

Infant temperament with anxiety postpartum mothers in primary health care Sleman, Indonesia



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ABSTRACT

Introduction: Changes in psychological conditions after childbirth often occur, one of which is anxiety. During the postpartum period, anxiety is a common disorder that occurs in as many as 30% of women, with at least one episode of anxiety in their lifetime. Anxiety in postpartum mothers is caused by the infant, who has an easy or difficult temperament. Therefore, this study aims to determine the relationship between infant temperament and anxiety in postpartum mothers in the Sleman Yogyakarta Public Health Center.

Methods: This type of research is a non-experimental quantitative with a cross-sectional approach involving 80 samples of postpartum mothers aged up to the first six weeks in the Sleman Yogyakarta Public Health Center. Sampling with a purposive sampling technique. The instruments used were the Infant Characteristics Questionnaire (ICQ) and the Hamilton Anxiety Rate Scale (HARS). The statistical test used in this research is Chi-Square.

Results: Most infant temperaments were easy (68.8%) and mild postpartum anxiety (50%). Statistical test results show a p-value of 0.001.

Conclusion: An infant's temperament influences anxiety in postpartum mothers. Nurses must improve the quality of maternity nursing care services through education and early detection to prevent postpartum anxiety.

Keywords: *Anxiety, Infant Temperament, Postpartum.*

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INTRODUCTION

Pregnancy and childbirth are natural and normal events in a mother's life, so the mother will experience physiological, social, and psychological adaptations during the postpartum period. One of the psychological conditions that affect postpartum mothers is anxiety. During the postpartum period, anxiety is a common disorder in as many as 30% of women and postpartum mothers who experience at least one episode of anxiety throughout their lives.¹

Postpartum anxiety is a condition of excessive anxiety in postpartum mothers. This is because after giving birth, the hormone progesterone and estrogen levels in a mother experience a drastic decrease, causing mood swings that can harm the baby. The majority of anxiety experienced by postpartum mothers is sometimes ignored, and treatment is not immediately carried out. It is feared that it can cause

further problems, namely depression or postpartum blues in postpartum mothers.² Anxiety in postpartum mothers can be caused by factors such as age, family support, social parity, knowledge, and the baby's condition. Babies with chronic or acute diseases, babies born prematurely, and the baby's temperament are all factors of the baby.³ According to the journal Public Library of Science, high-tempered babies have higher levels of emotional and behavioral difficulties. Babies who show temperament from an early age, if not handled and assisted properly, will affect parenting so that this condition can cause anxiety in postpartum mothers.⁴

Infant temperament is a baby's instinctive behavior, self-regulation images, and emotional expressions used to convey needs, feelings, and discomfort. This condition can be shown through negative reactions such as crying, anger, fear, difficulty sleeping or initiating sleep, and movement.⁵ The characteristics of

the baby's temperament are distinguished based on the baby's typical behavior, divided into easy and difficult. Postpartum mothers who have difficulty understanding the temperament behavior of babies will affect the parenting process so that it affects emotional conditions related to anxiety. In contrast, postpartum mothers who can understand the temperament behavior of babies will easily condition anxiety.⁶ This condition is in line with a study conducted on 210 pregnant women and postpartum mothers in Mexico, which found that the baby's temperament plays an important role in postpartum maternal anxiety and depression. The average temperament of the babies in this study was 15.2% with difficult characteristics, 41.9% on average for mothers with depression and 41.5% for mothers with anxiety.⁷ The impact of this anxiety includes causing the mother to be less active, experiencing an unstable emotional state, feeling uncomfortable with the baby, not taking care of the baby

because it is more focused on oneself, and affecting the work of hormones that produce breast milk.⁸

The postpartum period is a transitional period for a mother, both physically and psychologically. This condition can allow the emergence of several problems, one of which is anxiety. The condition of the postpartum mother's anxiety is often influenced by the unstable emotional state of the baby, namely the baby's temperament. The impact of this attitude will affect the bond between mother and baby. Therefore, with this phenomenon, the author is interested in researching the relationship of infant temperament with anxiety in postpartum mothers in the primary health care Sleman Indonesia.”

METHODS

This study uses quantitative research methods with a cross-sectional approach. The research sample was postpartum mothers who were previously screened using the Edinburgh Postpartum Depression Scale (EPDS) questionnaire. The EPDS instrument measures whether respondents are depressed or not as a screening for postpartum mothers. This instrument has been standardized and recognized for its reliability and validity with a sensitivity value of 86%, and the results of the EPDS reliability test are a p-value of 0.028.⁹ The number of questions in the EPDS instrument amounts to 10 items, with a score of 0-9 being normal and a score of > 10 being depression.¹⁰

Sampling using a purposive sampling technique, a total of 80 respondents were in the Primary Health care Sleman Indonesia. The instruments used were the Infant Characteristics Questionnaire (ICQ) to measure the baby's temperament and the Hamilton Anxiety Rate Scale (HARS) to measure anxiety in postpartum mothers.

