

Improving Public Health Independence in The Use of Moringa Leaf (*Moringa Oleifera*) For Breast Swelling and Increasing Breast Milk Production

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ABSTRACT

There are many factors that influence the nutritional status of under-fives, including income, knowledge of mother's nutrition, access to health services, incidence of diarrhea, exclusive breastfeeding, clean water sources, parenting style, nutrition during pregnancy and low birth weight babies. (LBW). Success in exclusive breastfeeding is influenced by a mother's ability to deal with problems in breastfeeding. The purpose of this community service is to optimize the independence of public health in the use of Moringa leaves for breast swelling and to facilitate the production of breast milk as an effort to support the success of exclusive breastfeeding. The target of community service activities are all members of the community, mothers of health cadres, postpartum and breastfeeding mothers, posyandu mothers in Kajoran Klaten Selatan village on Saturday, July 1, 2023 and communities in foreign partners (ICS) Tuesday, June 27 2023. From the results of monitoring evaluation there was an increase in knowledge about the use of Moringa leaves for the management of breast swelling and Increased participant skills in using Moringa leaves for the management of breast swelling by 88%.

Keywords: Moringa leaves, Health independence, Utilization.

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INTRODUCTION

The postpartum period or puerperium is the period that begins after the birth of the placenta and ends when the uterine devices return to their pre-pregnancy state which lasts for about 6 weeks after delivery (Alhadar & Umaternate, 2017). One of the problems that often arises in postpartum women is breast swelling. Swelling of the breast is a reservoir of breast milk caused by narrowing of the lactiferous ducts by glands that are not completely emptied or due to abnormalities in the nipples accompanied by pain and increased body temperature (Herdini Widyaning pertiwi, 2018). The breasts will feel painful, hot, hard to touch, tense which occurs on the third to fifth day of postpartum (Kostania, 2015). In the first weeks, if the mother does not get proper information on how to deal with breast swelling, the mother will stop breastfeeding, so that the baby does not get exclusive breastfeeding (Fungtammasan & Phupong, 2021).

According to data from the World Health Organization (WHO) for 2020, the exclusive breastfeeding rate is 66.6%. Indonesia's health profile, the percentage of infants less than 6 months who receive exclusive breastfeeding is 66.1%. Central Java Province 81.4%. Data from the District Health Office the coverage of exclusive breastfeeding in 2022 is 89%. Meanwhile, the data for the working area of the 2021 reaches 39% (Asrul & Pratiwi, 2020).

Handling breast swelling pharmacologically by providing symptomatic therapy in the form of analgesics to reduce pain such as paracetamol or ibuprofen. Non-pharmacologically by giving Moringa leaf compresses (Moringa Oleifera). Since ancient times, this plant has been used for therapeutic purposes. Some scientific researchers reveal that this plant is useful for treating various diseases, one of which is anti-inflammatory (Yunus et al., 2021). Phytochemical test results on Moringa leaves are known to contain, such as tannins, steroids, triterpenoids, flavonoids, saponins, anthraquinones and alkaloids. These compounds have the ability to be anti-inflammatory, antibiotic, detoxifying and antibacterial (Widiyanto et al., 2020).

After giving birth the baby is given breast milk to fulfill the baby's nutrition. In fulfilling the nutrition of newborns by breastfeeding. Breastfeeding is a unique way of providing food that is ideal for the healthy growth and development of babies and has a unique biological and psychological effect on the health of both mother and baby. Anti-infective substances contained in breast milk help protect babies against disease (Johan et al., 2019). The smooth production of breast milk is influenced by many factors, factors including the nutritional status of the mother, mother's nutrition can be met with alternative extracts. Moringa (Moringa oleifera) is a local food ingredient that has the potential to be developed in the culinary field for breastfeeding mothers, because it contains phytosterol compounds which function to increase and facilitate milk production (Tan et al., 2022). Research Zakaria in the effect of giving moringa leaf extract on the quantity and quality of breast milk states that there is a change in milk production when mothers are given moringa leaf extract (Johan et al., 2019).

From several researchers, Moringa leaves contain flavonoids in Moringa leaves which are efficacious as analgesics whose mechanism of action inhibits the action of cyclooxygenase enzymes thereby reducing pain and flavonoids also inhibit neutrophil degranulation so that they inhibit the release of cytokines, free radicals, and enzymes

that play a role in inflammation (Johan et al., 2019). With a decrease in pain in cases of swelling, it will restore the function of the breasts in producing breast milk. So that the mother's milk production will increase.

The results of the preliminary study, both in the South Klaten Village and in foreign partner communities (Timor leste), there are still many people who do not understand the use of Moringa leaves for breast swelling and increasing milk production. Based on this background, the author wishes to provide counseling to increase public health self-sufficiency in using Moringa leaves for breast swelling and increasing milk production.

