



Publish: Association of Indonesian Teachers and Lecturers

International Journal of Health Sciences (IJHS)Journal Homepage: <https://jurnal.agdosi.com/index.php/IJHS/index>

Volume 3 | Number 4 | December 2025 |



The Effect Of Health Education About Exclusive Breastfeeding On The Knowledge Of Breastfeeding Mothers In Public Health Center X

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ABSTRACT

Exclusive breastfeeding is the best source of nutrition for infants aged 0–6 months and plays an important role in growth, development, and improving infant immunity. However, the coverage of exclusive breastfeeding in Indonesia is still not optimal, one of the causes being the low knowledge of breastfeeding mothers. Health education is a promotive and preventive effort that can improve mothers' knowledge regarding exclusive breastfeeding. This study aims to determine the effect of health education about exclusive breastfeeding on the knowledge of breastfeeding mothers at Community Health Center X. The study used a pre -experimental design with a one-way approach. group Pretest - posttest. The sample consisted of 30 breastfeeding mothers selected using purposive sampling. The research instrument was a questionnaire on exclusive breastfeeding knowledge. Data analysis was performed using the Wilcoxon test. Signed Rank Test. The results of the study showed an increase in knowledge of breastfeeding mothers after being given health education with a *p value* = 0.000 (<0.05). The conclusion of this study is that health education about exclusive breastfeeding has a significant effect on increasing knowledge of breastfeeding mothers at Community Health Center X.

Keywords: Health Education, Exclusive Breastfeeding, Knowledge, Breastfeeding Mothers

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1. Introduction

Breast milk is the best food for babies because it contains complete nutrition, antibodies, and growth factors needed by babies during the first six months of life. According to the World Health Organization (WHO) and the United Nations Children's the UNICEF recommends exclusive breastfeeding for the first six months without any additional food or drink. Exclusive breastfeeding has been proven to reduce infant morbidity and mortality and improve long-term health.

Although the benefits of exclusive breastfeeding are widely known, the coverage of exclusive breastfeeding in Indonesia still falls short of the national target. One factor contributing to the low rate of exclusive breastfeeding is a lack of knowledge among breastfeeding mothers about the benefits, proper breastfeeding techniques, and widespread myths. This lack of accurate information can lead mothers to choose to give their babies formula or supplementary foods before they are six months old.

A mother's knowledge of breastfeeding plays a crucial role in the success of exclusive breastfeeding. Mothers with good knowledge tend to have positive attitudes and behaviors that support exclusive breastfeeding. Therefore, effective efforts are needed to improve breastfeeding knowledge, one of which is through health education.

Health education is a learning process aimed at improving the knowledge, attitudes, and behaviors of individuals or groups regarding health. In primary health care settings such as community health centers (Puskesmas), health education on exclusive breastfeeding is a key strategy in maternal and child health programs. However, the implementation of health education is often suboptimal and its impact on improving maternal knowledge has not been systematically evaluated.

Based on this description, the researcher is interested in conducting research on the influence of health education about exclusive breastfeeding on the knowledge of breastfeeding mothers at Community Health Center X, as an effort to provide scientific evidence regarding the effectiveness of health education in increasing the knowledge of breastfeeding mothers.

2. Research Methods

a) Research Design

This study uses a pre -experimental design with a one-way design. group pretest – posttest.

b) Location and Time of Research

The research was conducted at Community Health Center X in May–June 2025.

c) Population and Sample

The research population was all breastfeeding mothers who visited Community Health Center X. The research sample consisted of 30 breastfeeding mothers, selected using purposive sampling techniques.

