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Self-Efficacy and Mental Health of Mothers with Infants 0-6 Months on Breastfeeding Status: A Comparative Study

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Abstract

Background: Exclusive breastfeeding coverage in Bengkulu City has decreased over the last three years. Mothers' confidence in their abilities and good mental health become the essential part in supporting exclusive breastfeeding.
Objective: This study aims to examine the differences between self-efficacy and mental health of mothers based on their breastfeeding status, located in Bengkulu City.
Methods: The researchers employed a cross-sectional approach for analyzing the study. The sample consisted of 72 mothers with infants aged 0-6 months. The researchers selected the samples using a purposive sampling technique. Data collection was carried out using a digital questionnaire (via Google Forms) through validity and reliability tests. Data were analyzed using independent t-test. The mean self-efficacy score of partially breastfeeding mothers has lower scores than the exclusively breastfeeding mother. The mean mental health score of partially breastfeeding mothers is higher than exclusively breastfeeding mothers.
Results: The results of the independent t-test found that the average self-efficacy score of exclusively breastfeeding mothers is 55.58 and the average mental health score of partially breastfeeding mothers is 10.32.
Conclusion: There is a difference in the self-efficacy and mental health scores of partially and exclusively breastfeeding mothers. A high self-efficacy score indicates high maternal confidence. Meanwhile, a high mental health scores indicate mothers experience symptoms of psychological disorders. The achievement of successful exclusive breastfeeding is closely related to boosting self-assurance and preserving a mother's mental well-being.

Keywords: self-efficacy; mental health; partial breastfeeding; exclusive breastfeeding; breastfeeding status

INTRODUCTION

Exclusive breastfeeding is the most appropriate food for infants aged 0-6 months, and it should be continued until the age of two years, supplemented with complementary foods. Exclusive breastfeeding is crucial to protect the health of infants. It is proven that exclusively breastfed infants (up to 6 months) have a 93% reduced risk of death compared to those who were never exclusively breastfed (Ahmed & Rojjanasrirat, 2021). Globally, exclusive breastfeeding from 2015 to 2021 showed the percentage of 48%, while in 2025, the achievement of exclusive breastfeeding is targeted at 50%, and in 2030 it is targeted to reach 70%. The percentage of mothers who breastfeed their children in East Asia and the Pacific Ocean is 30% lower than the average for all other areas. In order to accomplish the goals that have been set, efforts are being conducted to initiate breastfeeding at an early age to breastfeed exclusively for the first six months as well as to maintain nursing for up to two years (WHO, 2022).

According to the annual data from Indonesia's Ministry of Health, the proportion of infants between 0 to 6 months receiving exclusive breastfeeding has decreased over the last three

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years. It has declined from 67.74% in 2019, to 66.1% in 2020, and further decreased to 56.9% in 2021 (Kemenkes RI, 2020, 2021, 2022). Meanwhile, according to the Indonesian Nutrition Status Survey (SSGI) in 2021, exclusive breastfeeding coverage was 48.2% and decreased significantly to 16.7% in 2022. There are twenty provinces that are still below the national target, one of which is Bengkulu Province. Exclusive breastfeeding coverage for the last three years in Bengkulu Province has continued to decrease, these are 68.39% (2020), 66.3% (2021), and 64.41% (2022) (Dinas Kesehatan Provinsi Bengkulu, 2023; Dinas Kesehatan Provinsi Bengkulu, 2021).

Exclusive breastfeeding is able to reduce the chance of infectious diseases for up to 28 months, such as diarrhea, sore throat and fever, as well as sudden infant death syndrome. Childhood leukemia, necrotizing enterocolitis (an intestinal disorder in infants), acute otitis media, non-specific gastroenteritis, severe lower respiratory tract infections, atopic dermatitis, asthma in young children, obesity, type 1 and 2 diabetes, and atopic dermatitis are several conditions correlated with a past history of breastfeeding (Dalili et al., 2019; Ip et al., 2007; Lin et al., 2014; Prentice, 2022; Saeed et al., 2020).