Measurement of infant temperament variables using the Infant Characteristics Questionnaire (ICQ) to determine the baby's behavior. The ICQ questionnaire was developed and has been used in Indonesia with 20 question items ranging in the score range of 20-140. Scores with results less than equal to 60.25 are categorized as babies with easy temperaments, and

scores of more than 60.25 are categorized as babies with difficult temperaments. Instruments for the measurement of infant temperament using Infant ICQ have been tested for validity and reliability with a value of Cronbach's Alpha of 0.89 so that this instrument shows reliable and valid results as a data retrieval instrument.¹¹

Measurement of postpartum anxiety variables using the Hamilton Anxiety Rate Scale (HARS). Max Hamilton developed this measuring instrument in 1956 to find out the signs of psychological anxiety as well as somatics divided into 14 questions. Each item of the questionnaire question is scored between 0 (no anxiety) to 4 (very heavy anxiety). Determination of the degree of anxiety by summing the scores of scores and items 1- 14 with the result if the score is less than 14: no anxiety, scores 14–20: mild anxiety, scores 21–27: moderate anxiety, scores 28–41: severe anxiety and scores 42 – 56: severe anxiety. The validity level of the HARS instrument was 0.93, and the result of the reliability test was 0.97.¹² The statistical test in this study uses the chi-square. This research had undergone ethical clearance with letter number 338/EC-KEPK FKIK UMY/ XII/2021.

RESULTS

The average age of the respondents is 29 years old, with the oldest being 46 years old and the youngest being 17 years old. The standard deviation value is 6.12. The mean age of the baby is 4 weeks, with the youngest age of 1 week and the oldest age of 6 weeks. The standard deviation value is 1.67.

The education of the majority of respondents is high school, with a total of 50 (62.5%) respondents. The majority of respondents are housewives, with a total of 62 (77.5%) respondents. The majority of parity status was multigravida with a total of 42 (56.3%) respondents, and the majority of the type of delivery was normal with a total of 48 (60%) respondents.

The majority of respondents expressed easy temperament in babies, with 55 (68.8%) respondents and 25 (31.3%) difficult respondents. Postpartum mothers experienced mild anxiety in as many as 40 (50%) respondents, 31 (38.8%) respondents did not experience anxiety, 8 (10%) respondents experienced moderate anxiety, and a small proportion experienced severe anxiety levels. There was 1 (1.3%) respondent.

Table 1. Demographic characteristics of participant: mother's age and baby's age (n=80).

Variable	Mean	Standard Deviation	Min	Max
Mother's age	28.86	6.12	17	46
Infant's age	4	1.67	1	6

Table 2. Demographic characteristics of participants: education, profession, parity, type of birth.

Variable	Frequency	Percent (%)
Education		
Primary school	2	2.5
Junior high school	10	12.5
Senior high school	50	62.5
College	18	22.5
Profession		
Housewife	62	77.5
Civil servant	1	1.3
Employee	17	21.3
Parity		
Primigravida	35	43.8
Multigravida	45	56.3
Type of birth		
Normal	48	60
Sectio Caesaria	32	40

Table 3. The Infant's Temperament Level.

Variable	Frequency	Percent (%)
Infant's temperament		
Easy	55	68.8
Difficult	25	31.3
Anxiety Level		
No anxiety	31	38.8
Mild anxiety	40	50
Moderate anxiety	8	10
Severe anxiety	1	1.3

Table 4. Relationship between Infant's Temperament and Anxiety in Postpartum Mothers.

Anxiety	Infant's Temperament				Total		p-value
	Easy		Difficult		n	%	
	n	%	n	%			
No anxiety	28	90.3	3	9.7	31	100	0.001
Mild anxiety	25	62.5	15	37.5	40	100	
Moderate anxiety	2	25	6	75	8	100	
Severe anxiety	0	0	1	100	1	100	
Total	55	68.8	25	31.3	80	100	

The results of the chi-square test between the baby's temperament and postpartum anxiety there are as many as 3 (9.7%) mothers who do not have anxiety have a difficult baby temperament, while among mothers who do not have anxiety, as many as 28 (90.3%) have the easy baby temperament. The results of the statistical test obtained a value of $p = 0.001$. It can be concluded that there is a relationship between the baby's temperament and postpartum anxiety.

DISCUSSION

The age characteristics of the majority of postpartum mothers range from 20–35 years, which are healthy and productive ages because, at that age, the reproductive organs have matured, so they are ready to accept pregnancy until birth. Mothers with a range of 20–35 years have a good level of maturity in thinking they can care for their babies and themselves.¹³

The results of this study indicate that the majority of infants are in the neonatal category. The behavior of babies at this time develops by their age and develops faster. Developments that influence each other and are related namely physical, cognitive, and emotional development.¹⁴ The behavior of babies at this time develops by their age and develops faster. The babies aged 6 weeks cry for around 3 hours a day. The peak of crying is often between 3 pm

and 11 pm. This can cause the mother to experience feelings of anxiety, fatigue, and worry for her baby.¹⁵

