



SEINÄJOEN AMMATTIKORKEAKOULU
SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

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CARE OF A NEWBORN BABY AT HOME

Descriptive Literature Review

Thesis

Autumn 2021

SeAMK School of Health Care and Social Work
Degree Programme in Nursing



SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

Thesis abstract

Faculty: School of Health Care and Social Work

Degree Programme: Degree Programme in Nursing

Specialisation: Bachelor of Nursing/ Registered Nurse

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Title of thesis: Care of a New-Born Baby at Home – A Descriptive Literature Review

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Year: 2021

Number of pages: 38

Number of appendices: 1

Neonatal care is one of the most important care in social and health care services. In 2019, 2.4 million babies died before they turned 6 months globally, and the number one cause was lack of proper care. For the proper growth and development of new-born babies, it is essential to have quality neonatal care, which helps identify and minimise morbidity and mortality.

The goal of this study is to target families and caretakers that do not speak or understand the Finnish language but use English and oversee new-born babies. The purpose is to provide them with researched information on how well to care for their new-born babies at home after delivery till six months of age. The essential new-born care practices include, but are not limited to, nutrition, hygiene, sleep, safety, preventative care, thermal care, and more. The need for neonatal care is magnified by the current global population and fertility state.

The world's population is shifted towards older ages, coupled by decreased birth rates. It is, therefore, essential that every born baby survives and grows up healthy. The goal of this thesis is to provide evidence-based information to those in care of new-born infants. The results of this research show that neonatal care has a great impact on the survival and development of a human being through their whole life.

Quality neonatal care is not easily achieved. It is, therefore, important, according to family health care nursing, to provide guidance and support to all parents and caregivers. Parents and caregivers should also familiarise themselves with medically approved neonatal care practices and if possible, the same should be made available to all age bearing adults.

¹ Keywords: new-born baby, home care, maternity care, new-born care

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Terms and Abbreviations

AAP	American Association of Paediatrics
BN	Biological Nurturing
CDC	Centre for Disease Control
DD	Diaper Dermatitis
FTT	Failure to Thrive
LBBF	Laid Back Breastfeeding
PPD	Postpartum Depression
PRB	Population Reference Bureau
SIDs	Sudden Infant Death Syndrome
THL	Finnish Institute for Health and Welfare
UNICEF	United Nations Children's Emergency Fund
WHO	World Health Organization

1 INTRODUCTION

According to United Nations International Children's Emergency Fund (UNICEF) (2020), the first 28 days of life are the most vulnerable and carry the highest risk of death for a human being. The average global rate of deaths in the neonatal period was at 17 deaths per 1,000 live births in 2019 and 2.4 million babies died in the first month of life.

According to World Health Organization (WHO) (2018), the number of people aged 60 years and above is expected to rise to a total of 2 billion by 2050 and further adds that as of today 125 million people are 80 years and above. In the whole world, Asia and Europe are the continents that have the oldest populations aged above 65 years and the top five countries include Japan, Italy, Finland, Portugal, and Greece (Population Reference Bureau (PRB) 2020).

According to the Finnish Institute for Health and Welfare (THL) (2020), the population of Finland is rapidly ageing and still living in a historical era of four concurrent generations, thus making it one of the countries in Europe with the oldest population and as the population is ageing rapidly, there is a decline in birth rates. By 2060, the share of over 65-year-olds are expected to be 29%. Statistics Finland shows that the birth rates in Finland have lowered compared to previous years. For example, in 2018 the number went down by 2,744 children compared to 2017 and as of 2019, the birth rate was at 1.35 children per woman. (Statistics Finland 2019.)

WHO (2018) emphasizes that since the distribution of the world's population is shifted towards older age, and coupled with decreased birth rates, this indicates that every new life needs to be preserved by all means. This responsibility primarily falls on the parents and the immediate caregivers. In Finland the nursing professionals are supporting and educating the families according to the family health care nursing (Kaakinen et al. 2015). In this thesis we focus more to the preventive care at the maternity clinics (Femeda, 2021).

