EFFORTS TO INCREASE THE KNOWLEDGE OF BREASTFEEDING MOTHERS ABOUT THE USE OF MORINGA LEAF PUDDING (MORINGA OLEIFERA) AS A BREAST MILK FACILITATOR

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ABSTRACT

The Infant Mortality Rate (IMR) in Indonesia is still high. The infant mortality rate is largely caused by nutritional factors. Exclusive breastfeeding can reduce infant morbidity and mortality. The most common reason found in breastfeeding mothers who stop breastfeeding is due to insufficient breast milk production. The use of plants/vegetables that function as galactogogues can be used as an alternative to increase breast milk production. Moringa leaves are one of the plants that people often use to increase breast milk production. Based on this, it is necessary to provide education to increase knowledge about the use of Moringa oleifera leaf pudding as a breast milk enhancer. The aim of the education is to increase postpartum mothers’ knowledge about the use of Moringa leaf pudding as a breast milk enhancer. This health education activity was carried out on August 7 2023 in Jempong Baru Village, Sekarbel District, Mataram City. The method used in this service activity uses the lecture method, and the media uses power points and leaflets. Posttest results showed that postpartum mothers experienced an increase in knowledge after being given health education about the use of Moringa leaf pudding as a breast milk enhancer. After the service activities, postpartum mothers are expected to be able to develop processed keor leaves into pudding as an effort to increase the flow of breast milk.

Keywords: Breast milk, knowledge, pudding moringa leaves

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1. Introduction

Breast milk is the best food for babies because it is a perfect natural food, easily digested by babies and contains nutrients that are in accordance with the needs of babies for growth, immunity and preventing various diseases and for baby intelligence, safe and guaranteed cleanliness because it is given directly to babies to avoid digestive disorders such as diarrhea, vomiting and so on (Wahyuni, 2012).

Exclusive breastfeeding can reduce infant morbidity and mortality (Biks et al., 2015; Lenja et al., 2016). Optimal breastfeeding can prevent 1.4 million deaths worldwide in toddlers each year and reduce deaths due to acute respiratory infections and diarrhea by 50-95% (Horta BL, 2013). Suboptimal breastfeeding causes 45% of neonatal deaths due to infectious infections, 30% of deaths due to diarrhea, and 18% of deaths due to acute respiratory distress in children under five years of age in developing countries (Mekuria & Edris, 2015).

Based on Riskesdas data, the percentage of infants who received exclusive breastfeeding until 6 months of age was 30.2%. In 2018 there was an increase to 37.3%. However, this figure is still far below the national target of 54.3% (Riskesdas, 2018). Exclusive breastfeeding coverage in NTB Province is above the national target of 82.68%. The lowest breastfeeding coverage in NTB is Mataram City at 70.30% (Dikes Provinsi NTB, 2018).

Breast milk is the first, main and best food for neonates, which is natural and contains many nutrients needed in the process of growth and development of infants, especially until the age of 6 months. However, insufficient breast milk production is a common complaint expressed by mothers, especially in the first week postpartum (Asnidawati & Ramdhan, 2021; Margareth ZH, 2016). Zakaria’s (2016) study reported that 38% of breastfeeding mothers stopped breastfeeding due to interrupted milk production or insufficient milk production (Zakaria et al., 2016). Another study also showed that most mothers (69.23%) complained of insufficient breast milk in the first week after giving birth (Indrayani D, Gustirini R, 2015).

In Indonesia, there are many plants/vegetables that are believed to increase breast milk production or function as galactogogues, including fennel, moringa leaves, katuk leaves, young papaya fruit, klabet, anise, torbangun, beluntas, lempuyang, spinach, and cassava leaves (Indonesian Pediatric Association, 2010; Wulandari ET, 2020). Research conducted by Handayani (2021) explains that the most widely used plants as breast milk facilitators are katuk leaves (50.4%), Moringa leaves 38.2%), turi leaves (8.9%), and spinach (2.4%) (Handayani et al., 2021).

The World Health Organization (WHO) has also recommended the use of natural ingredients for traditional medicine as an effort to improve health (promotive), disease prevention (preventive), and treatment (curative). The use of natural ingredients is considered safer than chemical drugs and has relatively fewer side effects if used properly (World Health Organization, 2019). The results of laboratory test research on Moringa leaf pudding were found to contain alkaloids and terpenoids, which have a lactagogic effect. Compounds that have a lactagogic effect are most effective in increasing and facilitating breast milk production (Alindawati et al., 2021; Raguindin et al., 2014).