1) Inclusion Criteria





- Mother breastfeeding baby aged 0–6 months
 - Can read and write
 - Willing to be a respondent
- 2) Exclusion Criteria
- Mothers with communication disorders
 - Mothers who do not fully participate in health education

d) Research Instruments

The instrument used was an exclusive breastfeeding knowledge questionnaire consisting of 20 multiple-choice questions. Knowledge scores were categorized as follows:

- Good: $\geq 76\%$
- Sufficient: 56–75%
- Less: $\leq 55\%$

e) Research Procedures

- Pretest of breastfeeding mothers' knowledge
- Providing health education about exclusive breastfeeding (lecture and discussion ± 30 minutes)
- Posttest of breastfeeding mothers' knowledge

f) Data analysis

Data were analyzed using the Wilcoxon test. Signed Rank Test with a significance level of 0.05.

g) Research Ethics

The study has received ethical approval and respondents signed an informed consent.

3. Results And Discussion

a. Results

1) Respondent Characteristics

This study involved 30 breastfeeding mothers who visited Community Health Center X. Respondent characteristics included age, education level, occupation, and parity.

Table 1.
Distribution of Respondent Characteristics (n = 30)

Characteristics Category	f	%
Age <20 years	3	10.0
20–35 years	20	66.7
>35 years	7	23.3





Characteristics	Category	f	%
Education	Elementary–Middle School	6	20.0
	SENIOR HIGH SCHOOL	15	50.0
	College	9	30.0
Work	Housewife	19	63.3
	Work	11	36.7
Parity	Primipara	14	46.7
	Multipara	16	53.3

Interpretation:

Most respondents were of healthy reproductive age (20–35 years), had a high school education, and did not work outside the home. This situation supports the effectiveness of health education because mothers have the time and readiness to receive information.

2) Level of Knowledge of Breastfeeding Mothers Before Health Education

Initial measurements (pretest) showed that the majority of breastfeeding mothers had a low level of knowledge about exclusive breastfeeding.

Table 2.

Level of Knowledge Before Health Education (Pretest)

Knowledge Category	f	%
Good	5	16.7
Enough	9	30.0
Not enough	16	53.3
Total	30	100

Average pretest score: 54.2 (less category)

Interpretation:

More than half of respondents had insufficient knowledge, which indicates that mothers still have minimal understanding of the benefits of exclusive breastfeeding, duration of breastfeeding, and the risks of early complementary feeding.

3) Level of Knowledge of Breastfeeding Mothers After Health Education

After being given health education about exclusive breastfeeding, there was a significant increase in the level of knowledge of breastfeeding mothers.

Table 3.

Level of Knowledge After Health Education (Posttest)





Knowledge Category	f	%
Good	18	60.0
Enough	9	30.0
Not enough	3	10.0
Total	30	100

Average posttest score: 82.6 (good category)

Interpretation:

The majority of respondents experienced an increase in knowledge to the good category after participating in health education, which indicates the effectiveness of the intervention provided.

4) Comparison of Knowledge Levels Before and After Health Education

To determine the differences in the level of knowledge of breastfeeding mothers before and after health education, an analysis was carried out using the Wilcoxon test. Signed Rank Test.

Table 4.
Wilcoxon Test Results Signed Rank Test

Variables	Mean Rank	Z	p- value	Information
Pretest – Posttest Knowledge	15.50	-4,912	0,000	Significant

Interpretation: The p

value = $0.000 (< 0.05)$ indicates that there is a significant difference between the level of knowledge of breastfeeding mothers before and after being given health education about exclusive breastfeeding.

5) Average Knowledge Score

Table 5.
Average Knowledge Score of Breastfeeding Mothers

Measurement	Mean	Elementary School	Difference
Pretest	54.2	8.34	–
Posttest	82.6	7.91	+28.4

Interpretation:

There was an average increase in knowledge scores of 28.4 points, which clinically indicates a very significant increase in understanding of breastfeeding mothers after being given health education.

6) Observational Findings (Supporting Quantitative Results)

During the implementation of health education, researchers also noted several supporting findings:





- Breastfeeding mothers appeared more active in asking questions and discussing after the educational session.
- Most mothers are able to explain the meaning of exclusive breastfeeding and its benefits correctly.
- Mothers expressed more confidence in providing exclusive breastfeeding until the baby was 6 months old.

