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The Effect of Emotional Demonstration Education on Knowledge, Attitudes and Breastfeeding Intentions to Pregnant Women in the Cikuya Community Health Centre Area

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ABSTRACT

Exclusive breastfeeding is the practice of feeding infants from 0–6 months without giving any food or drink other than breast milk. Nutrition education techniques that use the emotional demonstration method are thought to be able to overcome low knowledge, attitudes, and intentions towards exclusive breastfeeding. This study aimed to determine the effect of emotional demonstration education on knowledge, attitudes and intentions to provide exclusive breastfeeding to pregnant women. This type of quantitative research used a quasi-experimental design with a pre-test and post-test. The research was conducted in Solear Village, the Cikuya Health Centre area, Solear District, Tangerang Regency, Banten Province. The research was conducted in May–July 2023, with a sample of 38 respondents. The type of statistical analysis used in this research was the Paired Sample T-test. The results of this study show that there was a difference in the average knowledge, attitude, and intention to provide exclusive breastfeeding before and after the emo demonstration, with a significance level of <0.05. The characteristics of the respondents showed that the majority were in their early adulthood (42.5%), were mostly junior high school students (37.5%), and that the majority of respondents' occupations were as housewives (72.5%). This research concludes that after being given intervention in the form of education using the emo demo method, it can increase the knowledge, attitudes and intentions of pregnant women towards exclusive breastfeeding.

Highlights:

- The Emo-Demo (Emotional Demonstration) method significantly improves pregnant women's knowledge, attitudes, and intentions regarding exclusive breastfeeding.
- The intervention effectively narrowed the score gap among participants, ensuring a more uniform and positive perspective on breastfeeding.
- The study underscores the potential of emotion-based educational strategies as a superior alternative to traditional counselling for maternal health programs.

INTRODUCTION

The foundation of a child's health and development begins during pregnancy, where the nutritional status and psychological readiness of expectant mothers play a vital role (1–4). During this period, pregnant women must gain comprehensive knowledge and build a positive attitude toward infant care to ensure a successful transition after birth. By fostering strong intentions early on, mothers are better prepared to meet their infants' biological needs immediately. As a result, exclusive breastfeeding is the best effort to prevent stunting in babies. Exclusive breastfeeding is giving breast milk to infants aged 0–6 without giving food or drink, and continuing until the age of 2 years with MPASI (Complementary Food for Breast Milk)(5,6). Giving babies exclusive breast milk is the best way to feed them. In 2019, national coverage of breastfeeding for babies reached 67.74%. In 2020, exclusive breastfeeding decreased to 60.1%. Even so, this figure has reached the 2020 Strategic Plan target, namely the 40% achievement target. Another review of the coverage of exclusive breastfeeding in 2021 was carried out, which can be seen in the SSGI (Indonesian Nutritional Status Survey) and showed the results that around 48% of babies aged <6 months still do not receive exclusive breastfeeding, which means that the achievement of exclusive breastfeeding in 2021 is only reached 52% (7).

Breast milk contains various benefits that babies really need in the first 6 months of life, such as nutritional, immunological, psychological, intellectual, and neurological benefits. If a baby is not given exclusive breast milk, it will have a negative impact on the growth process, both physically and psychologically (8–12). Previous research states that babies tend to be more at risk of dying if they do not receive exclusive breast milk. This can occur due to low knowledge and poor attitudes in mothers, so they are unable to apply exclusive breastfeeding to their babies. Knowledge and attitudes are very important in providing exclusive breastfeeding. Mothers with good knowledge show positive attitudes and are prepared to provide exclusive breastfeeding, thereby creating high-quality breastfeeding intentions and meeting the baby's nutritional needs (13,14).

Nutrition education can increase a person's knowledge, fostering a positive attitude to implement the expected pattern. Emotional Demonstration technique increased motivation, suggesting this technique could be used to increase exclusive breastfeeding (13,14). The emotional demonstration method is an activity with demonstration techniques involving emotional strength. Based on the theory of Behaviour Centred Design, Emotional Demonstration (Emo Demo) is a public education method developed by the London School of Hygiene and Tropical Medicine and redeveloped by the Global Alliance for Improved Nutrition (GAIN) to educate the public on community nutrition and welfare. Moreover, it was first applied in 2014.

Previous research showed that before being given the Emo Demo, it was found that almost all respondents had poor knowledge about exclusive breastfeeding. After being given the Emo Demo, the results showed that almost all respondents had good knowledge of exclusive breastfeeding. This shows that the emo demo technique, which is carried out with games and demonstration illustrations, can provide information about exclusive breastfeeding that attracts attention and emotionally touches the mother, so that the mother's knowledge increases (14–19). In a survey conducted in Solear Village, Cikuya Health Centre Area, Solear District, Tangerang Regency, the coverage of exclusive breastfeeding only reached 39.3%, and this still has not reached the target.

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METHODS

Research Design and Setting

This research was quantitative, using a quasi-experimental design with a pre-post test approach. The location of this research was carried out in Solear Village, Cikuya Health Centre area, Solear District, Tangerang Regency, Banten Province. The research was carried out in May–July 2023.

