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The Correlation Between Demographic Factors and Anxiety Levels of Pregnant Women During The Covid – 19's Pandemic

Ida Fauziah¹, Putri Dwi Christanti², Tri Krianto³

¹Post Graduate Student – Department of Health Education and Behavioral Science, Faculty of Public Health, University of Indonesia,, Indonesia)

²Chief of Research and Knowledge Center, Bidan Muda Bergerak (The Movement of Young Midwife), Indonesia ³Lecturer, Department of Health Education and Behavioral Science, Faculty of Public Health, University of Indonesia, Indonesia)

ABSTRACT

Background: The Covid-19 pandemic had an impact on several sectors including the health sector, especially maternal and child health services. The policies and restrictions imposed during the Covid-19 pandemic certainly caused MCH services did not function optimally, even pregnant women's visits to health services were recorded to decline during the start of the pandemic before the introduction of new normal. This condition certainly has a substantial negative psychological effect, especially for pregnant women.

Purpose: to determine the correlation between demographic factors and anxiety levels of pregnant women during the pandemic.

Methods: This research used quantitative research by using an online questionnaire with a crosssectional study design, and the number of respondents was 122 people using purposive sampling technique.

Results: As many as 66% of respondents with higher education level, with the type of activity 58% work, as many as 45% live in the red zone or high risk of covid-19, and 72% were high-level of anxiety. The results of statistical tests between the level of education, occupation, and risk zonation of covid – 19 on the level of anxiety, respectively, with *p*-values of 0.079, 0.256, and 0.546

Conclusion: Statistically, there was no correlation between the level of education, occupation, and risk zonation for Covid-19 on the level of anxiety of pregnant women in carrying out antenatal care. Health care providers are advised to provide extra services to pregnant women during the new normal era by providing service options through teleconsultation and tele-registration to shorten the duration of interaction and reduce the risk of exposure to the COVID-19 virus.

Keywords:

pregnant women; antenatal anxiety; covid-19

Corresponding email: ida.fauziah91@ui.ac.id

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BACKGROUND

Novel Corona Virus – 19 (Covid – 19) is a virus that causes a highly infectious disease with symptoms of pneumonia and severe respiratory disease (Zhu et al., 2020). This virus was first recognized in December 2019 and has spread widely throughout the world until it was finally designated as a Global Pandemic by WHO on March 11, 2020 (Cucinotta & Vanelli, 2020; Cullen et al., 2020). This virus mainly affects adults with recorded higher mortality rates in older ages and people with certain diseases (Dong et al., 2020; Huang & Schnabel, 2018). The psychological and social impacts were equally bad when this pandemic begins widely spread. Many people were physically separated from family, friends, communities and school closures around the world. Since the beginning of the Covid-19 pandemic, the Central Government had imposed a policy on Large-Scale Social Restrictions in the Context of Accelerating the Handling of Corona Virus Disease 2019 (Covid-19) as stated in Government Regulation Number 21 of 2020 and the Determination of Public Health Emergency Corona Virus Disease.

The Covid-19 pandemic also had an impact on the health sector, especially maternal and child health services. Policies and restrictions imposed during the Covid-19 pandemic had certainly caused MCH services did not function optimally, and even pregnant women's visits to health services were recorded to decline during the beginning of the pandemic before the introduction of new normal (Kar et al., 2020). It should be underlined that the current pandemic is not only a public health crisis, but also a social, demographic, and economic crisis and has a substantial negative psychological effect, including for pregnant women (Ashaba et al., 2017). Although limited, previous research has shown that outbreaks of highly infectious diseases increased symptoms of depression and anxiety (Hawryluck et al., 2004; Kajdy et al., 2020). In the early phase of the pandemic 53.8% of respondents in Wuhan China reported moderate to severe psychological effects, with 17% and 29% reporting symptoms of major depression and symptoms of anxiety (Zhou et al., 2020). (Saccone, 2020) published a small study of 100 pregnant women in Italy of whom more than half had severe psychological effects, and two-thirds more anxious than normal. Pregnant women are a vulnerable population during the pandemic and have special challenges due to their responsibilities in caring for their children and other family members. In other words, the need to receive routine prenatal care from a health facility increases the risk of exposure to viral infections in this population (Hussein, 2020).

