

## Accelerating Postpartum Recovery: Oxytocin Massage Training For Village Midwives

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### Abstract

**Purpose:** This community service activity aims Improving maternal well-being and reducing postpartum morbidity through oxytocin massage. **Methodology:** The methods used included hands-on training and mentoring by midwives, and regular monitoring and evaluation at the Purwoharjo Pemalang health centre. This program encourages includes training to hone the skills of village midwives in providing midwifery care to pregnant, delivery, and postpartum women with the specific skill of oxytocin massage to increase the well-being of mothers and babies. **Findings:** Village midwives in Comal Subdistrict, Pemalang Regency, the working area of Puskesmas Purwoharjo Pemalang, have acquired special skills in providing midwifery care using oxytocin massage.

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### A. Introduction

Exclusive breastfeeding in developing countries saves approximately 1.5 million babies every year. That is why World Health Organization (WHO) recommends exclusive breast exclusive breastfeeding up to the age of 6 years as the sole source of old. Exclusive breastfeeding is one of the keys to reducing infant mortality. Increasing breastfeeding can save 820,000 children under the age of five, 87% of whom are six-month-old infants. This represents 13% of the annual child mortality rate.<sup>1</sup>

Breast milk is the best nutrition for newborns until the age of 6 months of age, because the baby's intestines are not yet able to digest food at that time other than by breastfeeding.

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<sup>1</sup> UNICEF, "Breastfeeding: A Mother's Gift, for Every Child," *Unicef*, 2018, 1-13, <https://data.unicef.org/resources/breastfeeding-a-mothers-gift-for-every-child/>.

Breast milk can reduce gastrointestinal disorders in infants because the mother directly produces breast milk so it is fresh and sterile. The composition contained in breast milk is very contains many benefits, namely as nutrients, hormones, immunity, growth factors, anti allergies, antibodies, and anti-inflammatory which can prevent infection in infants. Prevent the infection of the baby.<sup>2</sup> Breast milk production can be affected by two factors: production and secretion. The hormone prolactin influences milk production, while secretion is influenced by the hormone oxytocin. Oxytocin is released when the nipple is stimulated. Stimulated by the baby sucking and the mother's breast and back massaging. The mother feels relaxed and calm. This allows oxytocin to be released and breast milk to be expressed quickly.<sup>3</sup>

According to data released by the WHO in 2023, Only about 38% of women worldwide were exclusively breastfeeding. In addition, only 54.5% of Indonesian babies aged 0-6 months were exclusively breastfed, compared to the 80% targeted.<sup>4</sup> The number of infant mortality cases in Pemalang Regency in 2022 was recorded at 151 cases, an increase compared to the number of infant mortality cases in 2021, which was 109 cases. in 2021 which was 109 cases. Thus, infant mortality in Pemalang Regency also increased in 2022, rising from 6.5 per 1,000 live births in 2021 to 4.41 per 1,000 live births in 2021. Compared to the RPJMD target for Pemalang Regency of 5 per 1,000 live births, the infant mortality rate has not met the target.<sup>5</sup> Breastfeeding is a behavior that encourages mothers to reduce stress and increase their nurturing behavior towards their babies. It can also help to maintain a positive mood. One method of promoting calm during breastfeeding and improving milk production is oxytocin massage. This massage involves applying pressure along the spine to stimulate the release of the hormones prolactin and oxytocin after childbirth.<sup>6</sup>

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<sup>2</sup> E. Anbarasi, S.K. Kalabarathi, and P.D. Padma, "Effectiveness of Oxytocin Massage on Promoting Lactation among Postpartum Mothers at Saveetha Medical College and Hospital, Thandalam, Chennai," *Cardiometry*, no. 25 (2023): 197–203, <https://doi.org/10.18137/cardiometry.2022.25.197203>.

<sup>3</sup>Hidayatun Nufus, "Profil," *Jurnal Borneo Cendekia* 3, no. 2 (2019): 223–27, <https://doi.org/10.54411/jbc.v3i2.217>.

<sup>4</sup> RI Kemenkes, "Profil Kesehatan Indonesia 2020," *Kementrian Kesehatan Republik Indonesia* 139 (2021).

<sup>5</sup> Dinkes Pemalang, "Profil Kesehatan Kabupaten Pemalang Tahun 2022," *Dinas Kesehatan Kabupaten Pemalang*, no. 12 (2023): 1–218, <https://dinkes.pemalangkab.go.id>.

