



THE EFFECTIVENESS OF KANGAROO MOTHER CARE (KMC) TECHNICAL TRAINING IN THE GROUP OF HOUSEWIVES ON THE ABILITY TO IMPLEMENT KMC IN CARING FOR LOW BIRTH WEIGHT BABIES AT HOME

Diyani Indriyani ¹⁾, Awatiful Azza ²⁾, Ria Angin ³⁾

^{1,2)}School of Nursing, Faculty of Health Science University of Muhammadiyah Jember

³⁾School of Political Science; Faculty of Social and Political Science University of Muhammadiyah Jember

Corresponding email : diyanindriyani@unmuhjember.ac.id ,
awatiful.azza@unmuhjember.ac.id, ria.angin@unmuhjember.ac.id

ABSTRACT

BACKGROUND: Low birth weight (LBW) babies are babies weighing less than 2500 grams and they are including to baby at risk due to an immature organ system and lack of body fat reserve. Common problems include respiratory distress syndrome (RDS), dysfunction of immunological system, gastrointestinal system, central nervous systems and temperature problems. Related to risk of maladaptive temperature LBW infants has a serious risk of hypothermia. Kanggoro Mother Care (KMC) is known as one of LBW baby care strategy in preventing hypothermia at home.

SUBJECT AND METHODE : This study is conduct to analyzed the effectiveness of KMC technical training in the group of housewife on ability to implement KMC for LBW babies at home. This is pre-experimental research involving 12 respondents or housewife who having a LBC babiesin Sumbersari taken by purposive sampling. The data was collected using ibtervention of KMC Technicque adn likerst scale.

RESULTS: the result study show that the average pre test score was 66.25 and score for post test are 80.42. The effectivity tof KMC technical training was analyzed by using paired T – test and show p value of 0,0000.

DISCUSSION : KMC technical training is effective on ability to implement KMC in caring for LBW babies at home. The recommendation of this study are suggested taht housewife use the KMC methode at home in helping LBW infants adapt to extra uterine temperature changes.

Keywords : Kangoroo Mother Care (KMC), LBW babies, housewife

INTRODUCTION

Low birth weight (LBW) babies are babies weighing less than 2500 grams, which is weighed at birth until the first 24 hours after birth (Saputra, 2014). LBW babies are at risk due to immature organ systems and lack of body fat resesrve. Conditions of early adaptation of LBW infants that need attention are the adjustment of body temperature to the environment, as well as thin body fat pads. TBW babies are difficult to adjusting theor body temeperature because of decreasing of fat insulation and comparison between large body surface are to body weight (Goomela et all, 2013).



To overcome the health problems of LBW infants, comprehensive care is needed. That is, it should be treated in hospital which aims to save the survival of the LBW babies. Kangaroo Mother Care (KMC) is known as one of alternative LBW babies care. This method is very effective and efficient since it can be done by mothers and family members (MCHIP, 2012).

Statistical data show that 90% of LBW babies are in developing country and their mortality are higher than baby weighing more than 2500 grams (Pantiawati, 2010). As many as 15 million babies are born LBW every year. Data in 2013 showed that the number of babies born in 2010 was 4,371,800. Of these, one in six born to experience LBW or 15.5 per 100 live births (675,700 inhabitants) were born LBW (IDAI, 2014). East Java Provincial Health Office in 2012 stated that the number of babies with LBW in East Java reached 3.32% which was obtained from the percentage of 19,712 out of 594,461 newborns weighed. Based on Basic Health Research (Riskesdas) of the Ministry of Health (2007) the etiology of neonatal deaths from 0 – 6 days in Indonesia are asphyxia (37%), LBW (34%) and sepsis (12%). Meanwhile the etiology of neonatal death 7 – 28 days is sepsis (20.5%), congenital abnormalities (19%), pneumonia (17%), respiratory distress syndromes/RDS (14%). So one of the most common etiology of death for newborn is LBW and infection (IDAI, 2014). The mortality rate for neonatal sepsis is quite high, 1350 % of the newborn mortality rate. The problems that often arise as complication of neonatal sepsis are meningitis, seizures, hypothermia, hyperbilirubinemia, breathing and drinking dysfunction (Ministry of Health, 2007). Approximately 57% of infant death occur when infants under 1 month of age and are mainly caused by perinatal disorders and LBW babies. According to estimates, every year around 400,000 babies are born with low weight (Ministry of Health, 2007). Based on the report of the Family Health and Community Nutrition Section of the Jember District Health Office, the number of babies born with low birth weight in 2016 is 1,564 out of 36,260 newborns weighed (4.3%). The number of LBW babies this year has decreased compared to the previous year (Jember Health Office, 2017).

