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**IJBLS 2022; 1(1):42-47**



International Journal of  
BioLife Sciences

Original paper

## Postpartum Depression Risk Factors and Breastfeeding Performance

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*Received: 1 August 2019*

*Revised: 11 August 2019*

*Accepted: 24 September 2019*

### Abstract

**Background and aim:** The maternal process is vulnerable for women to fall in an anxiety state that refers to postpartum depression. When symptoms appear, the possibility of depression during pregnancy will have a direct impact on the initiation of early breastfeeding and the termination of early breastfeeding. This study aims to look at the relationship between the potential of postpartum depression and the performance of breastfeeding in nursing mothers.

**Materials and methods:** This study used a cross-sectional study approach, in one of the sub-districts in Makassar City with the lowest achievement of exclusive breastfeeding. The study subjects were postpartum mothers who fulfilled 225 eligibility sampling throughout the period March-August 2018. Sociodemographic, obstetric variables, potential maternal postpartum depression, and breastfeeding performance assessment were collected and analyzed using the chi-square test and independent-sample t-test.

**Results:** Age (<0.001), work profile (<0.001), living property (<0.006), number of children (<0.001), and family support (<0.001) have been shown to influence maternal depression. We conclude that sociodemographic factors, especially economic vulnerability and social support, are risk factors for depression in nursing mothers. Although it did not appear to be different from breastfeeding performance between mothers who experienced depressive symptoms and anxiety, both felt the same of the obstacles to breastfeeding techniques.

**Conclusion:** To anticipate the magnitude of the possibility in breastfeeding cessation, mainly in women who are potentially depressed, by identifying the intention of breastfeeding and early screening detection of depression during pregnancy. Lactation management is something that must be mastered by every pregnant woman, especially primipara.

**Keywords:** EPDS, Postpartum, Depression, Breastfeeding

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## **Introduction**

Postpartum depression is a sedentary situation in new women in the form of affective disorders, decreased mood, feelings of sadness, worthlessness, despair, and tends to last four to six weeks [1], [2]. Clinical symptoms of postpartum depression are similar to depression generally in a woman's life cycle, but physiologically the symptoms begin during pregnancy and childbirth [3]. This situation usually preceded by baby blues syndrome, experienced by 4 out of 5 women on the first day until the tenth day since the baby is born [4]. Symptoms of postpartum depression are sometimes followed by eating, sleeping, and fatigue, making it difficult to distinguish between clinical and physical symptoms to measure its onset. However, in one review study confirmed psychological symptoms manifested in the form of anxiety triggered depression[5].

In Indonesia, the prevalence of postpartum depression reports unclear, by this mean postpartum depression retain in low priority among public health problems that requiring intervention. The individual situation of either women or mothers is generally unaware of changes in mood, anxiety, despair that accompany changes in the physiology of pregnancy and childbirth as a problem in the frame of depression. The word "depression" is a stigma that closer to the term "crazy." So that it is not easily detected because it hides sometimes. It takes foresight of midwives to observe these symptoms since antenatal care so that mothers want to be open and share information. For that, we need a simple measuring instrument as a screening tool. One quantitative measure designed to detect possible depression is the Edinburgh Postnatal Depression Scale (EPDS). In the form of a questionnaire containing ten questions about the feelings of mothers in the past week. This instrument applies in various countries, and the results are valid and reliable. This measuring device is simple, easy to calculate by health workers, quick to work on, more comfortable on the patient's side, language easy to understand, and relatively little cost. EPDS validates in the Indonesian version in 2006, with a sensitivity level of 91.7 and specificity of 76.9 [6].

When symptoms appear, the possibility of depression during pregnancy will have a direct impact on the initiation of early breastfeeding and the termination of early breastfeeding. Physiologically, milk production is regulated by hormonal mechanisms that are very sensitive to the psychological response of the mother. Anxiety is one of the symptoms of postpartum depression has an inhibitory effect on the release of the hormone oxytocin and prolactin. Continuous effects will interfere with the reflex of milk production and production [7]. Several studies report that breastfeeding mothers have a higher chance of depression [8], [9], while other studies reveal that formula feeding has a higher risk of depression compared to breastfeeding mothers. The prevalence of exclusive breastfeeding in mothers who have experienced postpartum depression tends to be very low [10], [11], the ability to maintain the lactation period is also getting weaker [12], while mothers who do not initiate early breastfeeding and breast milk tend to be more prone to depression during lactation [13]. Therefore, this study aims to detect differences in postpartum depression events from the sociodemographic aspects based on whether or not initiation of breastfeeding is done early in the first hour since the baby is born.

## **Material and Methods**

This study used an observational design with a cross-sectional study approach. The study conduct in one of the Pampang Subdistrict areas, Makassar City, with the lowest achievement of exclusive breastfeeding in the last three years. The subjects of the study were postpartum mothers with criteria for spontaneous vaginal delivery assisted by midwives or physicians ob-gyn, no previous history of depression, no smoking, and never consuming alcoholic beverages. The number of research subjects that became the target population was all mothers breastfeeding infants aged 0-

12 weeks during the period March-August 2018 totaling 275 mothers, but those who met the inclusion criteria were only 225 mothers. Data collection was in the form of sociodemographic data (maternal age at marriage and delivery, education, employment, family economic status, residence status, family structure), obstetric data (parity and age), family support, assessment of breastfeeding effectiveness, and maternal postpartum depression carried out during postpartum visits by midwives according to the time period of the visit scheduled for each mother. Sociodemographic and obstetric data were collected using a confirmed observation sheet with a medical record of maternal labor history from the clinic, breastfeeding performance data using the Unicef Breastfeeding-Aid 2009 sheet, and depression data measured by Edinburgh Postnatal Depression Scale. The entire process of data collection was carried out by seven standardized enumerators (training in the standardization of measurement methods and research data collection) through the interview process. To measure the correlation between sociodemographic, obstetric, postpartum depression variables on the performance of the breastfeeding process using the chi-square statistical test for nominal data and independent t-test for numerical data.

