972. PMID: 33537616; PMCID: PMC7839141.
  23. Gildner TE, Thayer ZM. Birth plan alterations among American women in response to COVID-19. *Health Expect*. 2020;23(4):969-971. doi: 10.1111/hex.13077. Epub 2020 May 24. PMID: 32449262; PMCID: PMC7283869.
  24. Agustina R, Utami FS. Faktor-faktor yang berhubungan dengan kesiapan persalinan di puskesmas Kasihan I, Kabupaten Bantul Yogyakarta tahun 2017 [Factors related to delivery preparedness in a health center, Bantul, Yogyakarta, 2017]. Undergraduate thesis. Yogyakarta: Universitas 'Aisyiyah Yogyakarta; 2017
  25. Farida I, Kurniawati D, Juliningrum PP. Hubungan dukungan suami dengan kesiapan persalinan pada ibu hamil usia remaja di Sukowono, Jember [Correlation between husband's support and delivery preparedness in adolescent pregnant women in Sukowono, Jember]. *E-Journal Pustaka Kesehatan*. 2019;7(2):127-34. doi: 10.19184/pk.v7i2.19125
  26. Nurdianti D. Hubungan dukungan keluarga pada ibu hamil trimester III dengan persiapan persalinan di wilayah kerja puskesmas Cigeureung kota Tasikmalaya tahun 2017 [Correlation between family support in delivery preparedness among trimester III pregnant women in Tasikmalaya, 2017]. *Jurnal Kebidanan UMTAS*. 2017;V(2):36-43.



# Relationship of pregnant mother's anxiety level with preparation for childbirth during Covid-19 pandemic in Surabaya, Indonesia

---

## ORIGINALITY REPORT

---

17%

SIMILARITY INDEX

13%

INTERNET SOURCES

10%

PUBLICATIONS

3%

STUDENT PAPERS

---

## MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

---

3%

★ Ani Margawati, Ahmad Syauqy, Aras Utami, Annisa Hananingtyas, Charysa Zaimatussoleha. "Anxiety among Pregnant Women in Rural-Urban Area Indonesia during the COVID-19 Pandemic in Semarang, Indonesia", Open Access Macedonian Journal of Medical Sciences, 2022

Publication

---

---

Exclude quotes On

Exclude bibliography On

Exclude matches < 1 words