This finding strengthens the quantitative results that health education not only improves knowledge scores, but also increases mothers' readiness to implement exclusive breastfeeding.

Summary of Research Results

Based on the results of statistical analysis and field observations, it can be concluded that health education about exclusive breastfeeding significantly increases the knowledge of breastfeeding mothers at Community Health Center X, both statistically and practically.

b. Discussion

The results of the study showed that health education about exclusive breastfeeding had a significant effect on increasing the knowledge of breastfeeding mothers at Community Health Center X. This was indicated by an increase in the average knowledge score from 54.2 before the intervention to 82.6 after the intervention, as well as the results of the Wilcoxon test with a p value = 0.000 (<0.05). These findings confirm that health education is an effective intervention in increasing mothers' understanding of exclusive breastfeeding.

1) The Influence of Health Education on Breastfeeding Mothers' Knowledge

Health education plays a crucial role in the process of knowledge change through the provision of systematic and targeted information. According to Notoatmodjo's (2020) theory, knowledge is the result of the sensory process of an object, and health education is one of the primary means of increasing one's knowledge. In this study, the lecture method combined with discussion enabled breastfeeding mothers not only to receive information but also to clarify any misunderstandings.

The significant increase in knowledge after health education indicates that most mothers had not previously received adequate information about exclusive breastfeeding. The information provided in health education, such as the definition of exclusive breastfeeding, its benefits for both the baby and the mother, proper breastfeeding techniques, and the risks of early introduction of complementary foods, significantly improved mothers' understanding. This aligns with research by Sari and Utami (2021), which found that health education





significantly improved mothers' knowledge because the information was provided directly and tailored to the needs of the target population.

2) Changes in Breastfeeding Knowledge Categories

The results of the study showed a shift in the knowledge category of breastfeeding mothers, from predominantly poor (53.3%) in the pretest to good (60.0%) in the posttest. This change indicates that health education not only improved knowledge scores but also significantly impacted mothers' understanding categorically.

This change in knowledge category is important because knowledge is a predisposing factor in changing health behaviors. Mothers with good knowledge tend to have positive attitudes toward exclusive breastfeeding and are more committed to optimally breastfeeding their babies. This aligns with the Knowledge - Attitude - Practice (KAP) concept, which states that increased knowledge will influence attitudes and subsequently drive behavioral change.

3) The Role of Education and Age in Information Reception

The characteristics of the respondents in this study indicate that most mothers were of healthy reproductive age (20–35 years) and had secondary to higher education. This contributes to the ease with which mothers received and understood the information provided during health education. Mothers with higher levels of education tended to be more receptive to information, think critically, and be open to changes in health behavior.

Maturity also influences a mother's readiness to receive health information. At a healthy reproductive age, mothers are generally highly motivated to provide the best for their babies, making them more responsive to education about exclusive breastfeeding. This finding aligns with research by Rahmawati et al. al. (2020) who stated that age and education influence the success of health education.

4) Health Education as a Promotive and Preventive Effort

Health education about exclusive breastfeeding is a promotional and preventive effort in maternal and child health services. By increasing knowledge among breastfeeding mothers, it is hoped that this will prevent early introduction of complementary foods, which can lead to digestive disorders, infections, and nutritional problems in infants.

The results of this study indicate that health education interventions at the primary care level, such as community health centers (Puskesmas), are highly strategic in improving public health. As the frontline of health services, Puskesmas play a crucial role in providing ongoing education to breastfeeding mothers through integrated health service posts (Posyandu), breastfeeding classes, and individual counseling.





5) Research Limitations

Although the study results show a significant effect, there are several limitations that should be considered. This study used a pre -experimental design without a control group, so it cannot completely rule out the influence of external factors such as personal experience or information from other media. Furthermore, the relatively small sample size and the study's location at only one community health center limit the generalizability of the study results.

This study also only measured knowledge and did not assess mothers' actual behavior regarding exclusive breastfeeding. Therefore, increased knowledge may not necessarily translate directly into changes in breastfeeding behavior.