When a LBW baby is being treated in hospital, the baby's condition will be controlled and get intensive and strict supervision. Various medical efforts were made to improve the health status of LBW infants in order to survive in extrauterine life optimally. The problems will arise when the baby has been declared allowed to go home and require further care at home. Parents readiness level in performing LBW infants after returning from care at the hospital varies greatly. In the other hand the family (housewife) is not yet competent in carrying out baby care and further it will lead an illness to the baby and even threatening the baby's safety.

Morbidity cases in LBW infants after hospitalization are require vigilance and assistance to be resolved. If LBW experiences a condition of illness due to the impact of improper care, this will pose a risk of a worse prognosis compared to babies born with normal condition (Jember Health Office, 2014). Increasing the competence of mothers about LBW babies care is needed to maintain the baby's health status. But the fact is that there is still a lack of knowledge and understanding of LBW infants after hospitalization (Indriyani et al, 2016).

Based on the explanation above, it is necessary to provide training on baby care skills in the form of the Kangaroo Mother Care (KMC) technique to facilitate the mother's ability to adapt the ambient temperature to LBW infants at home. Therefore it is necessary to conduct research on the effectiveness of training on Kangaroo Mother Care (KMC) techniques on the ability of housewives to implement KMC in LBW infants at home.



METHODE

This is quantitative study conducted with pre-experimental pre-post test design. Data collected by using an extension program unit KMC intervention and likert scale. This study involving 12 housewives in Sumbesari Jember taken by purposive sampling technicque start at May to June 2019. Data analysis was conducted using dependent t – test.

RESULTS AND DISCUSSION

This study were focused on group of hosewives in Sumbesari Jember who has LBW babies. The trainin were held at May 25, 2018 start at 09.00 to 12.00. The topic is about Kangaroo Mother Care (KMC) technicque. The repondents's knowledge were identified before and after the training. Pretest were done before the training and posttest were done a month after the training. The training were given trough lecture, demonstration and redemonstration. Picture 1 below are describing the KMC training activity at group of housewives.



Picture 1. Kangaroo Mother Care (KMC) Technicque in Group of Housewives.

The following table will shows the results of Kangaroo Mother Care training.

Table 1. Age Frequency Distribution of Housewives in Sumbesari Jember May-June 2019 n=12

Age	Frequency	Percentage
< 20 years old	2	16,7
20-35 years old	10	83,3
>35 years old	0	0.0
Total	12	100.0

Based on the data in table 1 it seen that majority if housewives is 20 -35 years old, which is 10 respondents (83,3%).



Table 2. Educational Degree Frequency Distribution of Housewives in Summersari Jember May-June 2019 n=12

Educational Degree	Frequency	Percentage
Elementary – junior high school	1	8,3
Senior high school	9	75
College	2	16,7
Total	12	100.0

According to the data from table 2 we can see that majority of respondents were graduated from senior high school, counted 9 respondents (75%).

Table 3. Tribal Frequency Distribution of Housewives in Summersari Jember May-June 2019 n=12

Tribe	Frequency	Percentage
Javanese	8	66,7
Madurese	4	33,3
Total	12	100.0

From the data on table 3 we see that majority of respondents are javanese, counted 8 respondents (66.7%).

Table 4. Frequency Distribution of Information of LBW Ever Obtained in Group of Housewife May – June 2019, n = 12

Exposure	Frequency	Percentage
Yes	1	8,3
No	11	91,7
Total	12	100.0

The data on table 4 shows that majority of respondents have never been exposed to information about LBW babies care.

Table 5. Effect of Kangaroo Mother Care (KMC) technique Training to Ability to Implement KMC in Caring LBW Babies in Group of Housewife in Summersari

Variabel	Min	Max	Mean	Std. Deviation	SE Mean	P value
Pretest	60	75	66.25	4.827	1.393	0,00
Posttest	75	90	80.83	4.687	1.353	

According to the data about the training activity in table 5, it seen that average score at pretest is 66.25. And average score at posttest is 80.33. And also the p value is obtained 0.00 which means that KMC training in is effective to improve housewives ability in performing LBW babies care at home.



