

The Influence of Health Education with Panthom Media about Breast Care on Knowledge and Behaviour in Postpartum Mothers

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ABSTRACT

Background : According to Indonesian Demographic and Health Survey Data (IDHS, 2017), 15.60% of the total postpartum mothers totaling 35,985 people suffer from breast milk retention. Health workers who provide breast care education to postpartum mothers are very useful in increasing their knowledge and ability to carry out postpartum breast care independently. The aim of this research is to examine the impact of health education using pantomime on breast care knowledge and behavior in postpartum mothers.

Methods : Participants in this study consisted of 30 mothers during the postpartum period. The sample approach used is total sample. The data obtained were analyzed using the Wilcoxon test. This research uses health education through pantomime media as an independent variable, while education and behavior as dependent factors. This intervention includes conveying health information to women during the postpartum period. Before and during the provision of health education, participants were asked to fill out a questionnaire covering knowledge and practices related to breast care.

Result : Breast care behavior in respondents before the intervention was good value 19 people (63.3%), while after the intervention became 23 people (76.7%). Wilcoxon test on knowledge of sig value results. $0.000 < 0.05$, while in behavior the results of the sig value. $0.000 < 0.05$.

Conclusions : Health education with panthom media about breast care affects the knowledge and behavior of postpartum mothers.

Keywords : Panthom ,Breast Care, Puerperium, Knowledge, Behavior

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Background. Indonesia's national health profile in 2020 shows that 66.06% of infants receive exclusive nutrition through breast milk. This figure has exceeded the 40% target set in the 2020 Strategic Plan (Profil Kesehatan Indonesia, 2020). The IMD coverage rate in Central Java Province in 2019 was 79.7 percent. The percentage of infants in Central Java Province who received IMD in 2019 was 79.7 percent. The coverage of exclusive breastfeeding in the Tretep Health Center working area of 68.3% shows that it is still lower than the coverage in Temanggung Regency (Dinas Kesehatan Provinsi Jawa Tengah, 2019).

Lactation refers to the physiological process of producing and secreting milk, which occurs when a newborn feeds and swallows breast milk. During pregnancy, the hormone prolactin is elevated, but milk secretion is inhibited due to continuous suppression by

elevated estrogen levels. On the second to third day after delivery, there is a decrease in estrogen and progesterone levels. This allows prolactin to have a stronger influence that has an impact on breast milk production (Purwanto et al., 2018).

The World Health Organization (WHO) recommends exclusive breastfeeding for 6 months, without any additional feeding or fluids. A study conducted by the World Health Organization (WHO) revealed that breast milk includes various essential elements that are essential for the survival of babies during the first six months of life. These nutrients include antibody hormones, immunological components, and antioxidants.

Puerperal mothers can prevent breastfeeding problems by doing the right breast care. Obstacles to breastfeeding during the puerperium that can inhibit breastfeeding include nipple pain, breast swelling, blocked

milk ducts, mastitis, and breast abscesses. Blocked milk ducts cause discomfort, increased body temperature, and breast flushing, sometimes called breast milk dams or breast swelling. (Fitriatun, 2019).

Breast dam is an enlargement of the breast caused by narrowing of the milk ducts due to the buildup of clumped milk that clogs the cavity of the ducts. This breast enlargement also develops due to inadequate breastfeeding. Often, this lactation inhibition occurs between the third and fifth days after childbirth. The occurrence of breast milk dams will reduce milk production and decrease reflex let down. (Fitriatun, 2019).

According to data (Kemenkes RI, 2022) throughout 2015, there were 76,543 cases of lactation difficulties reported in mothers. According to Indonesian Demographic and Health Survey Data (IDHS, 2017), 15.60% of the total postpartum mothers totaling 35,985 people suffer from breast milk retention. In 2015, as many as 77,231 postpartum mothers or 37.12% of all postpartum mothers experienced breast milk dams. In Central Java, urban areas have a prevalence of 13% (equivalent to 1-3 events per 100 breastfeeding mothers), while in rural areas the prevalence ranges from 2-13% (equivalent to 2-13 events per 100 breastfeeding mothers). In 2022, as many as 9,328 postpartum mothers in Temanggung Regency experienced breast milk dams or 18.9% of the total cases. In the special working area of the Tretop Health Center, out of 277 postpartum mothers, 103 (40.4%) experienced breast milk dams.