Participants and Sampling

The sampling technique for this research uses Non-Probability Sampling and Purposive Sampling. In calculating the sample for this research, the Lemeshow method sampling technique was used. The following is the sample size calculation formula :

$$n = \frac{N.Z^2.\ P\ .\ q)}{d^2.(N-1)+Z^2.\ P\ .\ q}$$
$$= \frac{63\ .\ (1{,}92)^2.\ 0{,}5\ .\ 0{,}5)}{(0{,}1)^2.(63-1)+(1{,}92)^2.\ 0{,}5\ .\ 0{,}5}$$
$$= \frac{57{,}96}{1{,}54} = 37{,}6$$

Figure 1. Sample Calculation

In the above calculation, the sample consisted of 38 respondents.

Data Collection and Analysis

The intervention media used in this research are the Emo Demo Module, provided by the Ministry of Health as a guide for implementing emotional demonstration education on exclusive breastfeeding, and the props used according to the module's instructions. This research follows a three-stage flow: the initial stage, the implementation stage, and the final stage. The initial stage in this research flow is determining the research sample, socialising with regional cadres, and collecting data from respondents (with the help of regional cadres). Then, the post-test (administered after the education was implemented at the end of the meeting) and the final stage, namely, observation (processing and presenting data). The statistical analysis used in this research is the Paired Sample T-test with a 95% confidence level (α = 0.05).

RESULTS

Characteristics of respondents

Characteristics (age, education level and occupation) of respondents. Based on Table 1 above, the respondents' ages are mostly in the early adulthood age group (26 - 35 years), with 17 people (42.5%). Regarding respondents' education level, it can be seen that the majority have a junior high school education, namely 15 people (37.5%). In contrast, at the respondent's level of employment, the majority were housewives, with 29 respondents (72%).

Table 1. Distribution of Characteristics of Pregnant Women

Respondent Characteristics	n	%
Respondent's Age		
17–25 years	11	27,5
26–35 years	17	42,5
36–45 years	12	30
Level Of Education		
Elementary School	9	22,5
Junior High School	15	37,5
Senior High School	14	35
College	2	5
Respondent's Occupation		
Private Sector Employee	3	7,5
Housewife	29	72,5
Enterpreneur/trader	7	17,5
Etc.	1	2,5

Description of Knowledge, Attitudes and Intentions Before and After Providing Intervention

Table 2 showed a descriptive analysis of participants' knowledge, attitudes, and intentions regarding exclusive breastfeeding before and after the intervention, categorised by mean, SD and minimum-maximum range.

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Prior to the intervention, the average knowledge score was 7±1.5 with a wide range of 4–10; however, following the educational program, the mean increased to 9.97± 0.2, with the minimum score rising from 4 to 9, indicating a more uniform understanding among participants. Similarly, the baseline attitude score improved from 6.9±1.8 (range 4–10) to 9.35±0.7, where the shift in the minimum score from 4 to 7 suggests a positive transformation in the participants' overall perspective. The most dramatic improvement was observed in breastfeeding intentions, which rose from a baseline of 6.62±2.2 (with scores as low as 0) to a post-intervention mean of 9.42±0.6 and a minimum score of 8. Overall, these descriptive data reveal a consistent upward trend across all variables. The substantial increase in mean scores, coupled with a significant rise in minimum values and a lower SD after the intervention, demonstrates that the educational program effectively enhanced and equalised knowledge, attitudes, and intentions among the pregnant women in the study group.

Table 2. Description of Knowledge, Attitudes and Intentions Before and After Providing Intervention

Variables	Mean ± SD	Min - Max
Knowledge Of Pregnant Women		
Before	7 ± 1.5	4 – 10
After	9.97 ± 0,2	9 – 10
Attitude Of Pregnant Women		
Before	6.9 ± 1.8	4 – 10
After	935 ± 0.7	7 – 10
Breastfeeding Intentions		
Before	6.62 ± 2.2	0 – 10
After	9.42 ± 0.6	8 – 10

Differences in knowledge, attitudes, and breastfeeding intentions of pregnant women before and after intervention

Table 3 shows the comparative analysis of participants' scores before and after the EMO DEMO intervention across three primary variables. The results indicate a significant increase in knowledge, from a pre-test mean of 7 to a post-test mean of 9.97. Similarly, participants' attitudes shifted positively, rising from 6.9 to 9.3. Breastfeeding intentions also showed substantial improvement, with scores rising from 6.6 at baseline to 9.4 following the intervention. Statistically, all three variables, knowledge, attitudes, and intentions, yielded a p-value of 0.001, which is below the significance threshold of 0.05. These findings confirm that the EMO DEMO intervention significantly improved the pregnant women's understanding, perspectives, and commitment toward exclusive breastfeeding.