Table 5 also told us that the pretest average score is 66.25 and after pretest the average score is become 80,83. Statistical analysis of effectivity of KMC training was obtained p value as 0,00.

The respondents are very responsive at the training, it is proven that they can redemonstrate the KMC technicque according to the direction conveyed. This training is significantly effective to improve housewive knowledge in doing KMC technicque to the LBW babies.

Experience of being a mother of a risky baby such as LBW baby require some skill to maintain the baby's survival. It is because the LBW babies are having a risk that related to immunity where the immunity is succceptible to infection process including the inability to adapt to the changes in ambient temperature spontaneously. This happen due to immaturity of hipotalamus which is functions is to regulate body temperature and also the tin body fat pads (Indriyani, Asih and Wahyuni, 2019).

One thing that make it possible to help maintain body temperature is by providing a warm environment, by doing Kangaroo Mother Care (KMC) technicque. It was obtained that 91,7% respondents never exposed to information about this technicque. That is why this technicque is very important to inform them about the KMC technicque. Improvement of undestanding up to this stage can be done in the form of skill training. The advantage of KMC implementation is that this tehnicque is not only performed by mother, but alsı by other member of family including the father. Related to the importance of mother's ability in performing KMC at home to help the LBW adapt the body temperture is the study conducted by Lestari, Arif and Alit (2019) which obtain that knowledge, mother's perception and family support are correlate to the implementation of KMC signifiactnly. Kurniatin and Mufdhilah (2013) also stated conducted a study about the effect of KMC care to the body tempereature of LBW babies. The number of LBW babies are contue to decrease every year. Teh data released by SDKI in 2010 stated that the number of LBW babies are 7.5%. nutritional improvement targets towards healthy Indonesia 2010 was 7% (Ministry of Health, 2010). Based on this data, the LBW babies are need to be treated so that their survival could be maintained. Changing in body temperature can lad to hypothermia condition is very dangerous for LBW babies. Accordiing to WHO in Bebasari, Aginwardi and Nandiati (2010) LBW babies could increase mortality , morbidity, diasbility of neonatus, infant and children and also have a long term impact on their lives in the future. The result of study which is conducted by Solehati et al (2018) stated that putting KMC in LBW treatment is significantly influence the improvement of LBW physycosocail response. KMC is recommended as a therapy for LBW care that can be done directly by the mother, no charge and preceded by health education from health provider. This was confirmed by research by Anggriani, Fransiska and Kasim (2014) that LBW body temperature and implementation of KMC has significant correlationship. Some of the aforementioned studies are very encouraging that these technicque helps to adapt body temperature in LBW babies and one of which is to improve the mothers skill about KMC methode, so that this methode can be applied at home. The success of maintaining health status in LBW infants is not only depend on baby care at the hospital, but the continuation of LBW infants at home is also important to get proper attention and care. Impelementing KMC at home require an optimal attitude from the mother and all family member.

This is in line with the study conducted by Kusumawardani and Cholifah (2019) which is stated that there is significant correlationship between mother's attitude and the implementation of



KMC in LBW babies. So that health workers and community are expected to performing KMC methode to the LBW babies di health care and home. Researcher believe that the success of LBW babies care at home in maintaining the normal body temperature are required collaboration from mother and family suported by health education by health worker. The result show that the ability of mother in performing KMC before training is in moderate level (66.25) and improving became good level after the training (80.83). The mother is also need to be convinced that she is the best care giver for LBW babies. This belief will encourage the mother to behave properly when caring at the baby.

CONCLUSION AND RECOMMENDATION

The ability of housewives in implementing KMC technicque show average score of 66.25 and after training the average score is 80.83. Training in performing KMC technicque in housewives is effective in improving housewife ability to caring for LBW babies at home. From the result above it recommended that health workers and family should supporting the mothers to implementing KMC technicque at home. The ability of housewives could improved through training and health education.

