

Original Article

## *The Effect of Lactation Education on Self-Efficacy of Breastfeeding Mothers*

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### ABSTRACT

*Factors that affect the success of breastfeeding are the intentions for breastfeeding and the self-efficacy of the mother. Mothers with high breastfeeding intentions and self-efficacy are more likely to exclusively breastfeed in one week and four months after delivery than those with low self-efficacy. This study aims to determine the effect of lactation education on the self-efficacy of breastfeeding mothers. The study design was the quasi-experiment, pre-test, and post-test with a control group design. Samples of mothers (gestational age  $\geq 28-32$  weeks) were divided into 3 groups: 1) those who received lactation and modification modules ( $n = 21$ ), 2) a group that only received modification modules ( $n = 21$ ), and 3) a group that only received the maternal and child health books ( $n = 20$ ). Data were collected using questionnaires, self-efficacy measurements were performed before lactation education was performed, and after 6 months of age. The result showed at initial measurement results ( $t_0$ ), the median self-efficacy score of respondents was between 60-79, while the median self-efficacy score of the mother at the final measurement ( $t_1$ ) was between 60-88. The highest score increase occurred in group 1, then group 3. The median test result showed there was a difference in self-efficacy between the three groups ( $p = 0,002$ ). This finding means that lactation education with modification modules may increasing self-efficacy of breastfeeding mothers. This can be seen in group 1 which has the highest self-efficacy score and also has the highest percentage of exclusive breastfeeding percentage of all groups. Lactation education improves the self-efficacy of the mother and also increases the duration of exclusive breastfeeding. Future research can measure the mother's self-efficacy for the duration of breastfeeding.*

**Keywords:** Lactation Education, Self-Efficacy, Breastfeeding

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## INTRODUCTION

Breast milk is the preferred food for all infants and breastfeeding remains the simplest healthiest and least expensive feeding method

that fulfills the infant's needs<sup>1</sup>. Exclusive Breastfeeding contributes to the health and well-being of mothers; it helps to space children, reduces the risk of both ovarian and breast cancer<sup>2</sup> and is one of the most natural and best

forms of prevention medicine. The target of breastfeeding (0-6 months) in 2014 is 80%, but the implementation of exclusive breastfeeding is still a concern. The percentage of exclusive breastfeeding in infants 0-6 months in Indonesia in 2012 and 2017 was only 48.6% and 61.33%<sup>3</sup>.

The results of basic health research (Riskesdas), the percentage of early initiation of breastfeeding was less than 1 hour as much as 29.3% in 2010, and increased to 41.3% in 2013. Based on Indonesia Health Demographic Survey data, exclusive breastfeeding in Southeast Sulawesi Province was 32.45%<sup>3</sup>. According to Kendari City Health Office Report, the percentage of exclusive breastfeeding from 2010 to 2013 continued to decline, 52.2% (2010), 52.4% (2011), 51.53% (2012), and 40.07% (2013).

Factors that affect the success of breastfeeding are the intention for breastfeeding and the self-efficacy of the mother. According to<sup>4</sup>, mothers with high breastfeeding intentions and self-efficacy are more likely to exclusively breastfeed in one week and four months after delivery than those with low self-efficacy. Breastfeeding Self-efficacy (BSE) specifically influences breastfeeding success by providing the motivation and confidence to persevere through common challenges during breastfeeding such as difficulties at first breastfeeding, concerns about milk production, and when the mother returns to work. Breastfeeding Self-efficacy (BSE) is a predictor of breastfeeding that can potentially be modified<sup>5</sup>.

It is important to improve self-efficacy primarily after delivery because disclosure of difficulty in early breastfeeding is associated with the ineffectiveness of exclusive breastfeeding. There is a high prevalence of depressive symptoms (PDS) among new mothers, and most do not breastfeed for recommended time periods. Increased PDS screening during prenatal and postpartum visits and promotion of lactation support services may better address the high rates of PDS and suboptimal breastfeeding behavior<sup>6</sup>. These findings suggest that mothers who suffer from depressive symptoms may experience less confidence in their ability to breastfeed. This association may be particularly relevant for the purpose of screening procedures for depression and unsatisfactory breastfeeding during the postpartum period.

Research on health education shows that antenatal education and counseling are helpful in breastfeeding<sup>7</sup>. It is important to provide accurate prenatal education for mothers, families, and health workers in the long term, focusing on the benefits and methods of breastfeeding<sup>8</sup>. This study aims to determine the effect of lactation education on the mother's self-efficacy of breastfeeding mothers.