METHODS

Community Service Activities to increase health independence in the Utilization of Moringa Leaves (*Moringa Oleifera*) for Breast Swelling and Increased Breast Milk Production are carried out in foreign partners, namely the community in the ICS area of Dili Timor Leste and domestically in the community at Posyandu Kajoran Klaten Selatan in April - June 2023.

Community Education : This method is used as an introduction to emphasize material on the Utilization of Moringa Leaves (*Moringa Oleifera*) for Breast Swelling and Increasing Breast Milk Production.

Consultation : This method is used either at the time of counseling or at the end of counseling which allows the community to express things that are not yet understood, exchange ideas between breastfeeding mothers and mothers of health cadres.

Survey and analysis of cases and problems with partners and representatives of the Midwife Professional Education Study Program, Kusuma Husada University, Surakarta. The community meeting will be held in May 2023 at 14.00-18.00 WIB. The Citizens' Meeting was attended by midwives, heads of RTs, heads of RWs, village heads, community leaders and health cadres of domestic and foreign partners. The community meeting discussed the findings of health problems found during cross-sectoral meetings with partners, namely the failure of mothers to breastfeed due to breast swelling and low milk production.

Preparation of teaching aids and counseling materials: will be carried out in May 2023 at the Kusuma Husada University Surakarta Campus, Midwife Professional Education Study Program, Kusuma Husada University Surakarta. In this stage, the coordinator and team members will arrange a program of counseling programs, leaflets, and training materials for using Moringa leaves for breast swelling and increasing milk production. In addition, the instructor will prepare the tools needed during the activity.

The implementation of community service in the form of counseling and training to increase public health independence in the use of Moringa leaves for breast swelling and increasing breast milk production will be carried out in June 2023 at 08.00-12.00 WIB online and offline. The activity began with a briefing from the extension coordinator to the team members. Activities in the form of counseling and training to increase public health independence in the use of Moringa leaves for breast swelling

Monitoring and evaluation. After the counseling and training process for increasing public health independence in using Moringa leaves for breast swelling and increasing breast milk production, monitoring and evaluation will be carried out in the form of

follow-up with the community in using katuk leaves to address breastfeeding problems in July 2023 and increase milk production for partner communities (domestic and foreign) using lecture, demonstration, sharing and question and answer methods.

RESULTS AND DISCUSSION

Community service is carried out by lecturers of the midwifery study program in the midwifery professional education program together with students regarding the use of moringa leaf compresses for treating breast swelling. The implementation of community service is carried out in two countries, namely Timor Leste and Indonesia. The implementation in Timor Leste is carried out online using the Zoom Meeting media which will be held on Tuesday, June 27 2023. The implementation starts at 09.00 to 12.00 WIB. International community service activities in Timor Leste with 30 participants. Service activities in Indonesia were carried out offline on Saturday, July 1, 2023 at the Polindes of Kajoran Village, South Klaten with 20 participants. Activities start at 10.00 to 12.00 WIB. All activities carried out both offline in Indonesia and online in Timor Leste ran smoothly.

Community service activities have been fully implemented and running smoothly. Service activities through lectures and demonstrations on how and using Moringa leaves for the management of breast swelling. Participants who took part in this activity were 20 health cadres, 8 maternity nursing lecturers and 22 health students who would later disseminate knowledge and skills on using Moringa leaves for the management of breast swelling in the community. All participants who took part in this activity were very enthusiastic about participating in the activity from start to finish. With this activity, it is hoped that participants will be able to find out about the utilization and use of moringa plants for treating breast swelling. Participants provide positive feedback through question and answer, discussion, sharing. This activity was evaluated for 1 month to see the utilization of Moringa leaves for breast swelling.

Based on the results of monitoring and evaluation of this implementation, knowledge of the use of Moringa leaves for breast swelling increased by 88% and the percentage of using Moringa leaves for the management of breast swelling was 88%. Previously, the moringa plant, both in Timor Leste and in Indonesia, was used for cooking vegetables and for making food preparations or a mixture of side dishes.



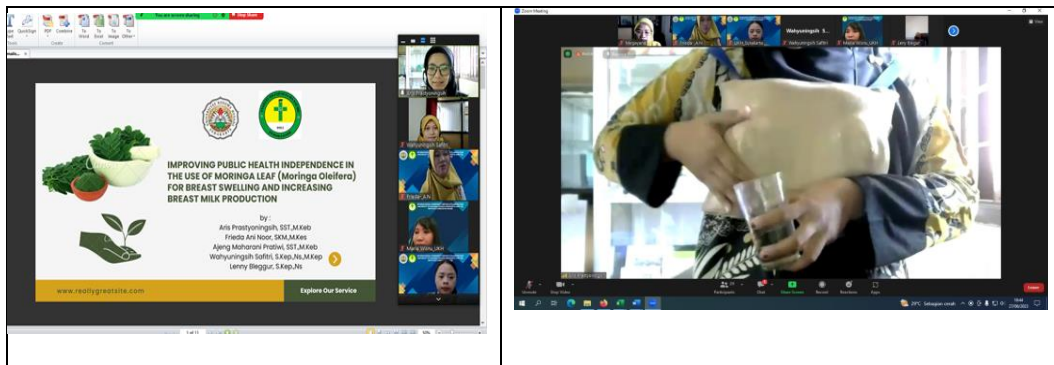


Figure 1. Coordination and Implementation of community service in Indonesia and Timor Leste

