

Anxiety and Maternal Self-efficacy among Postpartum Mothers during the COVID-19 Pandemic

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ABSTRACT

Background. Postpartum mothers are vulnerable to maternal mental health problems during the COVID-19 pandemic. Research relating anxiety to maternal self-efficacy (MSE) in postpartum mothers in Indonesia is limited.

Objective. This study aims to identify the relationship between anxiety and demographic characteristics with MSE among postpartum mothers in Indonesia.

Methods. This was a cross-sectional study conducted among 116 postpartum mothers in the Bekasi area, West Java using accidental sampling method. We used the Postpartum Specific Anxiety Scale – Research Short-Form - For use in global Crises (PSAS-RSF-C) and MSE questionnaires. We compared maternal self-efficacy and parity using the chi-squared test. Odds ratio and 95% CI were computed to determine parity, educational level, and anxiety.

Results. Most respondents were aged between 20-35 years (60.3%), had higher education (54.3%), did not work (65.5%), multiparous (69%), experienced anxiety (50.9%), and had good MSE (84.5%). There was a significant relationship between low educational level, primiparous, and high anxiety with poor MSE (p value <0.05, 95% CI). Meanwhile, age and work status did not have a significant relationship with MSE.

Conclusion. High level of anxiety was strongly associated with poor MSE. Health workers are expected to screen and intervene to prevent anxiety and to improve MSE.

Keywords: anxiety, postpartum, maternal self-efficacy

INTRODUCTION

The COVID-19 pandemic caused by the novel coronavirus (SARS-CoV-2) affected global health. In Indonesia, the incidence of COVID-19 increased in the last two years.¹ The number of deaths due to COVID-19 was 125,000 since the first case was found.² Although studies related to the psychological impact caused by the pandemic are still limited, data indicate that this pandemic plays a role in people's mental health.³⁻⁵

Populations that are vulnerable to mental health changes include women, especially postpartum mothers.⁶ In general, 25% of women experience mental health problems during the perinatal period, increasing into the postpartum period.⁷⁻⁹ Mental health problems of postpartum mothers affect daily activities and the mother's ability to care for herself and her baby.¹⁰

Maternal self-efficacy (MSE) refers to the belief by a postpartum mother in her ability to care for herself and her baby. The transition to parenthood triggers postpartum mothers to adapt to their roles.¹¹ Maternal self-efficacy occurs from the first postpartum day and increases over



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time.¹² Several studies have shown that MSE is influenced by educational level, parity, social support, stress, depression, and anxiety.^{11,13-15} Maternal self-efficacy is closely related to postpartum maternal psychology.

Anxiety has emerged as a global psychological concern. Postpartum mothers are at risk of experiencing anxiety in the perinatal period.¹⁶ Anxiety in postpartum mothers affects themselves and their ability to care for their babies, thereby reducing maternal self-efficacy.^{8,11,17} The COVID-19 pandemic further compound the vulnerability of postpartum mothers to anxiety.¹⁸ Worries about personal and infant health become stressors, exacerbated by the hormonal changes that contribute to heightened anxiety conditions in postpartum mothers.¹⁹ If left untreated, anxiety may impact the postpartum mother's recovery process and maternal self-efficacy. Given its high urgency, we aimed to identify the relationship between anxiety and maternal self-efficacy in postpartum mothers during the COVID-19 pandemic.

METHODS

This research used an analytical cross-sectional study design. The study was conducted in the Work Area of the Pejuang Public Health Center in Bekasi City from April to June 2021. The population in this study was all postpartum mothers in the Pejuang Public Health Center Bekasi City using accidental sampling technique. The samples in this study were 116 mothers with a postpartum period of 0 - 42 days. Exclusion criteria were baby with congenital disease, stillbirth, and respondent did not want to participate in this study.

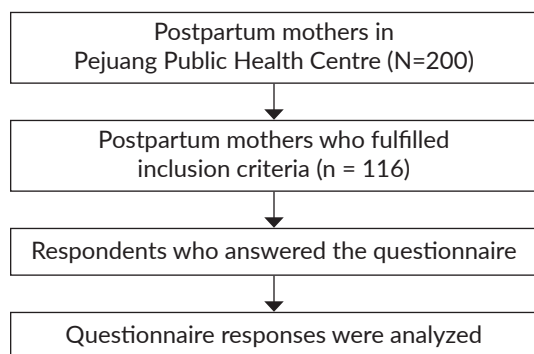


Figure 1. PRISMA study flow diagram.

We collected primary data using a demographic data questionnaire and the Postpartum Specific Anxiety Scale – Research Short-Form - For use in global Crises (PSAS-RSF-C) questionnaire.²⁰ This questionnaire consists of 12 items using Likert scale. The questionnaire was shown to be valid and reliable after pretesting in Karang Kitri Public Health Centre ($r = 0.361$). We used the 10-item Maternal Self-Efficacy (MSE) questionnaire to measure whether respondents have good or bad MSE.