## METHOD

The study design was the quasi-experiment, pre-test, and post-test with a control group design. Located in Public Health Centers (Puskesmas) in Kendari (Puskesmas Poasia, Puskesmas Mekar and Puskesmas Puuwatu). The study was conducted from June 2015 to April 2016. The study population was pregnant women in the third trimester who were followed until they gave birth. Sampling by clustering was carried out in 3 working areas of the Community Health Centers which represented all Community Health Centers in Kendari City.

The number of samples was determined according to the sampling criteria, totaling 62 people. Samples of mothers (gestational age  $\geq 28-32$  weeks) were divided into 3 groups: 1) those who received lactation and modification modules (n = 21), 2) a group that only received modification modules (n = 21), and 3) a group that only received the maternal and child health books (n = 20).

The research variable that was measured was the self-efficacy of pregnant and breastfeeding women. The initial measurement was carried out before the lactation education intervention was given (during pregnancy) and the second measurement after the intervention was completed (after the mother gave birth, and after 6 months of age).

Data were collected using questionnaires, measuring self-efficacy uses a questionnaire which consists of 20 closed-ended questions with 5 alternative answers, namely not sure, a little sure, quite sure, very sure and really sure. Assessment is supportive (favorable) is given a value of 1-5.

This study received ethical approval from the Hasanuddin University Health Research Ethics Committee with No. 1659/H4.8.4.5.3.1/PP36-KOMETIK/2015.

## RESULTS

The characteristics of the respondents are shown in Table 1. Based on the age group, most respondents were aged 20-35 years, namely 76.2% in groups 1 and 2, while in group 3 (80%). Most of the mothers had higher education, namely 76.2% in group 1, 81% in group 2, and 80% in group 3. Generally, the respondents did not work (Housewife), namely 90.5% in group 1, 85.7 in group 2, and 75 % in group 3. From the parity aspect, group 1 respondents have parity 1, namely 47.6%, and groups 2 and 3 generally have parity  $\geq 3$ , namely 42.9% and 45%. 1, 95.2% in group 2, and 95% in group 3. The results of the chi-square test obtained a value of  $p > 0.05$  which indicates the

characteristic conditions of the three research groups are homogeneous (table 1).

Self-efficacy is the belief that a mother can breastfeed her baby. If the mother has confidence, the mother will provide exclusive breastfeeding until the baby is 6 months old, without additional formula milk or other foods. The median self-efficacy score was measured at the beginning of the study (t0) and at the end of the study (t1), then it was calculated to determine changes in self-efficacy scores after receiving lactation education with the modification module assuming the self-efficacy score was the *fhi isomorph*. There are changes in self-efficacy scores in the first and second measurements which can be seen in table 2.

**Table 1. Characteristics of Respondents.**

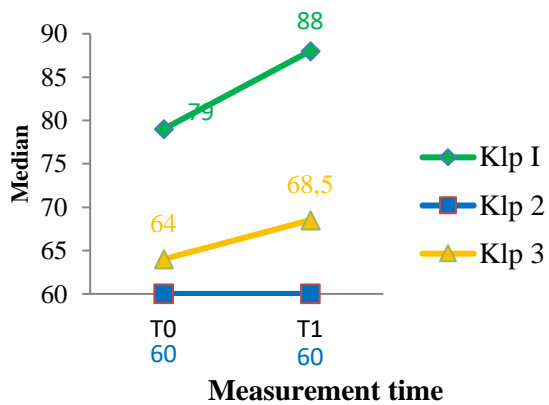
| Characteristics   | Group |      |       |      |       |      | p-value |
|-------------------|-------|------|-------|------|-------|------|---------|
|                   | 1     |      | 2     |      | 3     |      |         |
|                   | n(21) | %    | n(21) | %    | n(20) | %    |         |
| <b>Age</b>        |       |      |       |      |       |      |         |
| < 20              | 4     | 19,0 | 1     | 4,8  | 2     | 10,0 | 0,419   |
| 20 - 35           | 16    | 76,2 | 16    | 76,2 | 16    | 80,0 |         |
| $\geq 35$         | 1     | 4,8  | 4     | 19,0 | 2     | 10,0 |         |
| <b>Education</b>  |       |      |       |      |       |      |         |
| High              | 16    | 76,2 | 17    | 81,0 | 16    | 80,0 | 0,554   |
| Lower             | 5     | 23,8 | 4     | 19,0 | 4     | 20,0 |         |
| <b>Occupation</b> |       |      |       |      |       |      |         |
| Work              | 2     | 9,5  | 3     | 14,3 | 5     | 25,0 | 0,388   |
| Not Work          | 19    | 90,5 | 18    | 85,7 | 15    | 75,0 |         |
| <b>Parity</b>     |       |      |       |      |       |      |         |
| 1                 | 10    | 47,6 | 6     | 28,6 | 4     | 20,0 | 0,426   |
| 2                 | 5     | 23,8 | 6     | 28,6 | 7     | 35,0 |         |
| $\geq 3$          | 6     | 28,6 | 9     | 42,9 | 9     | 45,0 |         |