Table 3. Differences before and after EMO DEMO intervention

Variables	Pre- test	Post-test	*p*
Knowledge	7 ± 1.5	9.97 ± 0.1	0.001
Attitudes	6.9 ± 1.7	9.3 ± 0.6	0.001
intentions	6.6 ± 2.2	9.4 ± 0.3	0.001

DISCUSSION

The results of the research showed a difference between pre-test and post-test scores on the knowledge, attitude, and breastfeeding attention variables; this indicates that the intervention, given for three days in a relatively short time, will have a positive impact on efforts to increase a person's knowledge. Providing education is one of the most effective ways to improve and increase a person's knowledge, attitudes, and behaviour for the better (17,20,21). Changes in knowledge after being given education are likely to support changes in the mother's mindset and parenting style towards her baby. Mothers can be wiser in choosing good and bad things for their babies.

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This is in line with previous research, such as that by Fadhilah *et al.* (2020), which found a significant change in teenage mothers' exclusive breastfeeding practices between before and after education ($p<0.05$) using leaflets, booklets, and videos (22). Apart from that, other research conducted found that there was a change in nutritional knowledge and breast milk knowledge between before and after education, with results for nutritional knowledge and breast milk knowledge, with the education carried out in the form of planning baby meals. After several studies by previous researchers, including researchers, on average, education led to significant changes.

The respondent's attitude towards exclusive breastfeeding is still very poor, and they still hold the firm opinion that babies will not be enough if they are only given breast milk, even though the baby is still very young or <6 months. The best food for babies is breast milk, which contains white blood cells, proteins and immune substances that are suitable for babies. Breast milk is the baby's main source of nutrition after birth, so the baby does not yet need food or other fluids to meet his nutritional needs (8,9,23,24).

In question 7, many people answered "Agree" to the question, "I give breast milk and formula milk as a distraction while I work"; this is an unwise attitude. Giving milk to babies aged 0-6 must be done exclusively. Breastfeeding babies exclusively, without any food or drink, is a good and correct way to feed them, from birth until the baby is 6 months old, and continuing until the age of 24 month accompanied by complementary foods for breast milk (MP-ASI). A mother's job is not an obstacle to giving exclusive breast milk to her baby. Another solution for working mothers who still want to provide the best breast milk is to use a breast pump.

Career women or working mothers often use this method. This is the most effective and best middle ground for mother and baby. Apart from that, many respondents stated "Agree" with the question "I give additional food such as bananas or other foods to my baby who is <6 months old so that the baby feels full and not fussy." Giving food other than breast milk to babies aged <6 months is a reflection of bad behaviour because it can cause digestive disorders for the baby. Food or drinks other than breast milk can be given to babies aged 6 - 24 months, as their needs increase beyond breast milk. Giving food to a baby too early can cause various digestive problems for the baby, such as diarrhoea, vomiting, allergies and also constipation. Changes in the mother's attitude cannot be seen directly, but this can be illustrated from the results of the post-test carried out after providing the intervention. This method can at least detect changes in the mother's response and attitude towards exclusive breastfeeding, and the mother's attitude is quite good.

These results indicate that providing educational classes using the emotional demonstration method will be highly influential and will show a significant difference in changes in mothers' attitudes towards breastfeeding. Educational classes are indeed an effective way to improve mothers' poor attitudes towards exclusive breastfeeding, as in a study by Futri et al. (2025), a significant difference was found in mothers' attitudes towards exclusive breastfeeding before and after receiving health education through leaflets (25). Another study conducted by Nur Fitria et al. (2023) showed that attitudes changed before and after counselling to empower pregnant women to breastfeed exclusively. Statements from previous research and researchers indicate that, on average, educational methods result in significant changes in attitudes (14,26).

The results of the research on the variable intention to breastfeed among pregnant women in the Cikuya Community Health Centre Area, Solear District, Tangerang Regency, had the lowest weighted value. The

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intention to give exclusive breastfeeding is still not good, because respondents still reflect a poor attitude towards giving exclusive breastfeeding to their babies. Respondents still give food or drinks other than breast milk to babies aged <6 months. After receiving an educational class on exclusive breastfeeding, there was a visible change in the answers to the post-test administered by the researcher. Respondents' breastfeeding intentions improved.

According to the discussion above, this change occurs due to factors that support the success of meaningful changes in respondents' knowledge, attitudes, and intentions. These factors include the provision of education, which is carried out intimately by practising directly with the respondent and also involving the respondent's emotions, so that the information provided is more easily absorbed because there is a picture when practising the educational materials, the respondent gets the freedom to ask questions and have opinions and is explained clearly. The information given to respondents was in accordance with what the respondents needed, where the respondents in this study were pregnant women and the information provided also discussed pregnancy, namely exclusive breastfeeding, so that when providing education, the respondents were quite enthusiastic and were able to listen and absorb the information presented directly. Moreover, respondents can be helped to answer post-test questions given by researchers after providing education.

This positive finding indicates that education using the emotional demonstration method of exclusive breastfeeding, provided at the Cikuya Community Health Centre Area, Solear District, Tangerang Regency, can be used to improve mothers' knowledge, attitudes, and intentions in a more positive direction.

CONCLUSION

This research concluded that education using the Emo-Demo method significantly increases the knowledge, attitudes, and intentions of pregnant women toward exclusive breastfeeding. For future research, it is recommended to conduct longitudinal studies to observe whether these increased intentions successfully translate into the actual practice of exclusive breastfeeding for the full six-month period post-delivery.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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