According to a recent study, 20.5% of mothers exclusively breastfed their infants during 3.13 months (SD = 2.14 months) after giving birth. Early breastfeeding cessation is related to the following elements, such as 1) pacifier usage; 2) birth weight less than 3.3 kg; 3) breastfeeding not started within the first hour of life; 4) maternal unhappiness with child development; 5) maternal mental health issues at one month; and 6) low breastfeeding self-efficacy at birth and one month (Esquivel et al., 2022). Furthermore, place of residence, mother's education level, ANC visits, number of family members, mode of delivery, and place of delivery are also associated with exclusive breastfeeding practices (Mekebo et al., 2022; Shi et al., 2021; Van Breevoort et al., 2021).

The mother's occupation becomes an obstacle to the continuation of breastfeeding when the leave period ends and the mother has to return to work. Support from family and workplace is needed for the continuation of exclusive breastfeeding (Gebrekidan et al., 2021; Lechosa-Muñiz et al., 2021). In addition, mothers' judgement of the baby's crying also influenced breastfeeding practices. Mothers have realized that breastmilk is good for the baby's health, but when the baby continues to cry despite breastfeeding, the mother assumes that the breastmilk is insufficient, causing the mother gives food other than breastmilk (Lou et al., 2014; Premji et al., 2014; Wood et al., 2022). The mother's evaluation of the breastmilk quantity produced in one breast during breastfeeding process has an emotional impact on the mother, assuming that the amount of breastmilk is large, making the mother feel good and successful, in contrast to mothers who respond that less of breastmilk quantity will cause negative feelings (upset) (Quinn et al., 2023).

Mothers' confidence in breastfeeding on the second day after delivery predicted that they would more often exclusively breastfeed their infants up to 6 months postpartum (Panahi et al., 2022). In the breastfeeding process, the most crucial factor is how a mother perceives her self-efficacy in breastfeeding. The effort a mother puts into breastfeeding her infant, thoughts about breastfeeding, emotional readiness to breastfeed, capacity to overcome challenges that may arise during breastfeeding process, and the amount of time she breastfeeds infant, all factor into how effective she perceives herself to be as a breastfeeding mother (Gumussoy & Atan, 2019; Tuthill et al., 2016; Wu et al., 2018).

Postpartum depression in the first 4 weeks of labour is common among mothers, which may impact the duration of breastfeeding (Esquivel et al., 2022). On the other hand, Figueiredo in 2014 found that there is a significant reduction in depression scores in postpartum women up to three months after delivery, especially in women who were exclusively breastfed for three months or more. The results of this study suggest that supporting exclusive breastfeeding practices may help reduce depressive symptoms in postnatal women during the first three-month postnatal period (Figueiredo et al., 2014).

According to this context, it is important to conduct research about research on the breastfeeding status of mothers with babies aged 0 - 6 months in Bengkulu City by assessing the mother's self-efficacy and mental health. The objectives of this reaserch is to compares the women’s self-efficacy and mental

health based on whether they breastfed their children with the findings of previous studies that did not make such comparison.

METHOD

Research Design

This study employed a cross-sectional design to determine the factors that influence the provision of foods and beverages, aside from breastfeeding, for infants aged 0 to 6 months in Bengkulu City. The research conducted in Bengkulu City in August-September 2023.

Sample

This study involved all mothers with infants aged 0-6 months constituted the population. From this population in Bengkulu City, the researchers selected a sample of 72 individuals using a purposive sampling technique. The criteria for selection were mothers who had infants aged 0-6 months and who lived and gave birth in Bengkulu City.

Instrument

The questionnaires of this study were using self-efficacy and mental health tools that were develop by Dennis (Dennis, 2003) and Syam (Syam et al., 2021). Self-Efficacy and Mental Health were Independent variables and breastfeeding status was dependent variable in this study. The self-efficacy tool consists of 14 statements and the mental health tool consists of 10 statements. Self-efficacy assessment for each question used a 5-point Likert scale where number 1 indicates not at all confident and number 5 indicates always confident. Furthermore, the mental health assessment used a scoring system with the answer score range of 0 to 3. Mean and standart deviation of each instruments were used for data interpretation. In the breastfeeding variable measured by asking what the mother had given to the baby from birth to the time the study took place, the mother's choice answer consisted of several choices ranging from breast milk to various foods and drinks. The final outcome of maternal breastfeeding status consists of two categories of measuring results: partial (if the baby is consuming additional food) and exclusive if only breast milk. Validity and reliability tests on the self-efficacy and mental health variables of breastfeeding mothers obtained Cronbach's alpha values for each variable of 0.927 and 0.796. Data were collected using a GoogleForm-based questionnaire by distributing the link to respondents via WhatsApp and direct data collection during *Posyandu*.