**Table 2. Changes in respondents' self-efficacy scores before and after the intervention based on intra-group**

| Self-efficacy         | Median |              |
|-----------------------|--------|--------------|
|                       | t0     | t1(p)        |
| <b>Group I (n=21)</b> | 79     | 88 (0,000)   |
| <b>Group 2 (n=21)</b> | 60     | 60 (0,005)   |
| <b>Group 3 (n=20)</b> | 64     | 68,5 (0,003) |

Source: Primary Data, p: uji Wilcoxon

Table 2 shows that there was an increase in self-efficacy scores at the last measurement (t1) for all groups. The results of statistical tests with Wilcoxon showed that the median self-efficacy score of the respondents was significant in all groups. The distribution of changes in the respondents' self-efficacy before and after the intervention can be seen in Figure 1.



**Figure 1. Graph of changes in the mother's self-efficacy score**

Figure 1 shows that at the beginning of measurement (t0), the median self-efficacy score of the respondents was between 60–79. At the end of the measurement, the median score (t1) of mothers' self-efficacy was between 60–88. The highest self-efficacy score increase was in group 1. The median self-efficacy score in group 2 did not change after the end measurement (t2).

The difference in self-efficacy scores ( $\Delta 1$ ) is obtained by self-efficacy scores at the end measurement (t1) minus the self-efficacy scores at the beginning measurement (t0). To compare the difference in self-efficacy scores between groups, the Median test was used. A comparison of different self-efficacy scores between research groups can be seen in table 3.

**Table 3. Differences in respondents' self-efficacy scores before and after the intervention between groups.**

| Self-efficacy  | Median     |                |
|----------------|------------|----------------|
|                | $\Delta 1$ | <i>p-value</i> |
| Group I (n=21) | 9          |                |
| Group 2 (n=21) | 0          | 0,002          |
| Group 3 (n=20) | 4.5        |                |

Source: Primary Data, *p* : Median Test

Median test results in table 3, it can be seen that there is a difference in self-efficacy between the three groups in terms of increasing scores, the highest increase is in group 1, then group 3. This shows that there is an effect of lactation education with modification modules on increasing self-efficacy scores of pregnant women and breastfeeding.

## DISCUSSION

The results of this study found that the

increase in maternal self-efficacy scores was significant at the end of measurement (t1) in all groups. The statistical test results showed that there was a difference between the self-efficacy of the three groups, in terms of increasing scores, the highest increase was in group 1, then group 3 (table 3). This shows that lactation education with modified modules increases the self-efficacy of breastfeeding mothers.

Breastfeeding self-efficacy is a mother's belief in her ability to breastfeed her baby and predict whether she will breastfeed or not, how much effort is made to breastfeed, the desire to improve mindsets or destroy mindsets and ways to overcome difficulties in breastfeeding<sup>9</sup>. There are 4 (four) main sources of information that affect breastfeeding, namely: work performance (previous breastfeeding experience), vicarious experience (seeing other people breastfeeding), verbal persuasion (husband and family support in breastfeeding), and physiological responses (fatigue, stress, and anxiety). Mothers' beliefs and intentions to breastfeed have also been cited as influencing factors in breastfeeding outcomes. The results showed that mothers with breastfeeding intentions and high self-efficacy (self-confidence) were more likely to exclusively breastfeed one week and four months after delivery than mothers with low self-efficacy<sup>4</sup>.

