The experience of breastfeeding mothers with LBW in NICU

Elsy Juni Andri Kariny1*, Herlin Fitriani Kurniawati2, Andari Wuri Astuti3

1,2,3Faculty of Health Sciences, ‘Aisyiyah University of Yogyakarta, West Ringroad, 63 Nogotirto Street, Gamping Sleman 55292, Yogyakarta Indonesia

elsykariny@gmail.com1*; herlinani@unisayogya.ac.id2; astutiandari@unisayogya.ac.id3

*corresponding author

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Abstract

More than 80% of premature infants are born between 32-37 weeks of age have Low Birth Weight (LBW) and die due to lack of care. Neonatal Intensive Care Unit (NICU) is the main place to provide information about LBW care and optimal nutrition by breastfeeding. Scoping review is to describe The Experience of Breastfeeding Mothers with Low Birth Weight in NICU. The method used is consists of 6 stages, namely identifying questions with the PEOS Framework, identifying relevant studies, selecting studies using inclusion and exclusion criteria, conducting critical-appraisals to assess the quality of literature, performing data extraction, PRISMA Flowchart.

Keywords: mothers experience, NICU, breastfeeding mothers, premature infant, low birth weight (LBW)

INTRODUCTION

LBW is a baby who weighs less than 2500 grams. LBW is still a major public health problem. Overall, according to WHO and UNICEF, it is around 15% to 20% of births worldwide are LBW, representing more than 20 million births each year, so the target of reducing the incidence of LBW is 30% by 2025 (WHO, 2019). More than 80% of preterm babies born between the ages of 32-37 weeks experience low birth weight and die due to lack of care, such as warmth support and breastfeeding which are urgently needed by LBW. Health goal for Sustainable Development (SDG) 3 by 2030 has an objective of finishing preventable passing in babies and kids under 5 years old by lessenning neonatal mortality to at least 12 for every 1,000 live (WHO, 2019).

The Neonatal Intensive Care Unit (NICU) is the main place to deal with LBW which provides the needed care such as information about LBW care and breastfeeding (Boucher, 2011). One of the treatments for LBW babies is providing optimal nutrition that mothers can do by breastfeeding (Li et al., 2017). Breastfeeding is providing nutrition for babies for 6 months and continued for 2 years. Breastfeeding is depicted as something other than sustenance; it encourages the relationship and unobtrusive association among mother and kid physiologically and emotionall (Pajalic, 2014).

However, breastfeeding is an under-empowered experience, especially the support provided such as breastfeeding counseling in neonatal care units. So that there are still many mothers who have negative experiences in terms of successful breastfeeding for LBW, namely inadequate nutrition is an important factor that contributes to growth failure, because most LBW experience deficit in protein and energy during treatment in neonatal intensive care units. The first week of protein and energy intake was associated with 18 months of development in preterm infants (Su, 2013). From the explanation above, this research aim to reveal the experience of Breastfeeding Mothers with Low Birth Weight in Neonatal Intensive Care Unit (NICU).
RESEARCH METHODS

Researchers used scoping review to find the right literacy in knowing the factors, impacts, barriers, and support in breastfeeding LBW babies at the NICU. The scoping review is able to provide a gap regarding the need for possible research (Peterson et al., 2016). We used the framework to guide the review using the six-step methodological approach defined by Arksey and O'Malley (2005) (Peterson et al., 2016). These steps include (1) identifying the research questions (s), (2) identifying relevant studies, (3) selecting study, (4) data mapping, (5) arranging, summarizing, and reporting data, (6) consultation.

RESULTS AND DISCUSSION

The result of this research shows some depictions which described into several themes, namely: factor in breastfeeding, impact of breast feeding, barrier to breastfeeding and support in breastfeeding, there are some factors which influenced the breastfeeding process of mother with LBW such as method of delivery, breastfeeding schedule, technique, types of nutrition and hospital policy.