The results of this study indicate that the work status of the majority of postpartum mothers is as housewives or not working. Mothers who do not work will have time to care for their babies, monitor developments, and provide stimulation to babies. Household activities are inseparable from the duties of a mother, including cooking, washing, and taking care of children and family. This will trigger the emergence of stressors that affect how to control anxiety.¹⁶ The postpartum mother's education level is very influential on her emotional and intellectual development. The characteristics of respondents with the majority of their last education being high school also experienced fatigue, which will result in anxiety for postpartum mothers.¹⁷

The characteristics of postpartum respondents are mostly multigravida mothers. The majority of respondents who had more than one pregnancy or multigravida, as many as 80.6%, indicated that the mother had previous experience with pregnancy and childbirth. Anxiety can arise for postpartum mothers who have previous experiences with pregnancy and childbirth due to uncomfortable past events that cause trauma in the next birth.¹⁸ In contrast to mothers who have

not experienced childbirth, this anxiety can be caused by the mother's ignorance of the labor process that will be experienced both before and after birth.¹⁹

The types of maternal postpartum deliveries are normal birth. It is explained that the type of normal vaginal delivery or cesarean delivery can affect the incidence of anxiety, postpartum blues, and depression because a bad mother's experience during childbirth will cause psychological trauma, which can result in the mother being less able to take good care of herself and her baby.²⁰

The results of this study indicate that most babies have a temperament in the category of easy temperament. Babies with increasingly difficult temperaments such as frequent crying, difficulty sleeping, and difficulty adapting to the environment result in mothers experiencing fatigue and feeling anxious about the baby's condition.²¹ This temperament is due to the influence of cortisol hormone levels in circulating blood and fetal amniotic fluid. In addition to anxiety factors in maternal pregnancy, depression and stress in pregnancy can affect the baby's temperament.²²

The formation of the baby's temperament is influenced by several factors, namely the provision of special stimulation to the fetus according to gestational age, the mother's fear during pregnancy, the influence of hormones, and the response to crying when the newborn is born. Giving a stimulus from the mother to the fetus will stimulate brain growth and development by the special psychological stimulus given by the mother or father because of indirect communication with the fetus.²³

These negative behaviors can affect the bond between mother and baby so that the pose does not work properly. These results will affect the benefits of forming bonding attachments from an early age, which can increase the release of the hormone oxytocin to prevent possible postpartum hemorrhage, increase lactation production, and decrease postpartum maternal anxiety so that the activity of providing care to babies can increase.³ The results of this study indicate that most postpartum mothers are in the range of mild anxiety. This means that the anxiety

that is felt is usually a part of everyday life, but the mother can still overcome the problems that are felt.

The research data showed that there was a relationship between the baby's temperament and anxiety in postpartum mothers. Most postpartum mothers have babies with easy temperaments with mild anxiety levels. Therefore, the more difficult the baby's temperament, the more severe the postpartum mother's anxiety level. The emotional reactions of babies who have difficult temperaments cause the relationship between mother and baby to be uncomfortable.¹⁰

One of the factors contributing to the emergence of anxiety in postpartum mothers is the characteristics of the baby, such as the temperament of a baby who has a difficult temperament, has difficulty sleeping, or is fussy.⁶ The temperament of the baby was 12.56 times more likely to affect the psychosocial effects of postpartum mothers. In another study, 15.2% of infants had difficult temperaments, and 84.8% of infants with easy temperaments caused anxiety and depression in postpartum mothers.⁷ Pressure from the baby, such as crying or fussing throughout the day, difficulty sleeping, and difficulty getting close to the mother or other people when the mother is not prepared to deal with these attitudes, can affect the psychology of the mother, who is unsure of her abilities and focuses more on the problem of her powerlessness. Negative emotional states will worsen the condition of mothers who are symptomatic of anxiety. Mothers of babies who have easy or difficult temperaments will have more negative views about how to care for the baby.²⁴ Efforts are made by nurses to address postpartum maternal anxiety by improving health information and education. Mothers who do not have proper information about pregnancy and the period after childbirth will find it difficult to make healthy choices for themselves and their babies.²⁵

CONCLUSION

There is a relationship between infant temperament and anxiety in postpartum mothers in Primary Health Care Sleman Indonesia. The difficult temperament characteristics of the baby will make it

difficult for the mother to interact with and understand the baby. Difficulties in babysitting the baby will cause the mother to become anxious and affect her emotional state. Nurses are important to improve the quality of maternity nursing care services through education and early detection to prevent postpartum anxiety.

CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence this study.

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ETHICS APPROVAL

This research had passed the ethical test from the Ethics Committee of the Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta, with a letter of ethics no. 338/EC-KEPK FKIK UMY/XII/2021.

AUTHOR CONTRIBUTION

Conceptualization, R.O, E.A.B, N.A.I and R.R; methodology, R.O, E.A.B, A.N.K, and R.R; writing original draft preparation, R.O, E.A.B, N.A.I and R.R; writing review and editing, R.O and E.A.B; supervision, R.O, and R.R. All authors have read and agreed to the published version of the manuscript. Note: R.O: Riski Oktafia, E.A.B: Ema Anindita Berliyanti, N.A.I: Nur Azizah Indriastuti, R.R: Rini Rahmayanti.

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