A new-born baby (from birth to 2 months) is very vulnerable and is completely dependent on its caregiver for survival. A mother, father, or any caregiver is 100% responsible for the well-being of a new-born baby in all aspects of its life. Yet, it is the care and bonding received at this stage that contributes, to a great extent, to how the child will develop mentally and physically. (Winston et al., 2016.)

According to Paradis (2021), whether it is a first-time mother or an experienced mother, bringing home a baby from a hospital comes with challenges and it is usually easier for parents to care for their baby in the first days when still at the hospital because they still have support from the health workers. It is, therefore, important that they use this opportunity to learn from the health workers and prepare themselves for when they get home. The challenges of caring for a new-born are intensified for mothers who are living away from their native land and must deal with it all in a foreign environment. (Bandyopadhyay, 2010.)

The goal of this research is targeted at mothers, fathers, and caregivers that are or will be handling the care of a new-born baby and who use the English language to communicate in Finland. Our purpose is to provide research-based information to caregivers on how to care for babies six months old and below at home.

This thesis will help create guidelines through a brochure that can be dispersed to all people involved in new-born baby care. It will give step by step guidelines to caregivers on how to care for their babies and what to avoid. With the right information, mothers, fathers, and caregivers can create a safe and happy environment for their baby and allow it to develop smoothly.

2 MATERNITY CARE

Nursing professionals in Finland are working according to the family health care nursing principles. This means that the nursing and care plans should consider the whole family. The theory is especially important when there is a newborn baby at home. (Kaakinen et al. 2015; Renpenning et al. 2016, 187-190.) In this thesis however we focus more to the preventive care at the maternity clinics in Finland, because it not so familiar to the English-speaking foreign families.

Maternity care is the skilled care that is needed for all pregnant women and their families before (prenatal), during (labour), and after birth (postnatal). The main purpose and aim for maternity care is to provide prenatal care and identify high risk pregnancies and rule out pregnancy related problems referring them for further management in Maternity hospitals (Femeda Oy, 2021.)

2.1 Maternity Care in Finland

According to Hakulinen (2016), the first maternity clinic was started in the 1920s. Municipalities have the responsibility to provide the residents with maternal and child health services. If you are a resident of that municipality, you receive all the necessary care and even when you are not or without a residence permit, services will be provided, but at a cost. The Ministry of Social Affairs and Health in the Finland states that all pregnant mothers must attend maternity clinics for check-ups and examinations to qualify for the maternity grant.

According to Kela (2021), the first maternity grant was introduced in 1938 to support low-income families, but also due to the low fertility rates and increasing infant mortality rates. Kela adds that grants prompted families to seek maternal care services, thus reducing mortality and increasing fertility. In 2014, Finland registered the lowest infant mortality in the world, and this is because 99.8% of all families use maternity services and 99.5% use family health clinics to seek services (Hakulinen, 2016).

At the maternity clinic, there is a doctor and a nurse or a midwife. For a normal pregnancy, there are about 10 visits, and out of these, there are two doctor appointments, the rest check-ups, and examinations. Pregnant mothers must contact the clinics by week 10 of the pregnancy to plan their visits with the nurse/midwife. At the clinic, there are a variety of services to families,

such as support, education on the parent's roles concerning the child, childbirth preparations, monitoring the progress of pregnancy, and providing treatment in case of any problems. They provide postnatal services where the midwife/nurse performs home visits, or the mother and baby visit the clinic to monitor the mother and infant's health status. The maternity clinics collaborate with all specialities for proper management and referral. Once the postnatal visit is completed, a certificate is provided to qualify for a parental allowance from Kela. (Femeda Oy 2021.)

3 NEW-BORN BABY CARE

3.1 Importance of caring for newborn baby

New-born care is the care given to a baby right from birth through the first month of life. This is important because it enables early intervention for adverse events or congenital anomalies, as well as prevention of adverse events and neonatal deaths. (WHO, 2020) This care includes resuscitation if required, complete physical exam to identify any anomalies, administration of prophylactic medications if any, birth vaccines, adequate and early initiation of feeding either breast milk or formula, safe sleep, and hygiene of the new-born. Growth and behaviour assessments may also be done during new-born care, depending on the need for these assessments. They facilitate the identification of anomalies that need to be addressed. Other interventions include Vitamin K administration, Tetracycline or erythromycin ointment application, Vitamin D supplementation from 2 months, skincare that includes skin to skin contact for at least 6 hours after birth, bathing and dry cord care till umbilical stump falls off. Other issues are to look out for jaundice within the first 24 hours, which could be pathological, and thus bilirubin estimation should be done. This care is essential for transitioning babies right from birth. Intervention by a multidisciplinary team may be necessary in some cases. (Perez & Mendez, 2020.)