Studies show the determining factors affecting milk production in breastfeeding women. (Cahyo et al., 2018) namely maternal motivation in breastfeeding, breast care, nipple condition, frequency in breastfeeding, breastfeeding attachment, position in breastfeeding, breastfeeding techniques, and breast swelling. occurs during birth because the puerperal mother's body is still trying to adjust to the amount of milk needed by the baby, it occurs when the mother lacks time or frequency of breastfeeding to her baby so that less milk comes out or the baby releases less milk from the mother's breast. (Cahyo et al., 2018)

Immediate action is needed to relieve the symptoms of breast edema. If not done correctly, milk production is disturbed and the absorption process associated with early

weaning begins. This swelling develops into mastitis, acute infection of the mammary glands, the clinical consequences of which are inflammation, fever, chills, maternal discomfort, fatigue, breast abscess, septicemia.

Health education has been widely carried out by midwives as health workers in breast care to prevent the occurrence of breast milk dams (Profil Kesehatan Indonesia, 2020). Managing breastfeeding involves massaging the mammary glands and manually squeezing breast milk before breastfeeding. Cold compresses can be done to relieve stasis and venous discomfort, while alternating hot compresses can improve blood circulation. Frequent breastfeeding is recommended to increase milk flow and reduce breast tension. (Fitriatun, 2019)

Research shows that applying consistent breast care techniques to postpartum women can successfully prevent the formation of breast milk dams. Gustirini, 2021 Mothers who do breast care have a much lower incidence of breast milk blockage (28.6%) than mothers who do not do breast care (77.8%). Proper breast care not only helps prevent clogging of breast milk, but also increases milk production by stimulating the mammary glands through massage techniques.

Maintaining proper breast care during the breastfeeding phase is beneficial for reducing and controlling the potential occurrence of breast-related problems. Undoubtedly, when the breasts get proper attention and care, the act of breastfeeding becomes much more enjoyable for both the mother and the baby. Health professionals who provide breast care education play an important role in improving the knowledge and ability of postpartum mothers to manage their breast care independently after childbirth. This has a beneficial effect in increasing breast milk production and encouraging exclusive breastfeeding practices. (Nurahmawati et al., 2021)

A person's behavior, particularly in the context of breast care, is strongly influenced by his or her level of knowledge. In theory, knowledge plays an important role in shaping individual behavior or actions (Notoatmodjo, 2014). This is in line with research (Setiana, 2017) stated that individual knowledge is shaped by personal experience, external factors (such as the environment), both tangible and intangible, as well as socio-

cultural influences. These experiences are then understood, perceived, and believed, this process entails progressing from motivation to intention formation, and finally the execution of that intention through behavior.

Breast care behavior can be done before and after childbirth in the prevention of problems in the puerperium, namely breast milk dams or breast swelling. In accordance with the results of study (Cholifah & Astuti, 2015) there is a strong relationship between the frequency of breast care practices and the occurrence of mastitis in women after childbirth. Mothers who practice breast care have a smaller chance of developing mastitis compared to mothers who do not practice breast care.

There are many types of media in education. One of the media for conducting health education is mime media. The selection of panthom media is one of the good health promotion media alternatives as an intermediary tool. Effective promotional media is able to convey information or health messages that are in accordance with the level of acceptance of the target audience so as to influence behavior change in accordance with the message conveyed.(Nurrizka & Wenny, 2022)

Based on the results of a preliminary study at the Tretep Health Center, Temanggung Regency, the percentage of breast milk dams in postpartum mothers is still relatively high. In January of the 17 postpartum mothers, 7 (41.1%) experienced breast milk dam events. Of the 25 postpartum mothers in February, 10 of them, equivalent to 40%, experienced breast milk dams. Based on the findings of interviews conducted with mothers, it appears that there is still a lack of understanding of mothers regarding breast care. Efforts to overcome the mother's breast milk dam are not overcome in any way, only breastfeeding the baby, warm compresses, and massaging the breast.