Methods of breastfeeding that can be done in the breastfeeding process, such as manual expressing of breast milk, a pump device, feeding using a bottle, through a cup, and through a nasogastric tube. However, many mothers are still confused about the method of breastfeeding so that the mother is late in reaching the breastfeeding method they want, giving rise to negative and positive experiences in terms of breastfeeding methods (Boucher, 2011; Cescutti-butler et al., 2019; Dowling et al., 2012; Palmér & Ericson, 2019).

A negative experience in the way of breastfeeding is pumping breast milk, due to the inconvenience of using a breast pump and assuming the process of pumping breast milk is the same as when milking a cow (Boucher, 2011). Another study shows that mothers who do not want their babies to be breastfed through a bottle because it is very risky for the baby, the baby can choke because the flow of milk cannot be controlled by babies whose suction power is not maximal. On the other hand, by directly breastfeeding, the baby can control the milk well, but the baby does not suck the breast and only sticks to the mother's breast (Cescutti-butler et al., 2019).

Another method of breastfeeding is the use of an electric breast pump to increase a mother's willingness to breastfeed (Hasselberg et al., 2016). Meanwhile, other studies describe breast milk given in small cups. Small cups are used to express breastmilk, and bottles are considered poorly maintained in terms of hygiene (Dowling et al., 2012). The last method used to keep the baby from getting breast milk is a nasogastric tube. This is done because premature babies are prone to respiratory problems when breastfeeding directly causes the baby to tire quickly. However, this method is avoided by mothers because it considers the nasogastric tube of the baby to be uncomfortable (Palmér & Ericson, 2019).

A breastfeeding schedule is a rule given to babies to get enough nutrition, in several articles, there are pros and cons about breastfeeding schedules, the breastfeeding schedule recommended by nurses is every 3 hours. Schedule to support the volume production of milk in LBW babies and to ensure that the baby's daily needs are met, the mother must express breast milk 8 to 10 times per day (Rossman et al., 2013). However, this makes the motherless sure because she thinks the baby will not be full if given ASI once every 3 hours so that the mother will express breastmilk more often and this schedule is what the mother feels is not right. Mothers do not think this feeding schedule is appropriate for the baby's hunger pattern (Hasselberg et al., 2016).
Breastfeeding techniques are about how the baby's mouth attachments to the areola of the mother's breast, the position of the mother when breastfeeding and the position of the baby when getting breast milk. The mothers in the study did not know exactly how to breastfeed properly and correctly. Most (seven out of ten) mothers had no previous breastfeeding experience. So that the lack of knowledge of mothers in breastfeeding techniques indirectly results in milk production. So the mother is required to learn about the technique, breastfeeding position, and the baby's cues and behavior during breastfeeding to optimize milk production (Hasselberg et al., 2016; Wuri & Morgan, 2018).

Nutrients that can be given to babies such as exclusive breastfeeding, partial breast milk, and formula milk. Exclusive breastfeeding only provides breast milk with supplements that are limited to vitamins, no liquids, or other solid foods, partial breastfeeding is partial breastfeeding (Bower et al., 2017; Chawanpaiboon et al., 2019; Palmér & Ericson, 2019; Wuri & Morgan, 2018). Research shows that many mothers still use formula milk for the fulfillment of infant nutrition, thirty one percent of babies exclusively give formula milk and 19% of babies receive breast milk and formula milk because the mother cannot follow the rules of breastfeeding so that the alternative taken by the mother is formula milk (Palmér & Ericson, 2019).

According to WHO, hospitals with neonatal intensive care units can provide special care for newborns with problems. They have specialized equipment, trained doctors, and nurses who provide 24-hour care for LBW babies who need extra support to keep warm, breathe and breastfeed (Arksey & O’malley, 2005; Bower et al., 2017; Dowling et al., 2012; Hasselberg et al., 2016). The provision of inadequate hospital’s facilities for mothers who wish to breastfeed their babies at the NICU (Arksey & O’malley, 2005). In other studies, there are already facilities and infrastructure so that mothers can breastfeed their babies in the NICU, namely by implementing private rooms. However, private rooms are not sufficient to control the privacy of mothers in breastfeeding, mothers cannot control who enters the private room so that it interferes with the frequency of the mother in pumping breast milk. Program (single-family design or also known as the single-patient room) SFR is the latest innovation in hospitals with longer hospitalizations providing the opportunity to breastfeed directly at the NICU. The private room program could benefit mothers in the NICU if it was better managed and the infrastructure improved (Bower et al., 2017)