Until now, there is still very limited research that systematically examines the anxiety level of pregnant women during the pandemic and the factors that influence anxiety. This study was designed to explore the impact of the Covid-19 pandemic on the anxiety of pregnant women and to identify the demographic factors most associated with the level of anxiety of pregnant women during the pandemic.

OBJECTIVE

The purpose of this study was to determine the correlation between demographic factors and anxiety levels of pregnant women during the pandemic.

METHODS

This type of research used quantitative research with a cross-sectional research design with measurements between variables carried out at one time or simultaneously with the implementation of the research. In this study, researchers measured the independent and dependent variables and analyzed the two variables to find the relationship between variables. This study used a modified PRAQ-R2 (Pregnancy Related Anxiety Questionnaire - Revised 2) instrument to measure the anxiety of pregnant women

during the Covid-19 pandemic. The population of this study were all followers of the Instagram social media account @bidanmudabergerak who were pregnant and did antenatal care during the covid-19 pandemic in March - December 2020. The number of followers from the @bidanmudabergerak social media account was 3,910 people. Based on the calculation of the minimum sample of a cross-sectional study taking into account the population and the proportion of anxiety level of pregnant women, it was found that the minimum sample was 75 people. Sampling was carried out with an online questionnaire distributed with an online form (google form) using a purposive sampling technique or sampling based on specific reasons such as the nature or characteristics of the population that had been previously known.

RESULTS

Characteristics	Overall		
	N	%	
Anxiety Level			
Low	34	28	
High	88	72	
Education			
Elementary School Graduate	5	4	
Junior High School Graduate	12	10	
Senior High School Graduate	25	20	
College Graduate	89	66	
Occupation			
Employee	71	58	
Unemployment	51	42	
Area of Residence			
Jabodetabek	13	11	
Non Jabodetabek	109	89	
Knowledge of Risk Zonation			
of Covid - 19			
Know	109	89	
Doesn't know	13	11	
Covid – 19's Zonation			
Green	11	9	
Yellow	12	11	
Orange	31	25	
Red	55	45	
Age(year)			
< 20	7	6	
20-35	102	84	
> 35	13	10	

Tuble It Demographies Status (1, 122)	Table 1.	Demograp	hics	Status	(N=122)
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In table 1, information on the characteristics of respondents is obtained, consisting of level of anxiety education level, occupation, area of residence, knowledge of risk zonation of Covid-19 and the age of the respondent. Based on the anxiety level, most of the respondents were in high anxiety level as much as 72%. Based on the education level of most of the respondents as much as 66% of respondents were pregnant women with a college graduate. Based on employment status, most of the respondents 58% were working mothers. Based on age, most of the respondents were mothers aged 20-35 years.

Based on the respondent's area of residence, most of 89% live outside Jabodetabek. Based on the Covid-19 riskzonation, most of the respondents 89% knew the Covid-19 risk zonation in their area of residence. The distribution of respondent risk zones was very diverse, as many as 45% of respondents live in the red zone of covid-19, 25% live in the orange zone of covid-19, 11% live in the yellow zone of covid-19, and 9% live in the green zone of covid-19.

The Correlation between Education and Antenatal's Anxiety Level

Variable	VariableRespondent's Anxiety MeasuresLawHick		kiety iah	Overall		OR	n voluo	
	n	ow %	n	ign %	n	%	(93 % CI)	p value
Education Low High	8 26	47,1 24,8	9 79	52,9 75,2	17 105	100 100	2,701 (0,945-7,721)	0,079

Table 2. Education and Anxiety Measures Related to Covid – 19 (N=122)

In table 2, information is obtained that most of the respondents were college graduates (66%). Meanwhile, the statistical test results showed that there was no relationship between maternal education and the level of anxiety of pregnant women during the pandemic with a p-value of 0.079 and an OR value of 2.701OR 2.701, which means that respondents who have higher education have2.7 times higher risk of experiencing antenatal anxiety than respondents who have low education. From the table it can be seen that of the 105 respondents with higher education, most of them experienced high anxiety as much as 75.2% as well as respondents with low education of 17 respondents with low education, most of them as much as 52.9% experienced high levels of anxiety.

