

## Training of Health Cadres on Baby Care and Kangaroo Mother Care in Kabunan Village, Balen District, Bojonegoro Regencyld)

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### ABSTRACT

The rate of premature births in Indonesia ranged from 10-20% in 2009. According to data from the Indonesian Demographic and Health Survey (SDKI), the Infant Mortality Rate (IMR) has decreased since 1991, from 68 per 1,000 live births to 34 per 1,000 live births according to the 2007 SDKI. However, this figure is still far from the target of the Fourth Millennium Development Goal (MDGs), which aimed to reduce the infant mortality rate (IMR) to 23 per 1,000 live births by 2015. In addition, the Expanding Maternal and Neonatal Survival (EMAS) program, aimed at reducing maternal and infant mortality by 25% from 2011 to 2016, highlights the need to study factors that affect maternal and perinatal outcomes, particularly in preterm deliveries, to reduce maternal and infant mortality and morbidity rates. In Bojonegoro, the number of premature births in 2018 was 404 cases out of 17,172 births. The health centers with the highest rates of premature births were Balen Health Center with 34 cases out of 855 births, and Sumberjo Health Center with 35 cases out of 542 births. In 2018, Kabunan Village recorded 6 cases of premature birth out of 49 births, or 19.5%. The methods used were lectures, demonstrations, pre-tests, and post-tests.

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## INTRODUCTION

The rate of premature births in Indonesia ranged from 10-20% in 2009, which placed Indonesia in the fifth position for the largest number of premature births. According to data from the Indonesian Demographic and Health Survey (SDKI), the Infant Mortality Rate (IMR) has decreased since 1991, from 68 per 1,000 live births to 34 per 1,000 live births according to the 2007 SDKI. However, this figure is still far from the target of the Fourth Millennium Development Goal (MDGs), which aimed to reduce the infant mortality rate (IMR) to 23 per 1,000 live births by 2015.

Additionally, the Expanding Maternal and Neonatal Survival (EMAS) program, which aimed to reduce maternal and infant mortality by 25% from 2011 to 2016, highlights the need to study factors that can affect maternal and perinatal outcomes, particularly in premature deliveries, in order to reduce maternal and infant mortality and morbidity rates.

In Bojonegoro, the number of premature births in 2018 was 404 cases out of 17,172 deliveries. The health centers with the highest number of premature births were Balen Health Center with 34 cases out of 855 deliveries and Sumberjo Health Center with 35 cases out of 542 deliveries. In 2018, Kabunan Village recorded 6 cases of premature birth out of 49 deliveries, or 19.5%.

According to the WHO definition, a premature baby is a baby born alive before the 37th week of pregnancy (calculated from the first day of the last menstrual period). A preterm baby is a baby born at 37 weeks of gestation, regardless of the weight, with most premature babies being born weighing less than 2,500 grams (Surasmi, Handayani & Kusuma, 2003, p. 31).

Based on the issues faced by our partners, we will carry out a community service activity in the form of Baby Care and Baby Wearing Care Training for Health Cadres in Kabunan Village, Balen Subdistrict, Bojonegoro Regency.

### *Objectives of the Activity*

There are the objectives of the activity:

#### *General Objective*

The general objective of this community service is to increase the knowledge and skills of the Village Health Cadres regarding Baby Care and Baby Wearing Care in Kabunan Village, Balen Subdistrict, Bojonegoro Regency.

#### *Specific Objectives*

The specific objectives of this community service are as follows:

- a. To increase the knowledge of village health cadres about baby care and baby wearing care in Kabunan Village, Balen Subdistrict, Bojonegoro Regency.
- b. To improve the skills of health cadres in providing counseling about baby care and baby wearing care in Kabunan Village, Balen Subdistrict, Bojonegoro Regency.
- c. To strengthen the commitment of village health cadres regarding baby care and baby wearing care in Kabunan Village, Balen Subdistrict, Bojonegoro Regency.

- d. To conduct counseling on baby care and baby wearing care to postpartum mothers by health cadres in Kabunan Village, Balen Subdistrict, Bojonegoro Regency.