Questionnaires were filled up by respondents through Google forms with assistance from researchers or research assistants. The data (median) obtained were then analyzed using the chi-square test. This research passed ethical review from the UPN Veteran Jakarta Ethics Commission. The entire research flow can be seen in the PRISMA diagram (Figure 1).

RESULTS

Among 116 respondents, majority (60.3%) are from the low risk age group (20-35 years), had higher education (54.3%), unemployed (65.5%), and multiparous (69%). A little above half of mothers did not experience anxiety (50.9%) while majority had good maternal self-efficacy (84.5%) (Table 1). The table also shows a significant relationship between poor maternal self-efficacy and low educational level, primiparity, and high level of anxiety (p -value <0.05). Age and occupation did not show any significant relationship with MSE.

Table 1. Distribution of Mothers' Characteristics and Relationship with Maternal Self-Efficacy (MSE) in Pejuang Public Health Center Working Area, Bekasi East Java (N=116)

Characteristic	Frequency	%	P-value	OR
Age (years)			0.262	0.535
High risk (<20 and >35)	46	39.7		(0.177-1.617)
Low risk (20-35)	70	60.3		
Educational Level			0.030*	0.286
Low	53	45.7		(0.088-0.929)
High	63	54.3		
Work status			0.234	2.032
Homemaker	76	65.5		(0.622-6.645)
Working mother	40	34.5		
Parity			0.047*	0.235
Primipara	36	31.0		(0.051-1.084)
Multipara	80	69.0		
Anxiety			0.049*	0.340
Anxiety	57	49.1		(0.113-1.207)
No anxiety	59	50.9		
Maternal Self-Efficacy (MSE)				
Poor	18	15.5		
Good	98	84.5		

*Significant with p value <0.05

DISCUSSION

The results of this study indicate that low education is significantly related to poor MSE (p-value 0.03). These results are in line with the research of Zheng, which found that maternal low educational level is related to poor MSE.¹² The higher a mother's educational background, the easier it is for her to obtain and process information, leading to increased self-efficacy.^{13,21}

This study also shows that parity is one of the determinants of MSE. This is in line with the results of Botha et al. which showed that the number of children is positively related to MSE.²² It also proves that self-efficacy also occurs in primiparas who experienced caring for their babies for the first time.²³ The number of children increases the mother's experiences with her duties and responsibilities, thus, further increasing MSE.

MSE can also be affected by anxiety. This is shown in several studies which state that anxiety is associated with low MSE, and anxiety affects the relationship between mother and baby.^{8,10,24} In addition, the current pandemic has heightened the vulnerability of postpartum mothers to anxiety.¹⁸ However, in a longitudinal study in China among Chinese primiparous women, MSE increases during the postpartum period as other mental health problems decrease.¹² Women who reported higher social support after birth experienced a greater sense of MSE.²⁵ Anxiety may have far reaching detrimental effects on maternal self-confidence, which is associated with early infant regulatory problems.²³

According to Silverio et al., postpartum mothers felt worried about their relationship with their spouse, their baby's condition, and how to care for their baby.²⁰ Women with higher intolerance for uncertainty were more likely to experience postpartum anxiety. On the other hand, anxiety occurred in first time fathers, particularly during the early postpartum period. First time postpartum mothers (primiparous) have anxiety because of having no experience before.¹⁰

In this study, age and occupation did not have significant relationships with MSE. This result is in line with the study conducted in Israel that the mother's age is not related to her ability to care for her child.²² Regardless of work status, both working mothers and homemakers have good MSE scores. This finding may be explained by working mothers being on maternity leave and able to work from home during the pandemic. Being at home, postpartum mothers tend to get support from their families on shared responsibilities leading to increased self-efficacy.¹⁴

Postpartum mothers who experience anxiety will feel psychological pressure that ultimately makes it difficult for her to make decisions and provide care for both herself and her baby. The more anxious the mother, the more challenging for her to concentrate on caring for the baby. Conversely, if the mother receives social support, especially from her husband, and has sufficient knowledge related to infant care,

she will not be anxious and will find it easy to care for her baby, thus improving her MSE.

The study has some limitations which include possible confounding variables and other factors contributing to MSE that were not analyzed. The study was also conducted in only one of the healthcare facilities in one province, thus, findings are not generalizable.

CONCLUSION

This study indicates a significant relationship between anxiety and Maternal Self-Efficacy (MSE) in postpartum mothers. In addition, low level of education and primiparity are also determinants of MSE. Age and occupation have no relationship with MSE. Experimental research methods (RCT) and a larger sample size are needed for further research. Health workers must be able to conduct anxiety screening and provide timely intervention to prevent anxiety and improve MSE.

Statement of Authorship

Both authors certified fulfillment of ICMJE authorship criteria.

Author Disclosure

Both authors declared no conflicts of interest.

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