<sup>6</sup> Anbarasi, Kalabarathi, and Padma, "Effectiveness of Oxytocin Massage on Promoting Lactation among Postpartum Mothers at Saveetha Medical College and Hospital, Thandalam, Chennai."

Empirical data from Purwoharjo Community Health Center, Pemalang that is one of the health centers in Pemalang Regency with intermediate accreditation status and 30 midwives. Spread to each village in the working area of Puskesmas Purwoharjo and as a village midwife. Village midwives have the main task of carrying out health activities in the village, mobilizing village communities to live healthy lives, and providing maternal and child health services. Specific tasks include midwifery services, family planning, health counselling, and fostering health cadres.

In carrying out maternal and child health services, namely midwifery services, midwives are required to be able to carry out their duties comprehensively. One of which is to provide midwifery care, namely complementary therapy in the form of oxytocin massage for pregnant and postpartum women. The results of interviews with 6 village midwives in the working area of Purwoharjo Health Centre, they mentioned that as village midwives they did not have a good understanding of oxytocin massage. That in their village, the population of mothers of reproductive age is around 75% and many postpartum mothers suffer from mastitis. Therefore, midwives need to be trained in oxytocin massage. Some village midwives lacked mastery of the process of implementing oxytocin massage due to a lack of knowledge. Therefore, one of the health center programs is training village midwives, namely oxytocin massage training.

Training in oxytocin massage is very important to improve the knowledge and skills of village midwives in carrying out their duties, one of which is to reduce maternal morbidity and improve infant well-being in line with SDG target 3. Strengthening nursing and midwifery training is key to improving midwifery care. Evidence shows that fully educated and regulated midwives integrated within and supported by an interdisciplinary team and a supportive environment can deliver around 90% of essential reproductive health services, maternal, newborn and adolescent health that are important over the lifespan.<sup>7</sup>

## **B. Method**

Effective training can be completed through a systematic training process. The training process can be made clearer. Training needs assessment, training planning, training delivery and training evaluation are the four phases of the training process.

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<sup>7</sup> Dorkasi L. Mwakawanga et al., "Use of Non-Pharmacological Methods in Managing Labour Pain: Experiences of Nurse-Midwives in Two Selected District Hospitals in Eastern Tanzania," *BMC Pregnancy and Childbirth* 22, no. 1 (2022): 1-10, <https://doi.org/10.1186/s12884-022-04707-x>.

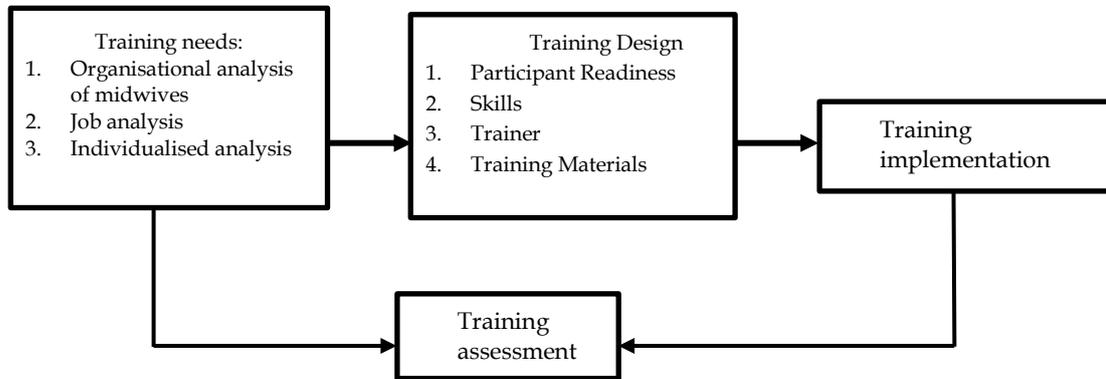


Figure 1. Training Process

The training of oxytocin massage for village midwives in the working area of Puskesmas Purwoharjo Comal sub-district Pemalang district, includes several stages:

#### 1. Screening Of Training Needs

Screening was conducted to ascertain the upgrading of basic skill needs in providing midwifery care in performing complementary therapies.



Figure 2. Training needs screening

#### 2. Training design

Training is systematically designed and developed according to needs to improve the performance and competence of village midwives. Training is designed and developed according to the needs systematically to improve the performance and competence of village midwives.