Moringa (Moringa Oleifera) plant is a local food that has the potential to be developed by breastfeeding mothers, because it contains phytosterol compounds that function to increase and facilitate breast milk production (lactagogue effect). Theoretically, compounds that have a lactagogic effect (Zakaria et al., 2016). Handayani's research (2021) shows that 38.2% of breastfeeding mothers who use moringa leaves as a breast milk facilitator are processed into clear vegetables (Handayani et al., 2021). Research conducted by Ristanti (2021) showed that 86% of mothers who consumed moringa vegetables experienced an increase in breastfeeding frequency (Ristanti W, 2021). The purpose of health education is to increase the knowledge of postpartum women about the use of moringa leaf pudding as a breast milk facilitator.

Based on the above background, it is necessary to conduct "Education to increase knowledge about the use of moringa leaf pudding (Moringa Oleifera) as a breast milk facilitator".
2. Methods

The community service partner is Jempong Baru Village, Sekarbela District, Mataram City. The method of implementing this service consists of several stages. The first stage is the planning of activities to be carried out, and the second stage is the implementation of community service activities in the form of solutions that have been approved by Jempong Baru Village, Sekarbela District, Mataram City. The solution offered is the provision of education to increase the knowledge of postpartum women about the use of Moringa leaf pudding (Moringa Oleifera) as a breast milk facilitator. The target in this service is postpartum women who come during the service activity. The service activity was carried out for 1 day on August 7, 2023 with several stages such as, the service team conducted a pretest, providing education to increase knowledge through health education about the use of Moringa leaf pudding (Moringa Oleifera) as a breast milk facilitator, and the last is giving a posttest.

![Chart 1. Method of Service Implementation](image)

3. Result And Discussion

a. Results

Sekarbela, Mataram City on efforts to increase postpartum mothers' knowledge about the use of Moringa (Moringa Oleifera) leaf pudding as a breast milk facilitator was carried out in three stages. The first stage, namely, the service team conducted a pretest on 37 postpartum women using a knowledge questionnaire containing the use of moringa leaf pudding as a breast milk facilitator. The pretest results can be seen in the following table:

<table>
<thead>
<tr>
<th>Kategori</th>
<th>Frekuensi</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Baik</td>
<td>19</td>
<td>52</td>
</tr>
<tr>
<td>2. Cukup</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>3. Kurang</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Based on table 1, it shows that mothers who have good knowledge are 52%, those with sufficient knowledge are 40%, and those with less knowledge are 8%.

The second stage of the service activity is to provide health education to postpartum women for 20 minutes and continued with question and answer activities. The media used in this activity are power points and leaflets.
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Figure 1. Material Delivery

The service activities went well, all postpartum women actively asked questions in the service activities. In addition, postpartum women also answered correctly when the speaker asked questions. Mothers who ask and answer questions are given rewards in the form of gifts.

Figure 2. Rewarding

The last stage of the service activity is that the team conducts a posttest, where all postpartum women fill out a questionnaire about knowledge "The use of moringa leaf pudding as a breast milk facilitator". The posttest results can be seen in the following table:

<table>
<thead>
<tr>
<th>Category</th>
<th>Frekuensi</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Good</td>
<td>34</td>
<td>90.1</td>
</tr>
<tr>
<td>2. Enough</td>
<td>3</td>
<td>8.9</td>
</tr>
<tr>
<td>3. Less</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 2. Knowledge of postpartum women after being given health education

2. Discussion

Moringa is a type of medicinal plant from the Moringaceae family that is rich in nutrients. Nutrients such as minerals, vitamins and amino acids are distributed in all parts of the Moringa plant. All parts of the moringa plant can be consumed, starting from the leaves, bark, flowers, fruit, to the roots (Septadina et al., 2018; Toripah, 2014). All parts of the moringa plant are traditionally used for different purposes, but generally the leaves are most commonly used (Leone et al., 2015).

Moringa leaves are similar to katuk leaves, round in shape and green in color. Moringa leaves are delicious to eat in a variety of dishes. The advantage of moringa lies in its nutritional content, especially the mineral and vitamin groups. Every 100 g of moringa leaves contains 3390 SI of vitamin A, twice as high as spinach and thirty times higher than chickpeas. Moringa leaves are also high in calcium, about 440 mg/100 g, and phosphorus 70 mg/100 g (Zakaria et al., 2016). Handayani's research (2021) shows that the most widely
used plants as breast milk facilitators are katuk leaves (50.4%), moringa leaves 38.2%), turi leaves (8.9%), and spinach (2.4%) (Handayani et al., 2021).