Data Analysis

The results of the normality test using the Kolmogrov-Smirnov test obtained a p value on each mental health and self-efficacy variable of 0.200, which means that the mental health and self-efficacy variables are normally distributed so they meet the requirements for statistical tests using the t test. The data collected were analyzed using Univariate and Bivariate analysis. Univariate analysis aims to obtain descriptive information and t-test independent analysis to identify the comparison between independent and dependent variables.

Research Ethics

This study complied with applicable research ethics, including maintaining the privacy of respondents and obtaining the necessary permissions where required. In 2023, the Stikes Sapta Bakti Health Research Ethics Committee approved the research protocol 001/FB/KEPKSTIKesSaptaBakti/2023. The Stikes Sapta Bakti Health Research Ethics Committee approved the research procedures and instruments

RESULT

The demographic characteristics of mothers who provided partial breastfeeding were mostly aged 20 - 35 years (61.3%), less education (67.7%), unemployment status (58.1%), number of children ≤ 2 (61.3%), normal delivery method (61.3%), performing IMD (58.1%), and getting information about breastfeeding during pregnancy (61.3%). The complete data distribution is presented in Table 1.

Table 1. Maternal characteristics, delivery history, timing of breastfeeding information by breastfeeding status

Variable	Partial Breastfeeding		Exclusive Breastfeeding	
	n	%	n	%
Age of Mother				
- Aged < 20 years to > 35 years	12	38.7	11	26.8
- - aged 20 years to 35 years	19	61.3	30	73.2
Education				
- Less	21	67.7	25	61
- Good	10	32.3	16	39
Occupation				
- Employed	13	41.9	13	36.1
- Unemployment	13	58.1	28	63.9
Parity				
- > 2 children	12	38.7	10	24.4
- ≤ 2 children	19	61.3	31	75.6
Delivery Method				
- Cesarean section	12	38.7	23	56.1
- Normal	19	61.3	18	43.9
Early initiation of breastfeeding				
- No	13	41.9	25	61
- Yes	18	58.1	16	39
Timing of receiving Breastfeeding Information				
- Pregnant				
- Breastfeeding	19	61.3	22	53.7
- Pregnant and Breastfeeding	7	22.6	9	22
	5	16.1	10	24.4

Source: Results of Data Analysis

Table 1 explains the information about analysis of the correlation between self-efficacy and maternal mental health with breastfeeding status. It is found that the mean self-efficacy score in the breastfeeding group was partially lower than the mean exclusive breastfeeding score (50.19 and 55.58).

Table 2 Results of The Univariate Analysis of Mental Health and Self-Eefficacy

Variable			
Dependent	**n**	**%**	
Breastfeeding Status			
- Partial Breastfeeding	31	43.1	
- Exclusive Breastfeeding	41	56.9	
Independent	Mean±SD	Min - Max	CI 95%
Self Eficacy	53.26±8.64	35 – 70	51.23 – 55.29
Mental Health	8.94±5.18	0 - 22	7.72 – 10.16

Source: Results of Data Analysis

Table 2 shows that as many as 56.9% of mothers exclusively breastfeed, the average self-efficacy score for breastfeeding mothers is 53.26 and the average mental health score is 8.94. The statistical test results proved that there is a difference in mothers' self-efficacy towards current breastfeeding status (*p* value = 0.008). Furthermore, the results based on the average maternal mental health score measured by the EPDS (Edinburgh post-natal depression scale) questionnaire shows that

the mental health score of partially breastfeeding mothers is higher than exclusive breastfeeding mothers (10.32 and 7.90). Statistical test results indicated that there is a difference between maternal mental health and breastfeeding status (*p* value = 0, 045). Table 3 above shows that there is a difference between the self-efficacy of partial and exclusive breastfeeding mothers.

Table 3. Results of Differences in Self-Efficacy and Mental Health by Breastfeeding

Variable	Partial Breastfeeding Mean ± SD	Exclusive Breastfeeding Mean ± SD	T Test Statistics	P Value
Self Eficacy	50.19±7.09	55.58±5.62	-2.739	0.008
Mental Health	10.32±9.05	7.90±4.63	2.002	0.049

Source: Results of Data Analysis

DISCUSSION

Mother in the exclusive breastfeeding group has higher self-efficacy scores than those in the partial breastfeeding group. This is in line with the previous study, which indicate that early cessation of breastfeeding is related to reduced maternal self-efficacy during the first months postpartum (Esquivel et al., 2022). High maternal self-efficacy five months postpartum is positively correlated with exclusive breastfeeding (Ahmed & Rojjanasrirat, 2021; Li et al., 2022).