- a. Readiness of trainees
- b. Ability of trainers
- c. Training materials



Figure 3. Coordination of training design

### 3. Training implementation

After the design of the oxytocin massage training is completed, the next step is the training implementation process. The methods used need to be tested to ensure they fulfil the training requirements. For training to be effective, a number of factors need to be considered, including the nature of the training, the identity of the trainees, the skills of the trainer, the geographical location, the cost in time and the timing of the training. At this stage, the village midwife performs oxytocin massage on postpartum mothers.



Figure 4. Delivery of materials from trainers to trainees



Figure 5. Training implementation

### 4. Training assessment

Assessment is carried out to see the results obtained when training activities take place by comparing before and after training with the expected objectives of the company or organization of the company or organization. Training assessment is conducted to recommend training activities that are carried out whether the training program needs to be continued and whether the training program needs to be continued and improved or not.

This stage assesses whether the midwife can perform oxytocin massage properly and correctly, as evidenced by the mother's milk flowing after the massage.



Figure 6. Training Assesment



Figure 7. Evaluation and reflection with breastfeeding mothers

### C. Results and Discussion

Implementation of birthing ball in coordination with the maternal and child health unit of Purwoharjo Health Centre Pemalang. Patient history taking, head to toe examination, pregnancy screening. The following is an explanation of the characteristics of the participants in table 1.

Table 1. Training participants characteristic

No	Participants	F	%
1	Age of village midwife		
	▪ 25 years old	5	20
	▪ 26-35 years old	10	40
	▪ 36-45 years old	10	40
2	Length of service		
	▪ 3-6 years	10	40
	▪ 7-12 years	8	32
	▪ 13-16 years	7	28
3	Education history		

	▪ Diploma in midwifery	15	60
	▪ Bachelor of applied midwifery	10	40
4	Knowledge and skill level		
	▪ Good	20	80
	▪ Fair	5	20
	▪ Poor	0	0

The age of the participants in the village midwife training was dominated by the 26-45 age group, with a total of 45%. Most of them have a length of service of 3-6 years, total 40 per cent. The educational history of village midwives was dominated by midwifery diploma. After receiving the training, the village midwives' knowledge increased by 80%.

Capacity refers to the degree to which an individual's internal processes are linked to task-relevant skills, abilities, knowledge, experience and opportunities to perform <sup>8</sup>. The length of service shows how long a person has worked in each job or position <sup>9</sup>. Work experience is the process of formation of knowledge and skills about the methods of a job for employees due to their involvement in the implementation of their work. employees because of this involvement in the implementation of their work. Work experience is the most influential factor in creating the growth of a business.

A long period of service will tend to make an employee feel more comfortable in an organization, this is due to, among others, having adapted to the environment long enough environment for a long time so that a worker will feel at home with his work. Other causes also due to a policy from the agency regarding life insurance in old age. Experience for vigilance against accidents increases with age, years of service in the company and the length of work in the workplace concerned. New workers do not yet know their work and safety, besides that new workers are concerned with completion of a job given to them. Length of a person's length of service can be attributed to the experience gained in the workplace. The longer a worker works the more the more experience and the more his knowledge and skills. A longer period of longer working period shows a person's

<sup>8</sup> Widyaswara Adiwijaya, "Hubungan Lama Bekerja Dan Motivasi Terhadap Kinerja Pegawai," *Jurnal Bisnis Administrasi* 53, no. 9 (2019): 1689-99.

<sup>9</sup> Dina Riskha Ariani, Sri Langgeng Ratnasari, and Rona Tanjung, "Pengaruh Motivasi, Lingkungan Kerja, Dan Pengalaman Kerja Terhadap Kinerja Karyawan Pt. Super Box Industries," *Jurnal Dimensi* 9, no. 1 (2020): 74-86, <https://doi.org/10.33373/dms.v9i1.2325>.

experience compared to other co-workers, so often the length of work experience is often taken into consideration a company in looking for workers.

A midwife is a woman who has completed the Midwife Education Program Midwife Education Program, recognized by the state and obtained qualifications and is authorized to carry out midwifery practice. Midwives in carrying out functions and duties are based on the competence and the authority given which is regulated through the Regulation of the Minister of Health (PERMENKES) No.900/MENKES/SK/VIII/2000. Midwife as a profession is prepared through formal education so that graduates can carry out the work that is their responsibility professionally<sup>10</sup>. The presence of midwives is indispensable for improving the welfare of mothers and babies.

The training was held on 15-17 July 2024 at the Purwoharjo Puskesmas training room. the training was held for 3 days, each day for 7 hours. starting with a material session, then a practical session. On the last day, an evaluation was conducted to determine the level of knowledge of the trainees.