The Correlation between Occupational and Antenatal's Anxiety Level

Variable	Re	Respondent's Anxiety Measures				erall	OR	
	Low		Н	High			(95% CI)	p value
	n	%	n	%	n	%		
Occupation								
Employee	17	33,3	34	66,7	51	100	1,588	0,256
Unemployment	17	23,9	54	76,1	71	100	(0,715-3,526)	

Table 3. Occupation and Anxiety Measures Related to Covid – 19 (N=122)

In table 3, information is obtained that most of the respondents were working mothers (58%). Meanwhile, the results of statistical tests showed that there was no relationship between maternal employment status and the level of anxiety of pregnant women during the pandemic with a p-value of 0.256 and an OR value of 1.588, which meant that pregnant women respondents with working status unemploymentwere 1.5 times higher risk as of experiencing antenatal anxiety than respondents of pregnant women who employee. From the table it can be seen that of the 71 respondents who unemployment,

most of them experience high anxiety as much as 76.1% as well as respondents with working status from 51 respondentsmostly as much as 66.7% experience high levels of anxiety.

The Correlation Between Risk Zonation of Covid - 19 and Antenatal's Anxiety Level

Variabel	Respondent's Anxiety Measures Low High		Overall		OR (95% CI)	p value		
	n	%	n	%	n	%		-
Risk Zonation Low Risk High Risk	5 24	21,7 27,9	18 62	78,3 72,1	23 86	100 100	0,718 (0,240-2,150)	0,546

Tabel 4. Risk Zonation and Anxiety Measures Related to Covid – 19 (N=122)

In table 4, information is obtained that most of the respondents were pregnant women who were in high risk zone of covid 19 transmission. Meanwhile, statistical test results showed that there was no relationship between the COVID-19 risk zonation of the respondent's area of residence and the level of anxiety of pregnant women during the pandemic with a p-value value 0.718. From the table, it can be seen that of the 86 respondents who were in the high risk zone for Covid-19 experienced a high level of anxiety as much as 72.1%, as well as respondents who were in the low risk zone for Covid-19 as many as 23 respondents mostly experienced a high level of anxiety. which is high as much as 78.3%.

DISCUSSION

The Correlation between Education and Antenatal's Anxiety Level

The results of data processing in this research revealed that most of the respondents were college graduates (66%). Meanwhile, statistical test results showed that there was no relationship between maternal education and the anxiety level of pregnant women during the pandemic. The results of this study were in accordance with the concept which stated that the level of individual education affects the ability to think. The higher the level of education, the easier it is for individuals to think rationally and capture new information, so the higher a person's education, the higher one's knowledge (Stuart & Laraia, 2007). Respondents with a low level of education experienced a low level of anxiety by 47.1% while those with high anxiety experienced as much as 52.9%. Meanwhile, respondents with higher education level experienced low anxiety by 24.8% and high anxiety by 75.2%. This represented that educational background did not affect the level of anxiety of pregnant women during the covid-19 pandemic, because the high and low status of education could not affect perceptions that can cause anxiety. (Yekta et al., 2007) also conducted a study which stated that there was no relationship between education level and patient anxiety level. Meanwhile, the PRAQ study conducted in America showed that women who reported increased stress about food availability, conflicts in the home, and the potential for contracting the virus had a large change in PRAQ scores, and were quite significant in women who had low education (not up to school). medium), presumably due to the specific impact of anxiety about their job or possible loss of income (Cheryl et al., 2020).