Breastfeeding mothers should pay attention to several things to improve the quality and volume of their breast milk. There are several suggestions that need to be considered by mothers who are breastfeeding their babies, namely: consuming vegetables and fruits that can increase breast milk volume (Permatasari & Qomar, 2019). Lacagogum power is an increase in the amount of milk. The mechanism of lacagogum power of a compound can occur, among others, by directly stimulating the protoplasmic activity of the secretory cells of the mammary glands, stimulating the secretory nerve endings in the mammary glands so that the secretion of milk increases, or stimulating the prolactin hormone that acts on the cells of the alveolar epithelium (Widowati et al., 2019).

One of the plants/vegetables that can be used to improve the quality and smooth milk production is moringa leaves, which are easy to obtain and grow well in several areas of the village. Moringa (Moringa Oleifera) is a local food that has the potential to be developed by breastfeeding mothers, because it contains phytosterol compounds that function to increase and facilitate breast milk production (lacagogum effect). Theoretically, compounds that have lacagogum effects include sterols. Sterols are steroid class compounds (Zakaria et al., 2016).

Moringa leaves (Moringa oleifera) is a galactogogue food that has a high micronutrient content compared to other galactogogue foods, nutritional content such as phytosterol compounds, alkaloids, saponins, polyphenols, and steroids (lacagogum effect) play a role in the prolactin reflex and increase prolactin hormone levels, thus stimulating the alveoli to produce breast milk (Aliyanto & Rosmadewi, 2019; Damayanti A, Widiawati I, 2022; Rochmayanti NS, 2022). The alkaloid content contained in moringa leaves works synergistically with the hormone oxytocin. Alkaloids have a function that directly works on all smooth muscles. When the smooth muscle contracts, there will be milk release and an increase in the number and diameter of the average alveoli proportional to the increase in breast milk produced (Rosalinda Sinaga, 2020).

The results of laboratory test research conducted by Pratiwi (2023) on Moringa leaf pudding contain alkaloids and terpenoids, which have a lacagogum effect. This is the basis for providing information related to the use of moringa leaf pudding as a breast milk facilitator. Providing information to postpartum women was carried out through health education in Jempong Baru Village, Sekarbelela District, Mataram City.

The results of providing health education to postpartum women about "the use of moringa leaf pudding" are an increase in knowledge between before and after being given health education. This is in accordance with the theory of Notoatmodjo (2007) which explains that increased knowledge can be obtained through various ways, one of which is by providing health education interventions. The concept of health education is a learning process for individuals, groups or communities from not knowing about health values to knowing, from not being able to overcome health problems to being able to (Notoatmodjo, 2007). This is in line with the results of the service carried out by the team, where after health education there was an increase in knowledge in postpartum women. Another study conducted by Khoirunnisa also explained that there was an increase in knowledge in postpartum women after being given health education about self-care during the postpartum period (Khoirunnisa S, 2022).

Providing information is the first step for someone in making behavioral changes according to their knowledge. Health education is an effort to influence others, either individuals, groups or communities to improve knowledge, attitudes, and skills in maintaining and improving health (Notoatmodjo, 2007).

Health education methods can also be an influence in increasing a person's knowledge, where the absorption of the information provided is strongly influenced by the effectiveness of a person's sensory function to capture the stimulus provided so that it is digested properly into information that can be deepened, the more the number of senses involved in a process of receiving information, the heavier the absorption of the stimulation (Andriani DF, 2022).

The delivery of material in a group activity can be done in various ways, one of which is the lecture method. The lecture method is one method that is often used in delivering messages orally or speaking directly accompanied by questions and answers to the target (Suryanti, 2021). The lecture method in this service is using power point media. Apart from power point, the service team also used media in the form of leaflets given to all postpartum women involved in the service activities.
Information media is indispensable in conveying messages to someone. The leaflet method is one of the simple ways or tools commonly used to increase knowledge, namely the health education method. Health education is inseparable from the activities of delivering health messages or health promotion to communities, groups and even individuals so that they can gain knowledge about better health (Andriani DF, 2022). The use of leaflets in this service activity can increase the knowledge of postpartum women about the use of moringa leaf pudding as a breast milk facilitator, so that it can be an alternative in increasing the smooth production of breast milk.

4. Conclusion
Community service activities regarding education to increase knowledge of the use of Moringa leaf pudding (Moringa Oleifera) as a breast milk facilitator which was carried out on August 7, 2023 in Jempong Baru Village, Sekarbel District, Mataram City have been carried out well and received enthusiastic responses from the participants. The evaluation results obtained an increase in knowledge between before and after being given health education about "The use of Moringa leaf pudding (Moringa Oleifera) as a breast milk facilitator. 

After this activity, it is hoped that postpartum women can apply according to the knowledge gained about "The use of moringa leaf pudding (Moringa Oleifera) as a breast milk facilitator" and develop processed moringa leaves into pudding as an effort to increase the smooth production of breast milk.

5. Reference


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