There is a NICU policy in the rules for breastfeeding babies. The rules for breastfeeding are adjusted to the structural organization and schedule at the NICU, namely 20 minutes for breastfeeding. Mothers felt that this strict rule was not compatible with breastfeeding patterns, and stated that breastfeeding should be given on request. So that the mother makes her own rules in breastfeeding the baby, which is for 40 minutes (Hasselberg et al., 2016). This happened because the hospital was inadequate in providing information about hospital policies in handling LBW babies (Dowling et al., 2012).

There are several things which are going to be impacted on mothers with LBW. There are *Psychology of Mothers, Mother's Physical Condition, Low Milk Expenditure and Reluctance to Provide Breast Milk*. The breastfeeding process causes a lot of anxiety, stress, restlessness, guilt, fear. The source of maternal anxiety comes from the health and safety of the baby (Alves et al., 2016). Research shows mothers feel distressed about the health condition of their babies, especially when the milk supply is low (Wuri & Morgan, 2018). Other studies have shown that the source of maternal anxiety stems from a lack of support or no information about what mothers should do to successfully breastfeed (Arksey & O’malley, 2005; Bower et al., 2017; Chawanpaiboon...
et al., 2019). Mothers feel stressed and under pressure, because they have a baby in the NICU, so they feel unable to become real parents and cannot fulfill the baby's needs optimally (Hasselberg et al., 2016; Palmér & Ericson, 2019).

Some mothers feel tired while breastfeeding because they often wake up in the middle of the night (Hasselberg et al., 2016). Extreme body changes in the breast that make the mother physically uncomfortable and unwanted by the mother (Palmér & Ericson, 2019). Different investigations have indicated maternal medical conditions after conveyance, for example, hypertension, iron deficiency, and trouble breathing depicted as purposes behind longer stays in the conveyance unit (Dowling et al., 2012). So that the need for handling in overcoming the physical condition of the mother in increasing the success of breastfeeding.

When the mother experiences psychological effects, namely disappointment, anxiety, mother stress which causes low breastfeeding, the mother feels a lot of burden on the mind, the mother's oxytocin and prolactin hormones decrease so that it has an impact on milk production. The study explained that low milk production is due to emotionally depressed mothers and fears about the role of motherhood which is less than optimal so that it affects the production of breast milk (Palmér & Ericson, 2019).

Reluctance to breastfeed while the baby is being cared for in the NICU or after the baby is discharged at home is still common because of the mother's lack of understanding of the benefits of breastfeeding. Mothers stop breastfeeding when they feel uncomfortable, perceive breastfeeding as unnatural, breastfeeding is wrong, and even regret starting breastfeeding (Palmér & Ericson, 2019). This is in line with previous studies which showed that when the baby was released, the mother had no desire to continue breastfeeding because breastfeeding was painful and the mother only breastfed within 6 weeks of treatment (Dosani et al., 2017; Dowling et al., 2012).

Beside the impact of breastfeeding which influenced mothers with LBW, there are some Barriers to Breastfeeding that they have to face. There are; Problems in LBW Babies, Breast Problems, Separation from Infants, myth and Lack of Health Workers. LBW babies are physiologically not enough to develop when they are born earlier. The relationship between brain development and eating (breast milk) is an important oral intake to prevent feeding-related morbidity and mortality in infants. One-third of brain growth occurs in the last 6-8 weeks of pregnancy. Most of the nerves are responsible for eating behavior. So those LBW babies who are not yet full term experience the complexity of sucking, swallowing, and breathing, which is often done simultaneously during breastfeeding. At 34 weeks gestation, the baby's brain weighs only 65% of the term infant's brain, at 36 weeks LBW babies do not experience the last weeks of pregnancy which are actually in the development of coordinated oral motor skills development. Then no doubt significant brain development occurs during the last few weeks of pregnancy. This fact suggests that neurodevelopmental maturation contributes to the baby's sucking behavior (Chawanpaiboon et al., 2019). The result of preterm birth causes respiratory problems, such as after coughing, aspiration, and apnea of the baby when breastfed (Dowling et al., 2012).