The Correlation between Occupational and Antenatal's Anxiety Level

The results of data processing in this research indicated that most of the respondents haad work activities (58%). Meanwhile, statistical test results showed that there was no relationship between the mother's employment status and the anxiety level of pregnant women during the pandemic. Work is an activity that a person does especially to support his life and family so as to produce an income in the form of money. Ideally, as income increases, health care and services can be guaranteed so as to reduce the anxiety of pregnant women during the examination. The study showed the opposite results that both working and non-working mothers experienced high anxiety during the covid-19 pandemic, 66.7% high anxiety in working mothers and 76.1% high anxiety in nonworking mothers. This could be happened because pregnant women who work and pregnant women who did not work together have anxiety about their pregnancy during the COVID-19 pandemic (Bao et al., 2020). Meanwhile, the results of a study on the anxiety of pregnant women during the COVID-19 pandemic in America uttered several variables that were most significantly related to changes in anxiety in pregnant women including increased stress, such as: food availability, job loss, loss of parenting, tension or conflict at home, infected with the covid-19 virus, pregnant women or their families become workers, and live in areas with high numbers of covid cases. In addition, pregnant women or family members who were the main workers and report living in areas with a high number of COVID cases were indicated to have a fairly large change in PRAO scores (Avittey et al., 2020; Grigoriadis et al., 2019). It is undeniable that anxiety in pregnant women during the pandemic was strongly influenced by many factors, not only work factors. The presence of the COVID-19 pandemic was a major change that was felt by everyone, including pregnant women, so that the impact of these changes greatly affects the mother's physical and psychological condition in dealing with pregnancy, childbirth, and after childbirth (Shen et al., 2020; Zhang & Yongwen, 2018). Women with increased anxiety during pregnancy were known to be at increased risk of postpartum depression and other mood disorders, so monitoring the appearance of symptoms of postpartum depression and other mood disorders was very important (Berthelot et al., 2020; Farrel et al., 2020). Equally important was expanding teleconsultation options for perinatal mental health screening, care and monitoring.

The Correlation Between Risk Zonation of Covid – 19 and Antenatal's Anxiety Level

The results of data processing in this research showed that most of the respondents were in the red zone (45%). Meanwhile, statistical test results represented that there was no relationship between the risk zonation of covid - 19 and the level of anxiety of pregnant women during the pandemic. The covid-19 zonation in Indonesia was divided into 4, namely the green zone, yellow zone, orange zone and red zone (KeMenkes, 2018). This zonation only applies in Indonesia, while other countries applied different policies. Various countries had essential policies in preventing COVID-19 infection, such as isolation and social distancing strategies to protect the risk of infection (Shen et al., 2020). Considering various conditions, many countries had begun to implement regional and national restrictive measures or use the option of lockdowns. Ministry of Health Republic of Indonesia had issued guidelines at the beginning of the pandemic to limit pregnancy examinations in Trimester 2 (via teleconsultation) unless there were danger signs, then revised again in July 2020 (Center of Data and Information, 2014; Japanese, 2021). Discussions about remodeling MCH services during the pandemic continue to be an issue that was discussed across professions, while restrictions on mass movement based on zoning also cause anxiety for pregnant women. Services for pregnant women at the Primary Health Care for Community Health Empowermentwere also divided based on regional zoning, where the green zone for meetings such as the Mother's class can be

carried out through the face-to-face method. Cheryl et all (2020) conducted a nationwide survey on pregnancy-related anxiety with 2,740 pregnant women from 47 states in the United States as respondents. The factors most strongly associated with pregnancyrelated anxiety include issues related to COVID-19, such as delaying in-person/face-toface pregnancy check-ups and changes to delivery plans etc. In addition, living in a location with high COVID-19 cases was also a significant trigger for anxiety related to pregnancy. This factor remained significant even after controlling for age, education, history of depression and anxiety and other factors. Similar to the results of the study of Saccone et al. (2020), these findings indicated that the COVID-19 pandemic is having a major impact on pregnancy-related anxiety. Meanwhile, the results of the research in this study did not show a relationship between risk zonation of the covid-19 and the maternal anxiety level during the covid-19 pandemic because after all there were many factors that influence the anxiety experienced by mothers during the pandemic. The increase in the number of patients and suspect cases, the number of affected countries continues to grow, had caused public anxiety about the transmission of the covid virus during the pandemic, which had led to increased anxiety. Furthermore, the lack of a significant number of masks and disinfectants, exaggerated and sensational news headlines, and false news reports also add to anxiety and fear (Moyer et al., 2020).

CONCLUSION

Based on descriptive data, it described that as many as 66% of respondents with a tertiary education level, with the type of activity 58% work, and 45% live in the red zone or high risk of covid-19. The results of statistical tests between the level of education, occupation, and risk zoning on the level of anxiety with p-values of 0.079, 0.256, and 0.546, respectively, which meant that there was no statistically significant relationship between the level of education, occupation, and risk zonation for COVID-19 on maternal anxiety levels during antenatal care. Health care providers during the pandemic are advised to provide extra services to pregnant women during the pandemic and the era of adapting to new habits by providing service options through teleconsultation and tele-registration (for COVID-19 risk screening and initial anamnesis) to shorten the duration of interaction and reduce the risk of exposure to the COVID-19 virus.

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