
NURSING PRACTICE ANALYSIS OF AUDIO VISUAL TACTIL KINESTETIC STIMULATION ON NUTRITION FULFILLMENT IN BABIES WITH LOW BIRTH WEIGHT (LBW)

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Abstract

The percentage of babies with low birth weight in 2017 was 1.44%, where it was found 35 babies with birth weight <2500 grams 42 of 2,427 babies born. The goal is to provide nursing care for low birth weight (LBW) infants that focuses on kinesthetic tactile audio-visual stimulation for nutritional fulfillment. This method is carried out by nursing care to By Ny R for 5 consecutive days with tactile kinesthetic audio-visual stimulation interventions. Results By Mrs. R experienced a better condition than before, marked by an increase in the baby's weight, which increased the baby's weight now to 2120 grams. It was concluded that there was an effect of tactile kinesthetic audio-visual stimulation on the problem of nutritional fulfillment in LBW infants, this could be seen from the evaluation that had been carried out which showed significant changes in infants. It is hoped that the hospital, especially the perinatology room, can provide information and knowledge such as counseling on kinesthetic tactile audio-visual stimulation, so that all nurses and parents of babies know how to do tactile-kinesthetic audio-visual stimulation in hospitals and at home.

Keywords: Nutritional Fulfillment, Low Birth Weight, Tactile Audio Visual Stimulation

ANALISIS PRAKTEK KEPERAWATAN STIMULASI AUDIO VISUAL TAKTIL KINESTETIK TERHADAP PEMENUHAN NUTRISI PADA BAYI DENGAN BERAT BADAN LAHIR RENDAH (BBLR)

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Abstrak

Persentase bayi dengan berat badan lahir rendah tahun 2017 adalah 1.44%, dimana ditemukan 35 bayi dengan berat badan lahir <2500 gram dari 2.427 bayi yang lahir. Tujuannya pemberian asuhan keperawatan pada bayi berat lahir rendah (BBLR) yang berfokus pada stimulasi audio visual taktil kinestetik terhadap pemenuhan nutrisi. Metode ini dilakukan dengan asuhan keperawatan pada By Ny R selama 5 hari berturut-turut dengan intervensi stimulasi audio visual taktil kinestetik. Hasil By Ny R mengalami keadaan yang membaik dari sebelumnya ditandai dengan kenaikan berat badan bayi yang meningkat BB bayi sekarang 2120 gram. Disimpulkan bahwa adanya pengaruh stimulasi audio visual taktil kinestetik terhadap masalah pemenuhan nutrisi pada bayi BBLR, hal ini dapat dilihat dari evaluasi yang telah dilakukan yang menunjukkan adanya perubahan yang signifikan pada bayi. Diharapkan pihak rumah sakit khususnya ruangan perinatologi dapat memberikan informasi dan pengetahuan seperti penyuluhan stimulasi audio visual taktil kinestetik, supaya semua perawat dan orang tua bayi tau bagaimana melakukan stimulasi audio visual taktil kinestetik di rumah sakit maupun dirumah.

Kata Kunci: Pemenuhan nutrisi, Berat Badan Lahir Rendah, Stimulasi Audia Visual Taktil Kinestetik

Introduction

Low birth weight (LBW) babies are babies born weighing less than 2500 grams. The most common cause affecting LBW is due to lack of nutritional intake for the fetus and requires serious treatment because the body's organs are not yet fully formed (Ministry of Health, 2015). Perinatal mortality in LBW babies is 8 times greater than normal babies. The prognosis for LBW babies is 8 times greater than for normal babies of the same gestational age. The lower the birth weight of the baby, the worse the prognosis. High mortality is often found due to neonatal complications such as asphyxia, aspiration pneumonia, intracranial bleeding and hypoglycemia (Ministry of Health, 2015).

According to data from the Organization for Economic Co-operation and Development (OECD) and WHO, Indonesia is one of the developing countries that has an important role in the world economy, ranking third as the country with the highest prevalence of LBW (11.1%), after India (27.6%) and South Africa (13.2%).

Apart from that, Indonesia (11.1%) is also the second country with the highest prevalence of LBW among other Association of Southeast Asian Nations (ASEAN) countries, after the Philippines (21.2%) (OECD, et al, 2013).

Babies with low birth weight (LBW) have many risks of experiencing problems with unstable weight gain and nutritional problems. Other impacts are

psychodynamic aspects, psychosocial development and organic maturation. Due to the immaturity of various organ systems, LBW need extraordinary adaptations to maintain their survival (Proverawati & Ismawati, 2010).

According to WHO, every year around 3% (3.6 million) of 120 million babies born experience asphyxia, almost 1 million of these babies then die. In Indonesia, of all under-five deaths, 38% died during newborns (BBL) according to IACMEG in 2005. Most neonatal deaths occurred at 0-6 days (78.5%) with the biggest cause of death being respiratory problems/asphyxia 35.9%, prematurity and LBW 32.4% and sepsis 12%. Meanwhile, the causes of death for babies aged 7-28 days were sepsis 20.5%, congenital abnormalities 18.1%, pneumonia 15.4%, prematurity and LBW 12.8% and Respiratory Distress Syndrome (RDS) 12.8%.