Research shows the difficulties of mothers in breastfeeding are breast pain, flat nipples, swollen breasts (mastitis), almost half of mothers (47.5%) reported having breast problems while pumping, peeling nipples (n = 10), engorgement (n = 4), and pain (n = 2) (Bower et al., 2017; Chawanpaiboon et al., 2019). The disorder is caused when the newborn cannot breastfeed properly and thus breastfeeding is a painful process (Su, 2013).
LBW babies are immediately taken to the NICU room without the mother having time to see the baby, causing limited access between mother and baby so that the mother feels less of a role in baby care (Alves et al., 2016; Kair et al., 2015; Khan et al., 2015). Research shows that the separation of mother and baby causes difficulty in expressing breastmilk, thus hindering breastfeeding for LBW babies who are hospitalized. When separated from the baby, it is difficult to remember the right time to express breastmilk because the mother is not directly with the baby who cries because of hunger at night (Alves et al., 2016).

Colostrum, the yellowish breast milk delivered toward the finish of pregnancy, is suggested by WHO as the ideal nourishment for infants. Examination shows the insight that colostrum is filthy and can cause the runs actually happens in certain towns, and attendants say that a few moms discard colostrum (Hasselberg et al., 2016). There should be a relationship between services from pregnancy to childbirth, such as providing planning interventions and pre-delivery preparation such as providing information, education, and communication during pregnancy which will lead to behavioral changes about breastfeeding (Wuri & Morgan, 2018). Research shows the lack of staff to care for LBW infants in the NICU room as a big problem, even though the equipment is adequate, it is not comparable with the number of trained health personnel (Lawn et al., 2013). The requirement for wellbeing work force has not been tended to and neonatal medical attendant instructional classes are as yet uncommon in sub-Saharan Africa. A Kenyan specialist evaluated the nature of neonatal consideration in eight locale emergency clinics and reasoned that staff deficiencies were normal and that even attendants were at the same time liable for guarding rooms, for example, conveyance rooms or postnatal wards (Opondo et al., 2009). Absence of staff influences breastfeeding and sustenance management as well as a danger to the overall consideration of LBW babies (Dowling et al., 2012; Hasselberg et al., 2016).

Base on the explanation above, it is clearly understood that mothers with LBW are surely needs Support in Breastfeeding, Health worker support and Family Support are surely needed. The problem of breastfeeding in LBW babies is very complex, so mothers need support in the breastfeeding process. Gaps in knowledge, skills in providing breastfeeding support are experienced between mothers and outpatient providers. Lack of available health professional support causes mothers to be forced to search for information online to obtain information that is not available from health workers. Subsequently, there is a requirement for wellbeing schooling and backing for mother breastfeeding LBW newborn children in China. This help requires preparing in adequate quantities of lactation experts and framing an extraordinary agreeable LBW baby care group to help moms and their families. There is a need to build up clinical rules on supporting moms of LBW babies to guarantee breastfeeding (Alves et al., 2016; Arksey & O’malley, 2005). Midwives do not appear to be able to take advantage of their instincts to guide individual women or to be flexible in administering breastfeeding to enable breastfeeding to be a positive experience. Midwives are more focused on the physical condition of the mother. Meanwhile, mothers are committed to the current and future health and well-being of their babies in terms of breastfeeding (Bower et al., 2017; Lawn et al., 2013). In Indonesia, educating women about breastfeeding during ANC services has a significant effect on breastfeeding attitudes (Wuri & Morgan, 2018).