Methods. This study used a quasi-experimental research design, specifically using a one group pretest-posttest research approach. Evaluation is carried out before and after the intervention.

This study focused on health education by using panthom media as an independent variable. The dependent variables in this study are knowledge and behavior. The research sample amounted to 30 respondents who were

postpartum mothers in the Tretep Health Center work area in October-November 2023. The study sample consisted of postpartum mothers who met the inclusion namely postpartum mothers 3-40 days postpartum physiological and exclusion criteria, and were selected from the Tretep Health Center operating area. during October-November 2023. This study used Total Sampling approach for its sampling.

The research will be conducted at the Tretep Health Center, Temanggung Regency in November 2023. The instruments of this study are observation sheets and questionnaires.

In this study, univariate analysis of knowledge uses the percentage of each variable because it uses ordinal categorical data. Furthermore, a normality test was carried out on behavioral data using ratio data, obtained a p value of less than 0.05. This indicates that the data does not follow the normal distribution. Therefore, univariate analysis is performed using median, minimum, and maximum values. The variables studied in this study include the extent of knowledge and behavior related to breast care.

Bivariate research was conducted to determine the effect of health education using Panthom media on breast care knowledge and behavior (Breast care) in postpartum mothers in the Tretep Health Center work area. The normality test conducted on knowledge and behavior shows a p value of less than 0.05 which indicates that the data does not follow the normal distribution. Therefore, bivariate analysis uses the Wilcoxon Test with a p value of less than 0.05 so that the alternative hypothesis (Ha) is accepted.

Result and Discussion.

Overview of Knowledge about Breast Care for Postpartum Mothers Before and After Health Education Through Panthom Media

Table 1. Frequency Distribution of Knowledge Value Categories Before and After Health Education with Panthom Media About Breast Care

Value Categories	Pretest		Posttest	
	F	(%)	F	(%)
Good (≥75%)	5	16,7	30	100,0
Enough (56%-74%)	9	30,0	0	0
Less (≤55%)	16	53,3	0	0
Total	30	100,0	30	100,0

Based on the data in table 1. the largest proportion of respondents' knowledge level before receiving health education was 16 people or 53.3%. Furthermore, after the provision of health education, as many as 30 people (100.0%) showed a good level of understanding. After the intervention, there was a significant increase in the number of responses, with all 30 participants demonstrating a high level of expertise.

According to the researcher's assumption, the change in the level of knowledge of respondents is due to the knowledge about breast care that has been obtained previously through health education provided by the health center. In addition, knowledge is also influenced by the age of the respondents. The characteristics of reproductive age will affect an individual's ability to grasp breast care information. Because the older they get, the less their catchment and mindset. Another factor that can support changes in knowledge levels is the level of education. The higher the level of education, the easier it is to grasp information.

Cognitive knowledge is a crucial aspect in shaping individual behavior. Health literacy influences behavior as a result of health education. Health behavior will directly improve public health indicators through health education. The purpose of extension is to educate the public, impart new knowledge, information, and skills, enabling individuals to develop appropriate attitudes and behave in ways conducive to a fulfilling life. (Ginting, 2022).

The breast phantom is included in the prosthetic props. Phantom media is commonly used in the health sector such as health education and early detection of diseases. But not many researchers have used phantom media for counseling interventions. Therefore, this study tries to analyze the effectiveness of the use of phantom media as an alternative media in breast care counseling.

According to the results of a study (Nurriszka & Wenny, 2022) entitled Breast Care Training with Phantom Media as a Successful Treatment of Exclusive Breastfeeding, that training with phantom media is the right choice of media for providing education to pregnant women about breast care and Exclusive Breastfeeding. It takes effort to convey good education using effective media to pregnant women and is carried out continuously.