In the city of Batam, the infant mortality rate in 2013 was 7.28 per 1000 live births, whereas in 2014 there was a slight increase, namely 8.67 per 1000 KH. The highest causes of infant death are asphyxia and LBW. Increasing the knowledge and skills of health workers is a strategic effort to achieve a reduction in infant mortality rates, one of which is through neonatal program training activities at village to hospital levels. The knowledge and skills of nurses, midwives and doctors regarding the management of LBW and asphyxia are very important in efforts to carry out management. appropriate care in providing care to neonates in general and LBW cases in particular (Dinkes, 2015)

Nutrition is very important in helping the process of growth and development in babies and children. Nutrition in children can generally be

grouped based on the child's age, one of which is nutrition for Low Birth Weight (LBW) Babies. Low Birth Weight (LBW) babies are vulnerable to nutritional deficiencies, their organ functions are immature, their nutritional needs are large and they easily get sick, so giving breast milk or nutrition for optimal growth and development of babies (Anik and Nurhayati, 2009). Nutrients are substances that make up food that are needed by the body for metabolism, namely: water (H₂O), protein, fat, carbohydrates, vitamins and minerals. Nutrient fulfillment care is a special way of caring for LBW babies by fulfilling nutrition according to the body's needs through orally, OGT and infusion are useful for helping healthy development, breastfeeding, strengthening suction power. The purpose of kinesthetic tactile audio visual is so that babies can recognize the environment and the mother's voice, stimulate fine motor skills and gross motor skills.

Tactile-Kinesthetic Stimulation will stimulate the neonate's movements, both gross and fine motor skills. Motor experience will sharpen and modify the neonate's perception of what will happen if the neonate moves in a certain way (Papalia, Olds & Feldman, 2002). Symington and Pinelli (2000) stated that auditory, visual, tactile and vestibular stimulation can reduce respiratory and pulse rates and improve the ability to eat and behavioral status of neonates. Additional stimulation has a positive effect on development, for example reducing apnea, a more stable condition, increasing body weight, reducing abnormal reflex movements, superior motor and sensory skills when conducting

behavioral assessments, and reducing length of stay in hospital (Symington & Pinelli, 2000;).

The results of research conducted by Aliabadi, et al (2013) on the effects of kinesthetic tactile stimulation on low birth weight babies. There was a trend towards increasing daily body weight, but without statistical significance. The test group showed statistically significant improvement scores in body weight (P-value<0.001). And also the results of research by Engla Sartika (2015). About the effect of tactile and kinesthetic stimulation on changes in the weight of newborns in the perinatology ward at Dr. Hospital. Achmad Mochtar Bukittinggi in 2015 with the results that there was a significant difference between the average body weight before and the average body weight after Tactile and Kinesthetic Stimulation with an increase in body weight of 19.0 grams.

Based on the results of the discussion above, it can be concluded that there is an influence of kinesthetic tactile audio visual stimulation on nutritional fulfillment in LBW. Therefore, we recommend kinesthetic tactile audio-visual stimulation as a therapy for treating low birth weight babies which can be carried out directly by mothers and health workers at no cost. The quality of nursing care for babies with low birth weight can continue to be improved by carrying out continuous interventions from nursing care and interventions given to babies with low birth weight.

For this reason, the author is interested in applying kinesthetic tactile audio visual stimulation to LBW with the aim of ensuring that the baby's nutritional needs are stable. Kinesthetic tactile audio-visual stimulation can be carried out by the

mother because it presents the mother as being sick, critical, and far apart when the baby is referred. Therefore, I am interested in applying this kinesthetic tactile audio visual stimulation in the case of my management of LBW. Based on this background, the author raised the title of analyzing clinical practice of kinesthetic tactile audio visual stimulation nursing on nutritional fulfillment in low birth weight (LBW) babies.

RESEARCH METHODS

This method was carried out using nursing care for By Mrs R for 5 consecutive days with kinesthetic tactile audio visual stimulation intervention. This research was carried out at the hospital. Hj. Mother Halimah in the nicu room. RS. Hj Bunda Halimah is a private hospital. At the hospital. Hj Bunda Halimah has many rooms, one of which is the NICU room, where this room consists of the NICU/PICU room and a room for sharing with the patient and the patient's mother. Based on an interview with one of the nicu room nurses, the number of LBWs increases every year.

RESULTS AND DISCUSSION

Analysis of Nursing Problems with Related Concepts

The first step taken by the author in conducting an assessment of the patient was to assess the patient's identity, clinical symptoms, risk factors, etiology of management and supporting examinations with a medical diagnosis of LBW.