### *Etiology*

Predisposing factors for premature birth include: (a) maternal factors, such as a history of previous premature births, antepartum bleeding, malnutrition, uterine abnormalities, hydramnios, heart disease/other chronic diseases, hypertension, maternal age under 20 years or over 35 years, closely spaced pregnancies, infection, trauma, habits such as tiring work, smoking; (b) fetal factors, such as congenital defects, multiple pregnancies, hydramnios, premature rupture of membranes; (c) low socioeconomic status (Prawirohardjo, 2006, p. 775).

Due to being born prematurely, and in some cases due to growth disturbances while still in the womb, known as Intrauterine Growth Retardation (IUGR) (Maryunani, 2013). One of the causes of mortality in low birth weight infants (LBWI) is feeding disturbances, which occur due to the immaturity of the digestive organs in LBWI (Depkes, 2009). This can include the absence or weakness of sucking and swallowing reflexes in the baby, as well as insufficient intake of breast milk as soon as the baby is allowed to drink. Many babies do not receive breast milk from their mothers due to certain conditions, which further worsens the health development of LBWI. This is because the immune system of LBWI/premature infants is not as developed as that of full-term babies, making them vulnerable to infections (sepsis), which is common.

Babies with Low Birth Weight (LBW) do not always receive health services with advanced technology due to barriers such as cost, geography, transportation, and communication. An alternative to incubators is needed that is effective and economical. The implementation of the Kangaroo Care method is one effort made to address various problems in babies with low birth weight.

Kangaroo Care is a special method for caring for low birth weight babies. This care involves direct skin-to-skin contact between the baby and the mother. This direct contact helps promote the baby's health development through improved temperature regulation, breastfeeding, infection prevention, and maternal-baby bonding, starting in the care facility and continued at home, combined with the provision of breast milk to ensure the baby stays warm.

To achieve success in providing breast milk (ASI) to premature babies, appropriate actions must be taken, one of which is through close care, often referred to as the kangaroo care method. The position of the baby during this care method makes it easier for the mother to breastfeed directly, as the baby is always near the mother's breast, attached to her, and skin-to-skin contact occurs, allowing for more frequent breastfeeding.

Based on the research findings, the difference in the standard deviation of weight before and after implementing the kangaroo care method is 44.796. The t-value calculated was 20.519 with a p-value of 0.000. Since  $p < 0.05$ , it can be concluded that there is an effect of the kangaroo care method on weight gain in

Low Birth Weight (BBLR) babies in the Perinatology Room of Dr. Rasidin Hospital, Padang in 2017.

The research conducted by Dyah et al. (2013) proves the effectiveness of the kangaroo care method in increasing the weight of Low Birth Weight (BBLR) babies. According to the research framework, the application of the kangaroo care method can optimally increase the baby's weight. This is because a baby born with Low Birth Weight (BBLR) is generally placed in an incubator to maintain its body temperature and is given oxygen assistance for breathing. BBLR babies can also experience mental and physical disorders in their subsequent developmental stages, which require high healthcare costs. In addition to the incubator, the baby's body temperature can be maintained with the kangaroo care method.

This method has been proven to effectively regulate the baby's body temperature for an extended period, as well as stabilize heart rate and breathing. The skin-to-skin care encourages the baby to search for and latch onto the breast, strengthening the bond between mother and baby and aiding in successful breastfeeding. In addition to the skin contact effect, this method makes babies more resilient to pain than when carried in a cloth, and their weight increases rapidly (Dyah, 2013).

This method was once considered only for poor people because wealthy people would place their babies in incubators. However, based on experience, the results of the kangaroo care method are actually more effective. The kangaroo care method can stabilize the baby's heart rate and make breathing more regular, which improves the distribution of oxygen throughout the body. Additionally, this method prevents the baby from getting cold. Babies are calmer, cry less, and their weight increases more rapidly (Ika, 2010).

Body weight is the most important and frequently used anthropometric measure for newborns (neonates). During infancy and toddlerhood, body weight is used to assess the rate of physical growth and nutritional status. Growth is an increase in the overall physical size of the body or an increase in each part, related to an increase in the number or size of cells. Babies born at term will regain their birth weight by day 10. The average weight gain during the first three months is about 200 grams per week, 150 grams per week during the second three months, and 42 grams per week during the second year (Ika, 2010).