Knowledge is a domain that is very important for the formation of one's performance. The results of the oxytocin massage training obtained 80% knowledge of village midwives. This proves that midwives can receive material well and can carry out oxytocin massage properly and correctly.

Oxytocin massage is an attempt to activate the hormones prolactin and oxytocin after birth by massaging down the side of the spine to the fifth and sixth costae. This massage increases the level of the hormone oxytocin, which can calm the mother and stimulate natural lactation. Oxytocin massage is a circular massage that lasts 15-20 minutes and is performed from the neck and shoulder blade to the spine (costae 5-6)<sup>11</sup>, which provides comfort and reduces swollen breasts by decreasing engorgement. It also stimulates the release of oxytocin and maintains milk production.<sup>12</sup>

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<sup>10</sup> Yuli Setiawati and Nurafni Ani, "Hubungan Pelatihan Apn Dengan Pengetahuan Dan Keterampilan Bidan Dalam Pertolongan Persalinan," *Bina Generasi: Jurnal Kesehatan* 11, no. 1 (2019): 74-79.

<sup>11</sup> Lidia Widia and Tuti Meihartati, "Oxytocin Massage Enhanced Breast Milk Production in Post-Partum Women," *Majalah Obstetri & Ginekologi* 25, no. 2 (2018): 63, <https://doi.org/10.20473/mog.v25i22017.63-65>; Kadek Yuli Hesti et al., "Effect of Combination of Breast Care and Oxytocin Massage on Breast Milk Secretion in Postpartum Mothers," *Belitung Nursing Journal* 3, no. 6 (2017): 784-90, <https://doi.org/10.33546/bnj.293>.

<sup>12</sup> Anbarasi, Kalabarathi, and Padma, "Effectiveness of Oxytocin Massage on Promoting Lactation among Postpartum Mothers at Saveetha Medical College and Hospital, Thandalam, Chennai."

The action of the parasympathetic nerve to stimulate peripheral sensory nerve endings in the back of the brain to release the hormone endorphin, which can limit the release of adrenal hormones, is accelerated by oxytocin massage<sup>13</sup>. One of the chemicals that can limit the release of oxytocin is adrenaline. The release of the hormone endorphin can bring relief, increase blood circulation, and improve the organ system performance<sup>14</sup>. This can increase milk production and release by stimulating the release of the hormones oxytocin and prolactin.

The results of this training found that village midwives in the working area of Puskesmas Purwoharjo, Comal District, Pemalang Regency, were able to perform oxytocin massage, as evidenced by pregnant women in the third trimester and postpartum women's milk can be released smoothly. Mothers feel comfortable when breast milk can be released and directly fed to the baby.

#### **D. Conclusion**

Oxytocin massage training is very effective to improve the knowledge and skills of village midwives in carrying out midwifery care tasks, especially in providing complementary therapies. There was a significant change in the knowledge of village midwives in performing oxytocin massage after the training. Oxytocin massage is also effective for breastfeeding mothers, because the oxytocin hormone can be released optimally. Mothers can provide breast milk to the baby optimally as well. Oxytocin massage is a massage technique that aims to stimulate the release of the hormone oxytocin in the body. Oxytocin is often referred to as the 'love hormone' as it plays a role in various processes related to social relationships, emotional bonding, as well as relaxation. Oxytocin massage usually involves gentle and rhythmic touching of specific areas, such as the back, shoulders and neck. The release of the hormone oxytocin is associated with increased levels of the hormone prolactin, which plays a role in several ways in breastfeeding mothers. Therefore, this technique is often used in breastfeeding mothers to help facilitate milk production, as oxytocin also plays a role in the milk release process.

#### **E. Acknowledgements**

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<sup>13</sup> Ade Triansyah et al., "The Effect of Oxytocin Massage and Breast Care on the Increased Production of Breast Milk of Breastfeeding Mothers in the Working Area of the Public Health Center of Lawanga of Poso District," *Gaceta Sanitaria* 35 (2021): S168-70, <https://doi.org/10.1016/j.gaceta.2021.10.017>.

<sup>14</sup> Prawirohardjo, "Produksi Asi Ibu Postpartum," 2020.

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## F. Author Contributions Statement

This activity was carried out by midwifery department. Uswatun Chasanah as the compiler of the manuscript. Tri Kartikawati as a trainer, Dewi Mayangsari as facilitators and trainee screening.

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