Starting from the data obtained during the assessment of the incoming baby with a medical diagnosis of LBW with the baby's weight being 2100 grams. Meanwhile, according to theory,

low birth weight babies are less than 2500 grams regardless of gestational age. Babies born with LBW are generally less able to withstand new environmental pressures, which can result in stunted growth and development, and can even disrupt their survival.

In the results of the assessment by Mrs. R, 1 day old baby, RR 67x/minute, body temperature 36oC, acral cold, baby's suction power is weak, breast milk does not come out, weight 2100 grams, this data is in accordance with signs of impaired nutritional fulfillment in babies which is confirmed by the results of interviews with one One room nurse stated that the baby was put in an incubator because his body temperature was decreasing, his breathing pattern was ineffective and his nutrition was disrupted. This is because the temperature in the incubator can provide comfort to the baby and can stabilize his body temperature. According to the theory, kinesthetic tactile stimulation in babies is a slow and gentle touch movement in babies, proving that touch therapy in babies can increase weight growth, body temperature and make babies more comfortable and calmer when sleeping.

By Mrs R, her birth weight was 2100 grams due to weight instability (difficulty gaining weight) because the baby's sucking and swallowing reflexes were still weak. Low birth weight babies are at risk of experiencing growth delays, especially weight.

Several causes of babies with low birth weight according to Proverawati and Ismawati, (2010), namely maternal factors, fetal factors, placental factors and environmental factors. One of the maternal factors is pregnancy

complications such as eclampsia, preeclampsia, bladder infections, anemia and other chronic diseases such as DM, hypertension, heart disease and others. And the data obtained during the study is the same as theory.

Based on the data obtained, the author formulated the nursing problems in By Mrs R, namely: Ineffective airway clearance based on the presence of secretions in the airway, Ineffective breathing patterns based on immaturity of the respiratory organs, nutritional imbalance less than the body's needs based on inability to ingest/digest /absorption, Impaired thermoregulation based on changes in room or environmental temperature, Risk of infection based on lack of immunological defense. The nursing problems that arise are in accordance with the theory (Surasmi, et al. 2002) LBW requires special care because it has a lot of problems in its body system due to its unstable body condition.

Respiratory problems, due to lung surfactant deficiency, soft thorax and weak respiratory muscles so that periodic apnea easily occurs. Besides that, weak coughing, sucking and swallowing reflexes can result in the risk of aspiration

Intervention Analysis

With related research concepts, there is a difference in baby weight after kinesthetic tactile audio-visual stimulation compared to not kinesthetic tactile audio-visual stimulation. Babies who received kinesthetic tactile audio-visual stimulation treatment experienced weight gain, while those who did not receive kinesthetic tactile audio-visual stimulation treatment experienced baby weight instability.

Based on the results of the intervention carried out, there is an influence of kinesthetic tactile audio visual stimulation on weight gain. The results of research conducted by Aliabadi, et al (2013) on the effects of kinesthetic tactile stimulation on the development of low birth weight babies. There was a trend towards increasing daily body weight, but without statistical significance. The test group showed statistically significant improvement scores in body weight ($P\text{-value} < 0.001$).

After implementation on By Mrs R for 5 days from 08 February 2022 to 12 February 2022 with body weight before the tactile kinesthetic audio visual stimulation the baby's weight was 2100 grams with the problem of nutritional deficiencies and the intervention carried out by kinesthetic tactile audio visual stimulation after the intervention over 5 days, the weight gain was 2120 grams. So it can be concluded that there is an influence of kinesthetic tactile audio-visual stimulation on baby weight gain. Kinesthetic tactile audio-visual stimulation can be carried out every day one hour after giving breast milk/PASI to the baby.

Kinesthetic tactile audio-visual stimulation can be beneficial for mothers and babies, namely improving the inner relationship between parents and their babies (bonding), increasing the volume of milk, stroking can also reduce stress levels in babies and create a closer relationship between babies and their parents.

For this reason, the author is interested in applying kinesthetic tactile audio-visual stimulation to LBW babies in the nicu room with the aim of ensuring that LBW babies' nutritional needs can be stable. Kinesthetic tactile

audio-visual stimulation can be carried out by the mother because presenting the mother in a sick, critical condition, far apart when the baby is referred can improve the inner relationship between parents and baby. And it can also be applied by hospital nurses. Hj. Mother Halimah. Therefore, I am interested in applying this kinesthetic tactile audio visual stimulation in the case of my management of LBW.

It was found that some problems were resolved and some were not resolved. The problem that is resolved is that airway clearance is ineffective, there are no problems and the risk of infection has improved. And problems that are not resolved are ineffective breathing patterns, nutritional imbalances that are less than the body's needs and thermoregulation disorders.

- a. Students are able to describe the analysis of nursing care (assessment, diagnosis, intervention, implementation and evaluation) for LBW.
- b. Students are able to analyze the results of implementing nursing care with tactile-kinesthetic audio-visual stimulation interventions for nutritional fulfillment.

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