The kangaroo care method can be recommended for parents and healthcare providers to address the issue of Low Birth Weight (BBLR) by applying kangaroo care at home. In this study, kangaroo care was applied for just 60 minutes per day, and this alone was able to increase the baby's weight more than babies who did not receive kangaroo care. It would be even more effective if the method were applied for 24 hours a day (Diyah, 2013).

The influence of the kangaroo care method on weight gain in BBLR babies is because the baby is in a relaxed state, resting in a comfortable position similar to the one in the womb. This reduces the baby's restlessness and leads to longer sleep. In this state, oxygen and calorie consumption are at their lowest, so the available calories are used to increase body weight. Additionally, with the kangaroo care method, breast milk production increases and breastfeeding frequency becomes more frequent, leading to a better effect on weight gain

(Suradi, 2000). This theory aligns with real-life observations, as after applying kangaroo care, the mother's milk production increased, and there were signs of breast milk leakage onto the cloth, leading the mother to use a cloth to prevent the milk from soaking the baby's body.

Partner Issues based on the data we obtained during our research in 2019 in the Balen Public Health Center area, the following issues were found, especially in Kabunan village: Neonatal health data in 2019 included the following cases: 5 premature births, 1 case of asphyxia, 6 cases of low birth weight (LBW), and 1 case of Neonatal Tetanus. Meanwhile, for maternal health in Kabunan village, the cases found included: 1 case of anemia in pregnant women and 5 cases of delayed labor. Based on the issues faced by the partner, we will carry out a community service activity in the form of training on Baby Care and Kangaroo Mother Care (KMC) for Health Cadres in Kabunan village, Balen subdistrict, Bojonegoro Regency.

### ***Benefits of the Activity***

The following activities provide benefits for the village health cadres and the community, For the Public Health Center (Puskesmas), and For the Lecturers

#### *For the village health cadres and the community*

1. Improved knowledge and skills of village health cadres regarding baby care and Kangaroo Mother Care (KMC) method.
2. Increased knowledge and skills of the community regarding baby care and Kangaroo Mother Care (KMC) method.

#### *For the Public Health Center (Puskesmas)*

1. Enhanced implementation of community health promotion efforts.
2. Improved execution of healthcare services.

#### *For the Lecturers*

1. Increased implementation of the Tri Dharma of Higher Education in the field of community service.
2. Strengthened network of lecturers through cooperation with Kabunan village and the Balen Public Health Center in Bojonegoro.

## **IMPLEMENTATION AND METHODS**

The methods used were lectures, demonstrations, and pre and post-tests. The lecture covered topics such as: the concept of cadres, the concept of baby care, the concept of low birth weight (LBW) babies, the concept of kangaroo care, the concept of Health Education and Information (KIE), techniques for delivering KIE to the community, and techniques for preventing hypothermia through baby care. Demonstrations included baby care and bathing, demonstration of kangaroo care, and KIE practices. The pre and post-tests aimed to assess participants' knowledge before and after the training. The participants were health cadres from Kabunan Village, Balen District, Bojonegoro Regency, totaling 35 people.

## RESULTS AND DISCUSSION

The knowledge of training participants is shown in the table below:

Table 1. Pre and Post Test Scores on Baby Care and Kangaroo Mother Care Knowledge of Cadre Training Participants in Kabunan Village, Balen District, Bojonegoro Regency, September 2021

No	Uraian	Pre test	Post test	Keterangan
1	Lowest score	33	67	Improved
2	Highest score	86	100	Improved
3	Average	60.6	85,2	Improved

From the table above, it can be explained that there was an improvement in the lowest score, highest score, and average score achieved by the training participants during the post-test.

Table 2. Post-Test Score Categories on Baby Care and Kangaroo Care Knowledge of Cadre Training Participants in Kabunan Village, Balen District, Bojonegoro Regency, September 2021

No	Category	Frequency (people)	%
1	Very good (79-100)	30	85,7
2	Good (68-78)	2	5,7
3	Satisfactory (50-67)	3	8,5
Total		35	100

From the table, it can be explained that the majority, 30 people (85.7%), had "very good" knowledge in the post-test category.

