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THE INFLUENCE OF ATTACHMENT EDUCATION AND INFANT POSITIONING ON BREASTFEEDING SUCCESS

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ABSTRACT

Background: Breastfeeding is essential for the physical and emotional health of both mother and baby. Proper breastfeeding techniques, including correct position and attachment, enhance bonding and provide optimal nutrition for the baby. Incorrect techniques can lead to issues like breast pain, sore nipples, and reduced milk production. **Objective:** to determine the effect of education on attachment and position of the baby on the success of breastfeeding. **Method:** The research used a pre-experimental approach with the *One-Group Pretest-Posttest Design.* The population of mothers who had just given birth at PKU Muhammadiyah Hospital Surakarta. The number of samples was 21 breastfeeding mothers using *purposive sampling*. The breastfeeding success instrument used the LATCH score *checklist* and educational media used props (phantoms and leaflets). Data Analysis used *the Wilcoxon Signed Rank Test.* **Results**: showed that most mothers were aged 26-35 years, had a high school education and were working mothers. Before being given education, most mothers after giving had a successful breastfeeding process that was less effective. After being given health education, it was known that most mothers had a successful breastfeeding process that was effective. That education on the position and attachment of the baby affected the success of the breastfeeding process p-value 0,000. **Conclusion**: There is an effect of education on the position and attachment on the success of breastfeeding.

Keywords: attachment and position: education; infant; successful breastfeeding

INTRODUCTION

Breastfeeding is a natural process, almost all mothers can breastfeed their babies without the help of others. However, in reality, not all mothers can breastfeed with the correct breastfeeding technique (Faiqah and Hamidiyanti, 2021) . Some problems that arise when mothers breastfeed are sore nipples when breastfeeding, swollen breasts, mastitis, yeast infections, one breast is larger than the other when breastfeeding, too little breast milk production, too much breast milk production, pain when breastfeeding, mother's breast condition (flat nipples) (Mintarsih *et al.* , 2023) . Insufficient breast milk syndrome, low motivation/awareness of mothers in providing exclusive breastfeeding, lack of support at work. Obstacles for mothers in lactation management, namely: lack of knowledge about lactation management, less than optimal socialization from health workers, perceived lack of support from family/caregivers. This problem is the main cause of mothers not being able to provide breast milk because mothers work, because breast milk production decreases or becomes small (Putri and Saripah, 2021)

The consequences if the problem is not addressed are causing wounds and pain in the nipples and breasts. The breasts swell because breast milk cannot be removed effectively. The

baby feels dissatisfied and wants to breastfeed longer. The baby will get very little breast milk, so the baby refuses to breastfeed (frustrated) and the baby's weight does not increase and gradually the breast milk will dry up (Yuniarti, Purwaningsih and Sulastri, 2023) .

Some problems that arise during breastfeeding can be prevented by helping mothers adjust their baby's position (attachment position), The correct position of the mother when breastfeeding in the first days after giving birth. This can be done in the form of education or breastfeeding counseling in the first days after giving birth by health workers, attending pregnancy classes or visiting a lactation clinic. In educational activities, information will be provided about breast milk, its content and benefits for mothers and babies, good breastfeeding positions, correct attachment positions, problems that may arise when breastfeeding and how to overcome them. In counseling activities, it will be reviewed how the mother is currently breastfeeding, what problems arise and solutions/resolutions will be provided on how the mother can overcome them (Agrina *et al.* , 2019) .

Education is a form of education regarding knowledge and skills for patients which aims to change behavior and increase patient understanding of their condition. (Mostafa, Salem and Badr, 2019) . In postpartum mothers, when the baby is *rooming in* with the mother, of course, anamnesis and observation of the breastfeeding process will be carried out. If there are obstacles in the breastfeeding process, education will be carried out by officers to achieve the success of the breastfeeding process.

Previous research results found that there was an effect of breastfeeding education on infant attachment in postpartum mothers (Hasnani and Atoy, 2020) . Good attachment is very important in the breastfeeding process, because it can affect the effectiveness of breastfeeding, the health of the baby, and the comfort of the mother. Proper attachment includes the correct position of the baby when breastfeeding, the baby's mouth wide open, and the baby's lips that close well around the areola, allowing optimal milk flow.