ACKNOWLEDGEMENT

1. Directorate of Research and Community Service, The Indonesian Ministry of Research, Technology and Higher Education has funded this activity
2. Rector of University of Muhammadiyah Jember and the entire academic community
3. Institute for Research and Community Service, University of Muhammadiyah Jember
4. Group of housewives in Sumbesari, Jember
5. Health cadres in Sumbesari, Jember
6. Sumbesari Health Center, Jember

REFERENCE

- Angriani, S., Fransisca, A dan , Kasim, J. (2014). *Hubungan Antara Metode Kangaroo Mother Care (KMC) Terhadap Suhu Tubuh BBLR Di RSKD Ibu Dan Anak Pertiwi Makassar*. Jurnal Ilmiah Kesehatan Diagnosis Volume 4 Nomor 6 Tahun 2014 • ISSN : 2302-1721. ejournal.stikesnh.ac.id
- Bebasari, Mardiani, & Agonwardi. (2017). *Pengaruh Perawatan Metode Kanguru Terhadap Kenaikan Berat Badan Pada Bayi Berat Badan Lahir Rendah Di Ruang Perinatologi RSUD Dr. Rasidin Padang Tahun 2017*. Jik-Oktober Volume 1 No 1 Tahun 2017, 1(1), 32-38.
- Departemen Kesehatan RI. (2007). *Survei Demografi Kesehatan Indonesia (SDKI) 2007*. Jakarta: Depkes RI
- Departemen Kesehatan RI. (2008). *Perawatan Bayi Berat Lahir Rendah (BBLR) dengan Metode Kanguru*. Jakarta : HTA Indonesia 2008_Perawatan BBLR dengan Metode Kanguru.



- Dinas Kesehatan Kabupaten Jember. (2014). *Laporan Tahunan Dinas Kesehatan Kabupaten Jember*.
- Dinas Kesehatan Kabupaten Jember. (2017). Profil Kesehatan Kabupaten Jember 2016. <http://www.depkes.go.id>
- Ikatan Dokter Anak Indonesia (IDAI). (2014). Indonesian Pediatric Society. Bayi BBLR. <http://idai.or.id>.
- Indriyani D., Asmuji. Dan Wahyuni, S., (2016). *Edukasi Postnatal dengan Pendekatan Family Centered Maternity Care (FCMC)*. Yogyakarta: Trans Medika.
- Indriyani, D. Asih, S.W., dan Wahyuni, S. (2018). *Perawatan Bayi Melalui Pendekatan Maternal Sensitivity Model (MSM) Berbasis Keluarga*. Yogyakarta: Pustaka Panasea
- Gomella, T.L., Cunningham, M.D., Eyal, F.G., et al. (2013). *Neonatology: Management, Procedures, On-Call, Problems, Diseases, and Drugs*. 7th Edition. Lange; 62:427-437
- Kemenkes RI (2010). *Panduan Pelayanan Kesehatan Bayi Baru Lahir Berbasis Perlindungan Anak*. Jakarta: kemenkes ri
- Kurniatin, L.F dan Mufdhilah. (2013). *Pengaruh KMC Dengan Perubahan Suhu Tubuh Bblr Di RSUD Panembahan Senopati Bantul Yogyakarta*. digilib.unisayogya.ac.id
- Kusumawardani, P.A dan Cholifah. (2019). *Hubungan Sikap Ibu dengan Pelaksanaan Metode Kanguru (Kangaroo Mother Care) pada Bayi Berat Badan Lahir Rendah di RS Siti Khodijah Sepanjang*. ojs.umsida.ac.id
- Lestari, T.B., Arif, Y.S dan Alit, N.K., (2019). *Faktor Pelaksanaan Kangaroo Mother Care Pada Bayi BBLR*. <https://e-journal.unair.ac.id>
- Saputra, L. (2014). *Pengantar Asuhan Neonatus, Bayi, dan Balita*. Penerbit Binarupa Aksara : Tangerang Selatan.
- Solehati, dkk. (2018). *Kangaroo Mother Care Pada Bayi Berat Lahir Rendah : Sistematis Review. Promotif*. Jurnal Kesehatan Masyarakat. [Vol 8, No 1 \(2018\). https://jurnal.unismuhpalu.ac.id](https://jurnal.unismuhpalu.ac.id)
- The Maternal and Child Health Integrated Program (MCHIP). (2012). *Kangaroo Mother Care*.