### *Counseling to Two Families*

Counseling was conducted by 35 (100%) training participants. Each participant provided counseling to 2 target families, resulting in a total of 70 families receiving counseling on baby care and kangaroo care.

## DISCUSSION

Health education is essentially an effort to convey health messages to the community, groups, or individuals, with the hope that through these messages, the community, group, or individual can gain better knowledge. Health education is essentially an effort to convey health messages to the community, groups, or individuals. The hope is that with these messages, the community, groups, or individuals can gain better knowledge (Notoatmodjo S, 2007).

There is alignment between the facts and theory that training, which is one of the efforts in health education, can increase a person's knowledge. High scores also indicate the participants' seriousness in attending the training. It is also hoped that the community will pay more attention to baby care and close baby care to reduce infant morbidity rates and provide care for low-birth-weight babies.

Additionally, using the kangaroo method, the risk of infants contracting infections is lower because the normal flora of the mother's skin is certainly better than that of those who do not use the kangaroo method. Furthermore, sick or

small newborns (with a birth weight < 2500 grams) require extra warmth to maintain normal body temperature. Low birth weight babies are more prone to hypothermia, and warming them up again takes a long time.

The risk of complications and death increases significantly if the environmental temperature is not optimal. According to the Ministry of Health of Indonesia (2003), there are five ways to warm up and maintain the body temperature of low-birth-weight babies.

Health education is an effort to encourage behavior change in individuals, groups, communities, or societies so that they know, want, and are able to solve the problems they face (Aminah, S, 2007). Health development aims to increase awareness, ability, and willingness to live a healthy life for every individual, in order to achieve the highest possible level of health. The community is expected to be able to play an active role as a health development actor in maintaining, preserving, and improving their health status, and actively contributing to the realization of this goal.

### ***Supporting Factors***

The supporting factors for this training are as follows:

1. High support from the Head of the Balen Health Center, the Coordinator Midwife, the Health Promoters at Balen Health Center, the Health Workers in the village, and the Head of Kabunan Balen Village.
2. The discipline, orderliness, and high interest from the training participants.
3. The presence of monitoring and supervision from Poltekkes Kemenkes Surabaya.

### ***Inhibiting Factors***

The inhibiting factor for this training is that the training space was held outdoors at the village hall due to the pandemic, which resulted in the LCD layer's brightness making the images and materials presented less clear.

## **CONCLUSIONS AND RECOMMENDATIONS**

There is the conclusion and recommendations:

### ***Conclusion***

1. There was an increase in the lowest, highest, and average scores during the post-test, with the majority (30 participants, 85.7%) having knowledge that was categorized as very good.
2. All 35 (100%) of the training participants have conducted health education for 2 families, resulting in a total of 70 families receiving education on the dangers of pesticide exposure to reproductive health.
3. The achievement in KIE (Health Education) skills about preparing for breastfeeding in PMK by the participants was an average score of 81.0 (very good), with 65% of participants achieving a very good score (79-100) in the health education skills, and all participants passed the training.
4. A joint commitment was formed to support baby care and close baby care in Kabunan Village, within the Balen Health Center area, with 35 cadres signing the commitment.

### **Recommendations**

There is the recommendations for the community and for the D3 Midwifery Program in Bojonegoro.

#### ***For the Community***

1. The community should pay more attention if there is a mother with a newborn baby in the family, whether the baby has normal birth weight or low birth weight.
2. Mothers and families should better understand the importance of daily baby care, especially for low birth weight babies, through Kangaroo Mother Care (PMK) and the proper method of breastfeeding in PMK.
3. Health cadres should frequently provide education on the importance of daily baby care using PMK, especially for families or communities with low birth weight babies in Kabunan Village, for example, to groups such as Dasa Wisma study groups, tahlil gatherings, and others.

#### ***For the D3 Midwifery Program in Bojonegoro***

For the lecturers, it is important to continuously improve their knowledge and engage in creative activities in community service through training for cadres in the community.

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