## Results

To distinguish between the group, ten cut off point is selected according to the reference of the Indonesian translated version [14]. All item in EPDS during validity and reliability tested, the EPDS instrument is reliable with Cronbach Alpha 0.706, except for validity item #1 and 2. In both groups divided by scores above and equal/below 10. According to table 1, almost 15% chose the larger scale, except for enjoyment, unhappy and crying, and harming self.

**Table 1.** Risk factor of depression

Variable	Depression Score >10 n=113		Depression Score ≤10 n=112		P Value
	f	%	f	%	
	<b>Education</b>				
Undergraduated	93	50.0	93	50.0	0.884
Graduated	20	51.3	19	48.7	
<b>Work Profile</b>					
Household	90	64.3	50	35.7	0.001
Employee	23	27.1	62	72.9	
<b>Family Income</b>					
< Regional Minimum Wage	75	51.7	70	48.3	0.544
≥ Regional Minimum Wage	38	47.5	42	52.5	
<b>Living Property</b>					
Own House	44	40.7	64	59.3	0.006
Rent	69	59.0	48	41.0	
<b>Family Structure</b>					
Nuclear	57	57.6	42	42.4	0.051
Extended	56	44.4	70	55.6	
<b>Family Support</b>					
Mean (SD)	32.32 (±7.172)		36.48 (±7.131)		0.001
<b>Breastfeeding Performance</b>					
Mean (SD)	17.50 (±2.758)		16.98 (±2.697)		0.130
<b>Mothers Age</b>					
Mean (SD)	25.26 (±6.677)		28.29 (±5.715)		0.001
<b>Mother Marriage Age</b>					
Mean (SD)	20.58 (±4.317)		20.78 (±3.915)		0.691
<b>Parity</b>					
Mean (SD)	1.52 (±0.669)		2.21 (±1.350)		0.001
<b>Babies Age</b>					
Mean (SD)	3.09 (±3.605)		2.95 (±2.504)		0.641

Even though this research failed to accept the significant correlation between breastfeeding performance and depression, several difficulties (table 3) issued same in both groups such as bonding between mothers and baby, restless and crying baby, the steps in positioning babies towards breast and persistence attachment and suckling until breastfeeding process terminated.

## **Discussion**

In this study, out of 225 post-partum mothers, more than 50% experienced signs and symptoms of depression, household mothers faced more symptoms of depression than working mothers. This possible because of the increase in workload during postpartum at home. The role of mothers in caring for babies is generally done alone because it considers as a women's responsibility, whereas the role as a housewife with household routine duties remains her responsibility. Fatigue is also one of the causes of anxiety and depression [15]. Most of the subjects studied were mothers with middle to lower welfare standards, which meant that they were mostly unable to finance a maid, so all of the work chores were done on their own. This study shows that household mothers have enormous potential for depression than working mothers. Low-income women are especially at high risk for postpartum depression. Prevalence of postpartum depression among low-income mothers between three and nine months after giving birth, count from 33% to nearly 40% [16].

Based on the description of the data, mothers with a higher number of family members living together in one house show a higher likelihood of depression than those who only live with their husbands and children, especially for families whose status is still hitching or living with parents or in-laws. Based on research conducted in China, boys are closely related to their original families and naturally are more likely to support their parents in conflict-in-law [17]. The experience of parenting gives the mother the confidence to perceive her ability to do the right thing, or just the adaptive ability of the emotional changes that occur from previous experiences. The sociodemographic characteristics of the study participants indicated that there was a statistically significant difference in the age of <25 years having twice the risk of postpartum depression compared to > 25 years [17]. Social support, especially from husbands, is essential; it cannot deny that the task of becoming a parent is not only mother responsibility. The involvement of fathers in providing simple assistance, the presence of husbands in each phase of pregnancy, childbirth, and breastfeeding makes the mother feel comfortable with funds. According to World Breastfeeding Week (WBW), this year, the campaign coming to theme Empower Parents Enable Breastfeeding. Breastfeeding is mother domain, but when all supporting system, fathers, family partner, workplace, environment, and community support, the breastfeeding rates and quality improves.

Although in this study, it failed to prove several other risk factors related to depression, especially the breastfeeding process. However, some barriers to breastfeeding seem to be felt by most mothers. As mentioned earlier, even in both groups shown no significant difference in performing breastfeeding, but among items observation during breastfeeding process, indicate moderate difficulties in the persistence of bonding between mother and baby during breastfeeding time.

## **Conclusion**

To reduce the burden caused by barriers to breastfeeding, pregnant women need to have excellent lactation management skills, through preparation to become mothers. Every basic health service should think about presenting this editing option in more detail and constructively for each mother. During pregnancy, it is essential to do a screening mechanism for potential symptoms of depression to get special preventive treatment immediately.

## Acknowledgment

We would like to express our gratitude to the ministry of Higher Education, Research and Technology of the Indonesian Government for supporting this research to be presented in 19<sup>th</sup> International Conference on BioMedical Science. We also thank all the woman in this study over her willingness to share their personal life with us to improve our knowledge in understanding breastfeeding and depression. Last, to all of our outstanding midwife student who spent their full time helping us to collect data. To all primary health care midwife, nurse, nutritionist, for the cooperative work field.

## Conflict of interests

The authors declare no conflict of interests in this study.

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