Nurses are in an ideal position to show interest and encourage mothers to ask questions and voice any concerns they may have. The nurse plays an integral role in helping learn breastfeeding techniques and building a level of comfort. In addition to breastfeeding support at the NICU, nurses must also provide support when the baby is
allowed to be discharged (Dowling et al., 2012; Rossman et al., 2017). One study found that there was a steady decline in mothers who continued breastfeeding after the baby's discharge from the hospital. Breastfeeding education at the NICU is to provide information to mothers about milk production and the challenges of breastfeeding they face when the baby is ready to go home. Breastfeeding support and education should not be limited to the length of the infant's NICU stay before discharge. A formal support system, such as a pediatrician or family doctor can help optimize the chances of mothers achieving the breastfeeding experience they expect at the NICU as well as after discharge. Breastfeeding support will not only strengthen the ability to breastfeed while the baby is hospitalized but can also facilitate efforts to breastfeed at home (Cescutti-butler et al., 2019; Pajalic, 2014).

For mothers who have no experience in caring for LBW babies and breastfeeding, support from husbands and grandparents is an integral part of increasing self-confidence and reducing feelings of confusion. The lack of support from husbands in the breastfeeding process makes mothers add formula milk. Grandmother's support also influences breastfeeding, for example in making food for mothers so that milk production runs smoothly. In Taiwanese culture, the importance of support from grandparents and fathers of LBW infants cannot be ignored (Wuri & Morgan, 2018). In this research, support from families is described in practice, especially when bringing food to the mother, because family members are not allowed in the NICU room because of the risk of infection. A husband who can see the baby through the window so that he can report the baby's situation to his wife. Relatives also play an important role in providing support, namely when encouraging them to continue pumping breast milk to be given to babies (Dowling et al., 2012; Lee et al., 2009).

From the explanations above, researchers reveals the experiences of breastfeeding mothers to LBW babies in the NICU. Babies who are born with LBW are a condition that makes mothers feel anxious, afraid, anxious about their baby's condition. Moreover, the care of LBW babies is different from the care of full-term babies. One of the main aspects of the breastfeeding experience at the NICU is the mother's concern about maintaining her milk supply. The physical condition of the mother, such as breasts with mastitis, sore nipples, makes it difficult for the mother to breastfeed. Nurses play an important role in LBW babies in the NICU, they must guide, educate, motivate, provide information and support that mother need for a positive and beneficial breastfeeding experience. This study found that mothers attach great importance to the role of health workers in terms of breastfeeding to foster mother-baby attachment and fluency in breastfeeding.

Complex negative experiences when giving breast milk to premature babies. The process of breastfeeding a premature baby is full of challenges. Many mothers do not understand how the methods, schedules, breastfeeding techniques, and even types of nutrition which are best for their babies, even the obstacles such as separation from the baby, unfavorable breast conditions, and obstacles that occur in premature babies where the baby's suction power is not maximized if breastfeeding directly on the mother, it causes a lack of milk production so that the mother experiences stress, depression, disappointment, anxiety, and fatigue. Lack of knowledge of mothers in the care of premature babies is a problem that must be resolved, but health workers are less involved in this. There are still many health workers who do not understand the protocol for treating premature babies well. Lack of support from health workers still makes mothers confused about proper care for premature babies, whether the baby is still in the NICU room or after being discharged home. So that the success of breastfeeding in
LBW babies on average fails in breastfeeding. The research gap of this study is that there is a need for further research on the effect of psychological support by health personnel in achieving successful breastfeeding in NICU-based LBW infants.

In general, the constraint in this investigation is the modest number of tests, which restricts the capacity of scientists to get top to bottom information from few members. A further shortcoming is that a large portion of the members are enlisted from metropolitan zones and are accomplished. Thus, these discoveries don't address the encounters of moms from rustic territories or those with lower levels of instruction. Further investigations of moms drawn from a more extensive socio-segment test are expected to affirm the discoveries of this examination.

REFERENCES