One of the factors that influences baby attachment is the mother's knowledge of breastfeeding techniques. Based on the results of the study, mothers who receive education about breastfeeding techniques before or after giving birth tend to be better able to overcome challenges in the breastfeeding process and improve baby attachment. Breastfeeding education can be provided in the form of direct training, antenatal classes, or personal counseling regarding the importance of correct positioning and attachment. Other research results show a significant effect of BEST *(Breastfeeding self-efficacy treatment)* on breastfeeding attachment techniques. BEST is an educational media that uses modules and audiovisuals. Developing *a theory of self-efficacy* in breastfeeding, namely performance achievement, other people's experiences, verbal persuasion, and physiological responses to increase maternal knowledge, breastfeeding attachment techniques and ultimately succeed in providing exclusive breastfeeding (Ampu, 2021)

Good breastfeeding skills include the correct breastfeeding position or attachment of the baby to the breast. The breastfeeding position should be as comfortable as possible, either lying down or sitting. An inappropriate position will result in poor attachment. The basic breastfeeding position consists of the mother's body position, the baby's body position, and the position of the baby's mouth and the mother's breast (attachment*)*. The mother's body position while breastfeeding can be sitting, lying on her back, or lying on her side (Saputra, Aisyah and Novianti, 2021) . One of the most popular assessment instruments is the LATCH Score *(latch, audible swallowing, type of nipple, comfort and hold)* which is most widely used because of its practicality. (Altuntas *et al,* 2014). The LATCH score is a systematic and practical assessment tool to obtain reliable and valid data on the lactation process per individual. The LATCH score can be used as a predictor of lactation success in

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predicting the duration of exclusive breastfeeding *after* delivery (Hanifa and Purwaningsih, 2023) .

The educational media used can be in the form of leaflets or teaching aids or audiovisuals. Leaflets are the cheapest and easiest educational media to obtain at health service locations. So it is hoped that learning during *rooming in* and providing leaflets can overcome obstacles that arise during the breastfeeding process. The use of leaflet media in health promotion is effective in increasing knowledge about preterm labor. Proper breastfeeding techniques, including correct position and attachment, enhance bonding and provide optimal nutrition for the baby (Yuniarti, Purwaningsih and Sulastri, 2023) This study aimed to determine the effect of education on attachment and position of the baby on the success of breastfeeding.

METHOD

This research design uses *pre-experimental, One-Group Pretest-Posttest Design.* The purpose of this study was to determine the effect of attachment education and baby position on the breastfeeding process in the Maternity Inpatient Room of PKU Muhammadiyah Hospital, Surakarta. This study was conducted for 3 months from September 8 to December 2021 after obtaining an ethical certificate from PKU Muhammadiyah Hospital, Surakarta number 009/KEPK/RS.PKU/XI/2021.

The population in this study were primiparous mothers who were treated in the Maternity Inpatient Room of PKU Muhammadiyah Hospital, Surakarta. The sampling technique used in this study was purposive sampling with inclusion criteria: Primiparous mothers who were willing to be respondents, primiparous mothers with spontaneous labor on day zero, primiparous mothers who were willing to breastfeed their babies, primiparous mothers who underwent combined treatment. Exclusion criteria included: primiparous mothers who had conditions that inhibited breastfeeding (breast milk engorgement and mastitis), primiparous mothers with babies who had contraindications for breastfeeding (babies with galactosemia, cleft lip and cleft palate).

Education was conducted using lecture and demonstration methods using baby phantom media and leaflets, while the breastfeeding success instrument used the LATCH score checklist. Univariate data analysis used frequency distribution while bivariate data analysis used Wilcoxon test.

RESULTS

Table 1 Frequency Distribution of Respondent Characteristics Based on Maternal Age

Characteristics	Frequency (f)	Percentage (%)
Mother's Age		
16-25 years	8	38.1%
26-35 years	12	57.1%
36-45 years	1	4.8%
Education		
Junior High School	5	23.8%
Senior High School	12	57.1%
College	4	19.1%
Job		
Work	13	61.9%
Doesn't Work	8	38.1
Total	21	

Based on table 1, it can be seen that of the total of 21 breastfeeding mothers, the majority of respondents were aged 26-35 years, namely 12 people (57.1%) and the least were aged 36-45 years, namely 1 person (4.8%).

