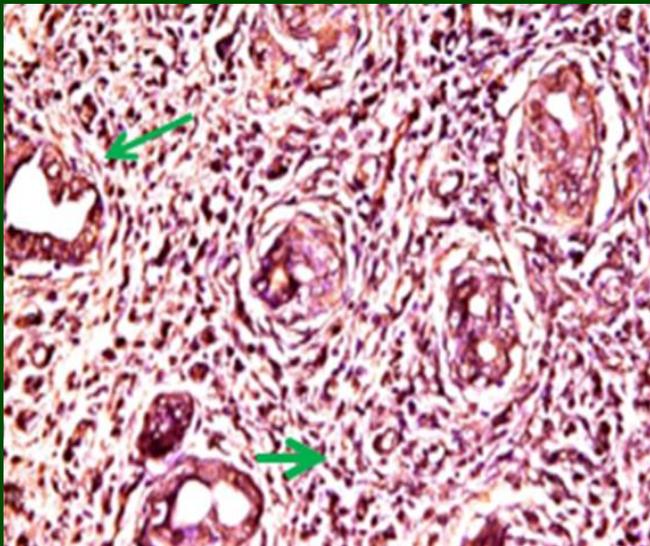# Majalah Obstetri & Ginekologi

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Immunohistochemistry of α-SMA in ovarian endometriosis

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- 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 a-smooth muscle actin expression in ovarian and peritoneal endometriosis

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Case Report

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Review Article

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1. Journal

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- Halpern SD, Ubel PA, Caplan AL. Solid-organ transplantation in HIV-infected patients. N Engl J Med. 2002;347(4):284-7.

More than three authors, list the first three authors, followed by et al.

- Rose ME, Huerbin MB, Melick J, et al. Regulation of interstitial excitatory amino acid concentrations after cortical contusion injury. Brain Res. 2002;935(1-2):40-6.

2. Books

- Butler SW. Secrets from the black bag. London: The Royal College of General Practitioners; 2005.

Chapter of an edited book

- Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. The genetic basis of human cancer. New York: McGraw-Hill; 2002. p. 93-113.

Translated book

- Luria AR. The mind of a mnemonist. Solotaroff L, translator. New York: Avon Books; 1969.

Electronic book/E-book

Chapter from an electronic book

- Darwin C. On the origin of species by means of natural selection or the preservation of favoured races in the struggle for life [Internet]. London: John Murray; 1859. Chapter 5, Laws of variation. [cited 2010 Apr 22]. Available from: http://www.talkorigins. org/faqs/origin/ chapter5.html

Full text electronic book

- Macdonald S. editor. Maye's midwifery 14th ed. [eBook]. Edinburgh: Bailliere Tindall; 2011 [cited 2012 Aug 26]. Available from: Ebrary.

Proceeding book

Offline proceeding

- Kimura J, Shibasaki H, editors. Recent advances in clinical neurophysiology. Proceedings of the 10th International Congress of EMG and Clinical Neurophysiology; 1995 Oct 15-19; Kyoto, Japan. Amsterdam: Elsevier; 1996.

Online proceeding

- Muller S, editor. Proceedings of the 10th international conference on head-driven phrase structure grammar [Internet]; 2003 Jul 18-20; East Lansing (MI). Stanford (CA): CSLI Publications; 2003 [cited 2017 Nov 16]. Available from: http://web.stanford.edu/group/ cslipublicationsSta/cslipublications/HPSG/200 3/toc.shtml

Thesis/dissertation

Offline thesis/dissertation

- Kay JG. Intracellular cytokine trafficking and phagocytosis in macrophages [dissertation]. St Lucia, Qld: University of Queensland; 2007

Online thesis/dissertation

- Pahl KM. Preventing anxiety and promoting social and emotional strength in early childhood: an investigation of risk factors [dissertation on the Internet]. St Lucia, Qld: University of Queensland; 2009 [cited 2017 Nov 22]. Available from: https://espace. library.uq.edu.au/view/UQ:178027

3. Website

With author

- Diabetes Australia. Gestational diabetes [Internet]. Canberra (ACT): Diabetes Australia; 2015 [updated 2015; cited 2017 Nov 23]. Available from: https://www.diabetesaustralia. com.au/gestational-diabetes

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- The family impact of Attention Deficit Hyperactivity Disorder (ADHD) [Internet]. 2009 Nov 1 [updated 2010 Jan 1; cited 2010 Apr 8]. Available from:http://www.virtual-

medical centre.com.au/healthandlifestyle.asp?sid=192&title=The-Family-Impact-of-Attention-Deficit-Hyperactivity-Disorder-%28ADHD%29page=2

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For examples:

- Moir and Jessel maintain "that the sexes are interchangeable".[1]
- Numerous studies[20-22] have.....
- Smith's research ....[21]
- Smith and Jones[22] research .....
- Up to 3 authors eg. Smith, Jones and McDonald reported that ....[23]
- More than 3 authors eg. Smith et al[24] reports.

ORIGINAL ARTICLE

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

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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

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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.[1] 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.[2,3]

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.[4] 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.[5]

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.[2] The results of Hernani's research showed that 53.3% experienced anxiety in the face of childbirth.[6] 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.[7]

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.[8] 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.[9]

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.[10]

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.[11] 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						P value
	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[12], 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.[13] 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.[14]

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.[11,15,16]

Based on the research of Sahin and Kabakci[17] 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.[17]

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[18] 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[19] 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.[20] 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.[21,22]

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.[23-25]

According to Nurdianti[26] 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.

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