The results of research that are in line with this research are found that mother's self-efficacy was related to the duration of exclusive breastfeeding<sup>10</sup>. Mothers with low self-efficacy have a risk of exclusive breastfeeding <60 days 1.9 times compared to mothers with high self-efficacy. Findings from research<sup>11</sup> showed that breastfeeding experience, other people's experiences, verbal persuasion, and emotional arousal influence breastfeeding.

The issue of lack of self-confidence, where the mother is not sure of the adequacy of her milk or the mother has problems believing that she can successfully breastfeed, is the main obstacle to breastfeeding<sup>12</sup> stated. So that self-efficacy is important to increase, especially after giving birth because the disclosure of difficulties in early breastfeeding is related to the ineffectiveness of exclusive breastfeeding.

During the implementation of the lactation education intervention, mothers did not only listen to material from midwives or tutors, but they interacted with each other and shared experiences between participants regarding how to breastfeed, myths about

breastfeeding, and problems they had experienced while breastfeeding, such as sore nipples, babies not wanting to breastfeed, breastfeeding and others. So that there is an exchange of information, especially for mothers who have not had a history of breastfeeding before (primipara) and multiparous mothers get even more information because sometimes their previous experience in terms of breastfeeding is still not quite right.

The exchange of information among mothers included the habit of breastfeeding only on one breast, or taking turns breastfeeding but the breasts did not empty. In addition, the practice of weaning is too early because the baby often cries, and the mother's perception is that her milk is lacking. A baby who often cries will cause tension for the family, so family members often diagnose that the baby is hungry so they feel sure the baby needs to be given additional formula milk or complementary foods.

Pregnant women who have good knowledge about pregnancy and breastfeeding make their quality of life better by accepting their pregnancy and the birth of their baby<sup>13</sup>. Providing information to classes of pregnant women will also increase the ability of pregnant women so they can reduce pain, anxiety, stress, fear, and depression during labor and postpartum<sup>14,15,16</sup>. Mothers who experience increased symptoms of postpartum depression have a higher risk of stopping exclusive breastfeeding compared to mothers who do not experience symptoms of postpartum depression. There is a high prevalence of depressive symptoms (PDS) among new mothers, and most do not breastfeed for recommended time periods. Increased PDS screening during prenatal and postpartum visits and promotion of lactation support services may better address the high rates of PDS and suboptimal breastfeeding behavior<sup>6</sup>

Various studies have shown that breastfeeding self-efficacy is an important factor related to initiation, duration, and exclusive breastfeeding<sup>17</sup>. The results of research found that there was a close relationship between social support, knowledge, attitudes, and self-efficacy with breastfeeding behavior<sup>18</sup>. Other studies have found that mothers who have high breastfeeding self-efficacy tend to continue breastfeeding for 4 months<sup>4</sup>. Mothers with low breastfeeding self-efficacy are proven to tend to use

alternative techniques to breastfeed their babies when facing problems during breastfeeding<sup>19</sup>.

The results of these studies have opened up a new discourse that breastfeeding self-efficacy is thought to be closely related to successful breastfeeding practices<sup>20</sup>. Based on the research results obtained, researchers argue that self-efficacy is the key to the success of breastfeeding mothers. Mothers are actors in the practice of breastfeeding, so it is very important to develop self-efficacy from the beginning of pregnancy. Mothers who have high self-efficacy, of course, will prepare everything since pregnancy related to the breastfeeding process that will be experienced during the first 6 months until the baby is 2 years old. If a mother has the self-confidence to breastfeed, then she will go through breastfeeding more relaxed and not be a burden. However, if the mother's self-efficacy is low, the tendency to replace breast milk with formula is even greater. This is due to the assumption that breastfeeding will burden the mother and not be free to do activities. It is necessary to optimize the implementation of classes for pregnant women to increase knowledge and self-efficacy of mothers so that mothers can provide exclusive breastfeeding for 0-6 months and continue breastfeeding as an effort to prevent the risk of stunting in infants.

## CONCLUSION

The Conclusion is the increase in self-efficacy scores was highest in the group that received lactation education and modification modules which indicated that mothers were more confident about exclusive breastfeeding. It is suggested to midwives or health workers provide lactation education to pregnant and lactating women by continuously using modules to increase the self-efficacy of pregnant and lactating women. Midwives also conduct breastfeeding counseling to help mothers who face problems with breastfeeding. Future research can measure the mother's self-efficacy for the duration of breastfeeding.

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## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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