6) Implications of Research for Health Practice

The results of this study have important implications for healthcare workers, particularly midwives and community nurses, to be more proactive in providing structured and ongoing health education on exclusive breastfeeding. Health education should not be a one-time event, but rather repeated and tailored to the needs of breastfeeding mothers.

Furthermore, the use of engaging educational media such as leaflets, posters, and educational videos can increase the effectiveness of health education. A communicative and empathetic interpersonal approach is also necessary to ensure that health messages are well received by breastfeeding mothers.

Summary of Discussion

Overall, the results of this study indicate that health education on exclusive breastfeeding significantly improved the knowledge of breastfeeding mothers at Community Health Center X. Health education is an effective, easy-to-implement intervention that has a significant impact on supporting the success of the exclusive breastfeeding program. Therefore, health education needs to be an integral part of maternal and child health services at Community Health Centers.

4. Conclusion And Suggestions

a. Conclusion

Based on the results of research and discussion regarding the influence of health education about exclusive breastfeeding on the knowledge of breastfeeding mothers at Community Health Center X, the following conclusions can be drawn:

- 1) Before being given health education, most breastfeeding mothers at Community Health Center X had a low level of knowledge regarding exclusive breastfeeding, especially regarding the definition, benefits, duration of feeding, and risks of providing early supplementary foods.





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- 2) After being given health education about exclusive breastfeeding, there was a significant increase in the level of knowledge of breastfeeding mothers, which was indicated by an increase in the average knowledge score and a change in the knowledge category to predominantly good.
- 3) The results of statistical analysis using the Wilcoxon test Signed Rank The test shows a $p\text{ value} = 0.000 (< 0.05)$, which means there is a significant influence of health education on increasing the knowledge of breastfeeding mothers at Community Health Center X.
- 4) Health education has proven to be effective as a promotive intervention in increasing the understanding of breastfeeding mothers, thereby supporting the success of exclusive breastfeeding programs at the primary health care level.

Thus, it can be concluded that health education about exclusive breastfeeding is an effective and appropriate strategy in increasing the knowledge of breastfeeding mothers, and has an important role in efforts to improve maternal and infant health.

b. Suggestion

Based on the research results, the researcher provides several suggestions as follows:

- 1) For Community Health Centers
 - Community health centers are expected to optimize the implementation of health education on exclusive breastfeeding on a regular and scheduled basis, both through breastfeeding classes, integrated health posts (posyandu), and individual counseling.
 - It is necessary to develop educational media that are attractive and easy to understand, such as leaflets, posters, and audiovisual media, to increase the effectiveness of information delivery.
- 2) For Health Workers
 - Midwives and nurses are expected to be more active in providing education and motivation to breastfeeding mothers regarding the importance of exclusive breastfeeding from pregnancy to postpartum.
 - Health workers need to improve their communication skills and educational approaches so that health messages can be received and understood well by breastfeeding mothers.
- 3) For Breastfeeding Mothers
 - Breastfeeding mothers are expected to increase their active participation in health education activities and seek correct information about exclusive breastfeeding from trusted sources.





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- Breastfeeding mothers are expected to be able to apply the knowledge they have gained by providing exclusive breastfeeding to their babies until they are 6 months old.
- 4) For Further Researchers
- Further research is recommended to use a quasi -experimental design or an experiment with a control group so that the research results are methodologically stronger.
 - Future researchers can add variables of attitudes and behavior of breastfeeding mothers to see the relationship between increased knowledge and the practice of exclusive breastfeeding.
 - Research needs to be conducted with a larger sample size and in several Community Health Centers to increase the generalizability of research results.

c. Practical Implications

Health education about exclusive breastfeeding has important implications for improving the quality of maternal and child health services. By increasing maternal knowledge about breastfeeding, it is hoped that exclusive breastfeeding rates will increase, thus positively impacting infant morbidity and mortality. Therefore, health education should be a priority and ongoing program at community health centers (Puskesmas).

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