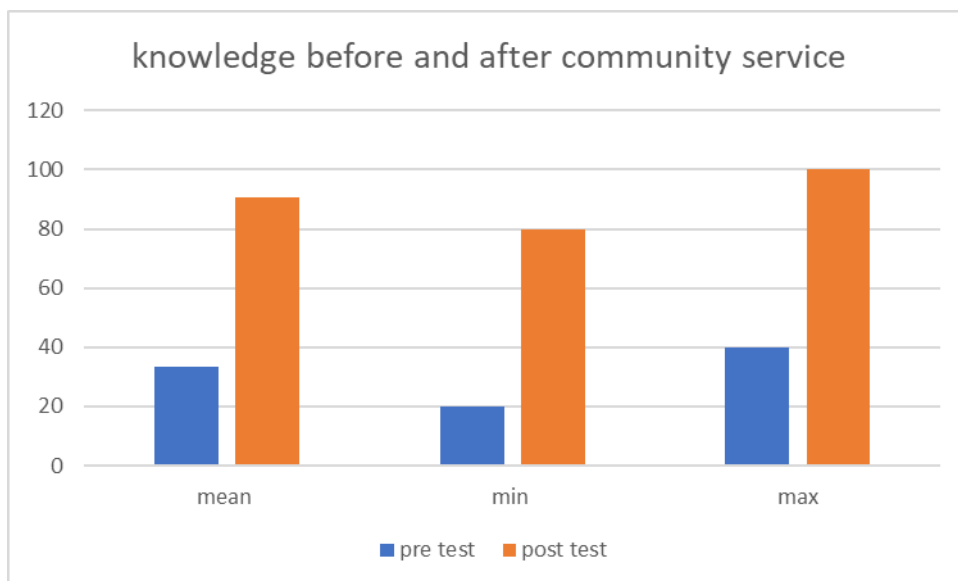


Figure 2. Knowledge before and after community service

The community service activities carried out in Timor Leste and in Indonesia ran smoothly and all activities went well and the participants were enthusiastic in participating in the community service activities. This activity became interesting with a demonstration about making compresses and their management for breast swelling. High cases of breast swelling occur in breastfeeding mothers in the early weeks of labour. So far, cases of swelling are only given drugs to reduce pain and antibiotics which may have an unfavorable impact on the baby. The percentage of breastfeeding women who experienced breast swelling reached an average of 87.05% or as many as 8242 postpartum mothers out of 12,765 people. So that alternative therapy using Moringa leaves can be chosen by the community for the management of breast swelling.

Moringa leaf compresses can reduce the scale of breast swelling, according to Aris Widiyanto's research (2020), namely Moringa leaves contain flavanoids which act to inhibit neutrophil degranulation so that they will inhibit the release of cytokines, free radicals, and enzymes that play a role in reducing swelling (Widiyanto et al., 2020). This study provides the effect of cutaneous stimulation which stimulates peripheral nerve fibers to send impulses through the dorsal horn of the spinal cord, when impulses carried by A-Beta dominate, the gate mechanism will close so that pain impulses are not transmitted to the brain (Meriani et al., 2020).

Pain is a sensation that needs to be overcome and the activity to suppress pain caused by Moringa leaf extract is due to the active compounds contained in Moringa leaves. This is supported by previous research conducted by Patel et al, that the results of the phytochemical test of Moringa leaves showed the presence of flavonoids, alkaloids, steroids, tannins, saponins, and terpenoids. Flavonoids are efficacious as analgesics whose mechanism of action is to inhibit the action of the cyclooxygenase enzyme. From the inhibition of the cyclooxygenase enzyme, it will reduce the production of prostaglandins so that it can reduce pain (Patel et al., 2014). Alkaloids have a function as inhibitors of important phases in prostaglandin biosynthesis, namely in the cyclooxygenase pathway in the arachidonic acid metabolic pathway, while saponins are classified into triterpenoids and steroid saponins which are anti-inflammatory, analgesic, and cytotoxic (Tamimi et al., 2020).

CONCLUSION

From the results of monitoring evaluation there was an increase in knowledge about the use of Moringa leaves for the management of breast swelling by 88%. Increased participant skills in using Moringa leaves for the management of breast swelling.

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