In line with research (Fadhilatul et al., 2018), after counseling using phantom media, the experimental group showed a significant knowledge gap, this was indicated by a p-value of 0.00, lower than the significance level (α) of 0.05. In addition, there is a striking disparity in attitudes, as indicated by a p-value of 0.03, which is lower than the predetermined significance threshold (α) of 0.05. Comparisons between ghost media and video media do not show a large difference in effectiveness. This is evidenced by the p-value of increased knowledge (0.74) which exceeds the significance level (α) of 0.05, and the p-value of attitude improvement (0.83) which is also higher than the significance level (α) of 0.05.

Description of Behavior about Breast Care in Postpartum Mothers Before and After Health Education Through Panthom Media

Table 2. Analyzing Before and After Health Education with Panthom Media About Breast Care

Intervention	Behaviour	N	Med	Min	Max
Implementati on of health education with panthom media	Before	30	2,00	0	6
	After	30	6,00	3	8

Based on the data in table 2. before health education through mime media, the median value was 2.00 with a minimum of 0 and a maximum of 6. However, after the implementation of health education using mime media, the median value has increased. up to 6.00, with a minimum score of 3 and a maximum of 8. The data showed that there were significant differences in respondents' behavior before and after the implementation of health education through mime media about breast care.

Researchers assume that a person's level of knowledge plays a very important role in shaping a person's positive and negative attitudes. The higher the level of knowledge, the higher the behavior of a person will also increase. In this study, a high level of knowledge about breast care will influence mothers to carry out breast care care regularly. This is an effort to handle the breast dam. Therefore, the existence of health education through phantom aims to make it easier for respondents to receive information about breast care so that it is hoped that respondents have awareness to carry out breast care.

Behavior is a series of actions or actions of a person to receive a response to something and make it a habit because they believe in a value. Human behavior is a human action or activity, whether observable or unobservable by human interaction with the environment, which is manifested in the form of knowledge, attitudes, and actions. Behavior can be more rationally defined by the response of an organism or a person to stimuli from outside the subject. The response is a passive and active form. The passive form is an internal response by a person and cannot be seen directly by others, while the active form is a behavior that can be seen directly. (Pakpahan et al., 2021).

The goal of health education is to encourage individual, family, and communal behavior change to promote and maintain healthy behaviors and a healthy environment. It also aims to actively contribute to achieving optimal health levels and encourage healthy living in all aspects – physical, mental, and social – in order to reduce morbidity and mortality. (Harwijayanti, 2023).

Before counseling through panthom media about breast care, there were several statements that showed bad behavior. After being given panthom media, the frequency of answers on the observation sheet increased which showed in a positive direction. This is in line with the results of the investigation conducted (Ranggi Trisnanda Putri et al. 2019) "The Effectiveness of Providing Health Education for Lactation Preparation on Knowledge and Behavior of Breast Care in Postpartum Mothers" Research findings show that the provision of health education before breastfeeding has a major impact on the knowledge and practice of breast care for postpartum mothers, supported by a p-value of 0.000 (p-value < 0.05).

The Effect of Health Education with Panthom Media About Breast Care on Knowledge in Postpartum Mothers

Data are not normally distributed as indicated by the Shapiro-Wilk test with significance values less than 0.05. Therefore, the Wilcoxon test is used for statistical analysis:

Table 3 Statistical Test Results with Wilcoxon Test

	N	Mean Rank	Z	p value
Decline	0	0,00	-4,798	0,000
Increased	30	15,50		
Remain	0			

Based on the data in table 3. the Wilcoxon test is used to analyze the results of pretest and posttest processing. The calculated p-value is 0.000, lower than the predetermined significance level of 0.05. Thus the alternative hypothesis (Ha) is considered valid. These findings show that health education programs utilizing mime media in breast care have a considerable impact on postpartum maternal knowledge.

The researcher's assumption is that to carry out breast care, a good level of knowledge is required that must be possessed by mothers. Lack of knowledge will affect the actions taken because knowledge is one of the predisposing factors for the formation of behavior.