Based on education level, most respondents had high school education, namely 12 people (57.1%) and the least had junior high school education, namely 4 people (19.1%). Based on employment status, most respondents were working (61.9%).

a. Overview of the Breastfeeding Process Before Being Given Health Education

Table 2. Success of Breastfeeding Process Before Being Given Health Education

Success of Breastfeeding Process	Frequency	Percentage	Min	Max	Mean	Std. Dev.
Ineffective	6	28.6%	3	8	5.35	1,498
Less Effective	14	66.7%				
Effective	1	4.7%				
Total	21	100.0%				

Based on the table 2, it is known that before being given health education in the form of leaflets containing about breast milk, breastfeeding positions, correct attachment positions and breastfeeding techniques, most mothers had success including less effective 14 people (66.7%). Statistically, they have a minimum LATCH score of 3, a maximum score of 8 with an average (*mean*) score of 5.35 and a standard deviation of 1.498 .

b. Overview of the Breastfeeding Process After Being Given Health Education

Table 3 of Success of Breastfeeding Process Before and After Health Education

Success of Breastfeeding Process	Frequency	Percentage	Min	Max	Mean	Std. Dev.
Less Effective	7	33.3%	6	9	7.82	1,074
Effective	14	66.7%				
Total	21	100.0%				

Based on the table 3, it is known that after being given health education in the form of leaflets containing information about breast milk, breastfeeding positions, correct attachment positions and breastfeeding techniques, most mothers had success including effective breastfeeding of 10 people (58.8%). Statistically, they had a minimum LATCH score of 6, a maximum score of 9 with an average (*mean*) score of 7.82 and a standard deviation of 1.074.

c. Normality Test Results

Table 4. Results of Normality Test using Shapiro-Wilk

	Shapiro Wilk		
	Statistics	df	Sig.
Pre	.933	17	.246
Post	.856	17	.013

The results of the normality test obtained a pretest significance value of 0.246 > 0.05 and a posttest of 0.013 < 0.05. This can be interpreted that the *pretest data* is said to be normal while the *posttest data* is said to have an abnormal data distribution. Therefore, further hypothesis testing uses *nonparametric Wilcoxon signed rank test analysis* at the 95% level.

d. The influence of attachment and position of the baby on breastfeeding success

Table 5. Analysis of the effectiveness of health education on the success of the breastfeeding process

Health Education (Leaflet)	Success of Breastfeeding Process			Mean ± Std Dev	*p value*
	Ineffective	Less effective	Effective		
Pre-test	6 (28.6%)	14 (66.7%)	1 (4.7%)	5.35 ±1.498	0,000
Post test	0 (0.0%)	7 (33.3%)	10 (66.7%)	7.82 ±1.074	

Based on the table 5, it is known that before being given health education using leaflets, the majority had a successful breastfeeding process that was less effective (82.4%) with an average score of 5.35 and after being given health education using leaflets, the majority had a successful breastfeeding process that was effective (58.8%) with an average score that increased to 7.82.

The results of the bivariate analysis using the *nonparametric Wilcoxon signed rank test analysis* obtained a significance value (*p value*) of

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0.000 < 0.05, then Ho is rejected and Ha is accepted. This can be interpreted that providing health education with leaflet media is effective in increasing the success of the breastfeeding process for mothers in labor.

DISCUSSION

Success of Breastfeeding Process Before Health Education Given to Mothers Giving Birth

Most mothers lacked effective breastfeeding techniques before receiving education via leaflet media, with 82.4% experiencing less effective breastfeeding (Sulastri, Heni Purwaningsih, and Nurul Fajriyah, 2022). Many had no prior experience, as most pregnancies ended in miscarriage, leading to low breastfeeding success rates and risks of infants not receiving exclusive breastfeeding at 0–6 months. Common issues include delayed milk production, insufficient perceived supply, work demands, and early cessation of breastfeeding due to poor techniques or support (Ampu, 2021).

Breastfeeding success depends on maternal knowledge, family support, and health worker assistance (Mostafa, Salem, and Badr, 2019). Proper techniques, influenced by age, education, and experience, prevent problems like sore nipples, mastitis, and reduced milk production (Retnowati, 2019; Wagner et al., 2019). Early breastfeeding initiation benefits from newborn reflexes, such as recognizing the mother's areola, and is supported by family and health workers (Nurhidayah, 2023; Rosa, Estiani, and Wiranti, 2024).