When a woman feels confident in her capacity to breastfeed, she has feeling the pleasure and satisfaction in her ability to fulfill her role as a nursing mother. During the breastfeeding process, successful breastfeeding is an important factor so that the mother is confident in what she has done. Self-efficacy influences the determination to initiate and maintain lactation. High-self-efficacy mothers are more likely to believe that they are capable of overcoming common breastfeeding obstacles, including discomfort, latching difficulties, and milk supply issues. The result of the mother's confidence in breastfeeding is consistence and effective during lactation. The mother prefer to solve the lactation problem by herself (Awaliyah et al., 2019). Mothers' breastfeeding satisfaction will be positively correlated with exclusive breastfeeding (Ahmed & Rojjanasrirat, 2021).

Maternal self-efficacy can be shaped through the provision of programs during pregnancy. There was an increase in mothers' self-efficacy in relation to breastfeeding process after attending an individual management programme (Zhao et al., 2020). Not only did the mothers' self-efficacy improve, the results of the education programme also increased the duration of exclusive breastfeeding (Yesil et al., 2023). Self-efficacy can be formed with the motivation of the individual and support from the closest person, for breastfeeding mothers the closest person is a life partner or husband (Sari et al., 2019).

This study found that there is a difference in the mental health scores of mothers who breastfed partially and exclusively. The findings of this study are supported by Esquivel where breastfeeding alone is interrupted when mothers experience mental health problems in the first month of labour (Esquivel et al., 2022). Mothers who breastfed partially (breast and bottle) had higher depression scores than those who breastfed only (Zubaran & Foresti, 2013). A study conducted by Adeyemo EO found 35.6% of mothers experienced postpartum depression, some of the factors that cause depression are multiparous mother status, Cesarean Section delivery, unhealthy mother after childbirth, and not breastfeeding the baby immediately after delivery (EO et al., 2020).

Mother's mental health must be prioritized since pregnancy. Handling desired and unwanted pregnancies is different, including the period during and after delivery. However, recent research by Annuril (2023) revealed that there is no significant difference in the anxiety felt by mothers, both in wanted or unwanted pregnancies (Annuril & Hermansyah, 2022).

Infants of moms with postpartum depression are fed less frequently and with less enthusiasm. However, the self-efficacy in feeding and the anticipation of positive feeding outcomes both of them had significant moderating roles in this correlation. That is, maternal depressive symptoms may affect a mother's beliefs about her ability to feed and her expectations about the outcomes of feeding, which then affect how responsive of the mother is in feeding her infant. The process of infant feeding problems is related to maternal depressive symptoms. This could mean that if the infant is having problems receiving food or growing, this may increase the risk of the mother experiencing depressive symptoms (Chen & Chien, 2022).

Breastfeeding status also has a direct relationship with depression risk. Besides, there are underlying factors such as the mother's occupation and education that have an effect on their decision to breastfeed or not. The most common psychological disorders identified in the case group were mixed depression and anxiety disorders (Assarian et al., 2014). Breastfeeding and mental health have the same reciprocal relationship, where when breastfeeding mothers will release the hormone oxyticcin and reduce or balance the hormone cortisol, thus the mother will be more confident in her ability to breastfeed. The balance of cortisol hormone that occurs during the breastfeeding process, is one of the factors that influence the breastfeeding process (Shiraishi et al., 2020).

CONCLUSION

Breastfeeding is a natural process experienced by women after childbirth. Mothers who are confident in their ability to breastfeed their babies are more likely to do so. Breastfeeding success is related to a mother's emotional health in besides to her self-assurance. While a woman is in the hospital, nurses should encourage exclusive breastfeeding by providing comprehensive information on the topic and ensuring the health of both mother and baby. The nurse assured the mother that they were able to breastfeed. In addition, nurses should regularly assess the mental health of breastfeeding mothers. If mental health problems are identified, a collaboration with a phychologist or psychiatrist can be intiated.

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