Cognitive knowledge is a crucial aspect in shaping individual behavior. Health knowledge exerts an impact on behavior as an intermediary result of health education. Health behavior plays an important role in improving public health indicators through health education. The purpose of extension is to enlighten the general public, provide new knowledge, information and skills, enable them to develop attitudes and behave in an appropriate way. (Ginting, 2022).

The results of this study are in line with research conducted by Andriany P, et al (2016) which showed that 47.6% of participants had sufficient knowledge before receiving counseling media. But after exposure to counselling media, 81% of respondents showed a high level of knowledge, showing a significant improvement in their understanding of oral and dental health. This is further reinforced by the findings of Papilaya's research (2016) This shows a noticeable change in the behavior of maintaining healthy teeth and mouth. The study recorded an average score of 42.14 before the implementation of oral health promotion, which later increased to 46.64 after the intervention.

The Impact of Health Education Using Panthom Media on Breast Care Behavior in Postpartum Mothers

The data was tested for normality with the Shapiro-Wilk test which resulted in a significance value of less than 0.05. This indicates that the data does not follow the normal distribution. Therefore the appropriate statistical test used is the Wilcoxon test:

Table 4. Statistical Test Results with Wilcoxon Test

	N	Mean Rank	Z	p value
Decline	0	0,00	-4.800	0,000
Increased	30	15,50		
Remain	0			

Based on the data shown in table 4. the Wilcoxon test is used to analyze pretest and posttest findings. The calculated p-value is 0.000, lower than the predetermined significance level of 0.05. Thus the alternative hypothesis (H_a) is considered valid. This shows that the application of health education through multimedia platforms in Breast Care has a major impact on postpartum maternal behavior.

According to researchers, the mother's attitude to do breast care is the mother's response and response to the occurrence of breast milk dams because the attitude is a reaction or response that is still closed from a person to a stimulus or object. Attitude in a way shows the connotation of an appropriate emotional reaction to social stimulus.

The goal of health education is to promote and maintain good behavior and a healthy environment at the individual, family, and communal levels. It also aims to contribute actively in achieving optimal health levels and cultivating healthy behaviors that are in line with adhering to the concept of physical, mental, and social well-being, the aim being to lower disease and mortality rates. (Harwijayanti, 2023).

Behavior is a series of actions or actions of a person to receive a response to something and make it a habit because they believe in a value. Human behavior is a human action or activity, whether observable or unobservable by human interaction with the environment, which is manifested in the form of knowledge, attitudes, and actions. Behavior can be more rationally defined by the response of an organism or a person to stimuli from outside the subject. The response is a passive and active form. The passive form is an internal response by a person and cannot be seen directly by others, while the active form is a behavior that can be seen directly. (Pakpahan et al., 2021, p. 42).

This research is in line with previous research conducted by Fadhilatul et al. (2018) entitled "The Effectiveness of Awareness Counseling Using Phantom Media and Videos

in Increasing Knowledge and Attitudes of Adolescents About Awareness at the Putri Pakem Sleman Sleman Orphanage". The results showed that there was a striking disparity in the experimental group. The p-value for knowledge is 0.00, lower than the significance level (α) of 0.05. Similarly, the p value for attitude is 0.03, also below the significance level (α) of 0.05. The difference was seen after participants received counseling using phantom media. Statistical analysis of phantom media and video showed no significant difference. The p-value of increased knowledge (0.74) was above the significance level (α) set at 0.05, as was the p-value of increased attitude (0.83).

Conclusion and Suggestions. The conclusion that can be drawn from the results of this study is that there is a difference in the level of knowledge and behavior before and after the implementation of health education with panthom media about breast care in postpartum mothers. There was an influence of health education using panthom media about breast care on the knowledge of postpartum mothers with the results of the Wilcoxon test on the knowledge obtained p value = 0.000 < 0.05 and the behavior of postpartum mothers with p value = 0.000 < 0.05.

The health center is expected to provide breast phantom as a teaching aid in health counseling and make a schedule for the implementation of these activities.

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