However, poor health education and lack of practical guidance often lead to formula feeding and inadequate infant nutrition (Sunardi, 2020). Effective health education can improve mothers' breastfeeding knowledge and prevent common issues, such as insufficient milk supply and breastfeeding discomfort (Hasnani, 2020). Providing reliable information and direct application of breastfeeding techniques is essential for successful practices (Putri and Saripah, 2021; Agrina et al., 2019).

Success of Breastfeeding Process After Health Education is Given to Mothers Who Have Given Birth

After receiving health education via leaflet media, 58.8% of respondents demonstrated effective breastfeeding processes (Table 4.5). This shows that health education about breastfeeding positions, correct attachment, and techniques significantly enhances mothers' success in breastfeeding, especially for first-time mothers, providing a foundation for exclusive breastfeeding in the future (Mostafa, Salem, and Badr, 2019). Leaflets simplify understanding and improve maternal knowledge, as they facilitate the delivery of essential information.

Yuniarti, Purwaningsih, and Sulastri (2023) emphasize that multimedia and face-to-face education effectively enhance knowledge and attitudes about breastfeeding. Similarly, Faiqah and Hamidiyanti (2021) found that health education influences behavior change, especially in breastfeeding techniques, improving both maternal and infant outcomes. Proper breastfeeding positions and techniques, such as ensuring the baby is aligned with the mother's stomach and the areola is mostly inside the baby's mouth, are critical (Hanifa and Purwaningsih, 2023).

Health education during antenatal care is vital to address lactation issues and promote breastfeeding success. Efforts like motivating mothers, establishing lactation counselors, and creating supportive regulations are crucial (Putri and Saripah, 2020). Leaflets, as highlighted by Ampu (2021), effectively convey information about lactation management, including breastfeeding benefits, storing, and serving expressed milk, particularly for working mothers.

The Effect of Attachment and Position Education on Breastfeeding Success

Before health education using leaflet media, 82.4% of mothers experienced less effective breastfeeding processes, with an average score of 5.35. After the intervention, 58.8% demonstrated effective breastfeeding processes, with the average score rising to 7.82. The Wilcoxon signed-rank test showed a significant p-value of 0.000 (<0.05), indicating that leaflet-based health education effectively enhances breastfeeding success. This finding aligns with Agrina et al. (2018), who emphasize the importance of health education in improving breastfeeding skills, and Mostafa et al. (2019), who highlight its effectiveness in increasing maternal knowledge and skills.

Similarly, Faiqah and Hamidiyanti (2021) found that health education positively impacts breastfeeding techniques, improving maternal knowledge and behavior. Proper breastfeeding techniques directly influence breastfeeding success, as maternal ignorance of correct methods can lead to failures. The findings also support Yuniarti, Purwaningsih, and Sulastri (2023), who demonstrated that leaflet-based education enhances maternal knowledge of lactation management. This underscores the need for health centers to develop attractive, efficient leaflets to promote lactation management knowledge effectively. Situmorang et al. (2020) emphasize the role of family-based education in supporting early breastfeeding initiation, highlighting the importance of improving maternal and familial knowledge and attitudes. Saputra, Aisyah, and Novianti (2021) also reported significant improvements in breastfeeding behavior among postpartum mothers following education, reinforcing the importance of such interventions.

The findings of this study indicate that education on attachment and infant positioning has a significant impact on breastfeeding success. Therefore, healthcare professionals, particularly nurses and midwives, should enhance education for breastfeeding mothers regarding proper techniques to optimize the breastfeeding process. This educational program can be integrated into antenatal and postnatal services to improve breastfeeding success rates and support maternal and infant health. Additionally, the development of publication media in hospitals is also necessary to enhance breastfeeding mothers' literacy. This limitation study did not include psychological screening of breastfeeding mothers, even though maternal readiness in infant care may influence the effectiveness of the education provided. Furthermore, social support (from husbands and families) was not assessed in this study.

CONCLUSION

There is an effect of education on the position and attachment on the success of breastfeeding. Future research should consider psychological factors, family support, and environmental conditions in assessing breastfeeding success. The development of digital educational modules should be prioritized to enhance the accessibility and effectiveness of breastfeeding education.

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