According to UNICEF (2020), during the neonatal period, the first 28 days of life are crucial for the survival of the child, and therefore, a lot of care should be invested in this vulnerable group. UNICEF further add that in 2019, about three-quarters of neonatal deaths occurred in the first week of life, and the children dying globally during the first month of life make it 17 deaths per 1,000 live births.

3.2 Newborn development milestones from birth to 3 months

Babies go through different phases of development as they grow. These include physical development, sensory development, language development, behaviour, and safety (MedlinePlus, 2020). Most of the babies reach certain milestones at the same time. However, one should keep in mind that each baby must be allowed to grow at their own pace. They further add that as one is caring for the baby at home, it should be able to identify

the milestones as they occur and tell if there are red flags concerning the child's development requiring a visit at the maternity clinic or notify the paediatrician. (Mayo clinic, 2020.)

The Centre for Disease Control (CDC) (2020) defines development milestones as skills developed by a baby as they go through different phases of life, for example smiling, the first step made, waving back to people, standing, crawling, and sitting.

3.2.1 Physical and motor skills

According to CDC (2020), when the babies are awake and placed on their stomach, by 3months they can turn, lift their heads, and try to push themselves upwards. Once they are placed on their backs, they tend to make smoother movements with the arms and legs especially when excited. Mayo clinic (2021) further adds that by this age, the baby can grasp anything that is placed before them.

The best way to promote motor skills is by practicing "tummy time". This is the time when the infant is placed on their tummy for a specific period and allowed to play. Tummy time helps develop the muscles that enable the baby to turn their head, crawl, sit, and eventually walk. However, it is important to remember that a baby must sleep on their back and play on their stomach. During tummy time, the infant must be awake, placed on a play mat or towel and on a ground level and then place the favourite colourful toys before the baby so that they try to reach for them. Tummy time could be best done as soon as they wake up or after diaper changing. It is advisable to get involved and play with the infant so that it feels safe and cared for. (Sharon, 2020.) In addition to tummy time, other ways to help develop the new-born physical skills is during bath time, when they try to kick and splash water, giving the new-born baby a massage, thus stimulating the neuromuscular system (Irvine, 2013).

3.2.2 Cognitive skills

Cherry (2019) explains that cognitive skills are problem-solving skills that are needed to figure out how the world works around us and that at the first 3 months of life is when the baby starts wondering about their body, the surrounding environment and learn how to take in and process information. By 3 months, the baby can recognise faces and objects even from a distance, especially those who always lift them, like the mother. When the baby is lying down and a toy is moved in different directions, the baby, at this age, begins to follow that object. What is more, when left in one spot and not given any consideration, they will cry or get angry until somebody gets to them. The baby at this age can differentiate between tastes, detect sound, and tend to turn towards its direction, focuses on faces when carrying them, and they prefer bright coloured toys. (Mayo clinic, 2020.)

New-born cognitive skills can be developed and improved through talking, singing, and reading with them. Playing with the new-born by placing beautiful and colourful items for them to look at before them. Play is a very important aspect in the development of a new-born baby, using toys that make some sounds and placing a mirror before them, so that they look at themselves while playing. (Loer & Meyers, 2010.)

3.2.3 Language skills

Babies do not talk at 3 months but can communicate in other forms to pass on their messages (Kayla, 2019). By the age of 3 months, the baby develops language skills and ways of communicating and these include cooing, making gurgling sounds, and can repeat some vowel sounds when speaking and playing with them. They always tend to respond to voices by turning immediately to the direction where the sound is coming from and start to express themselves through crying when they are hungry, tired, or in pain. (CDC, 2020; Mayo clinic, 2021.)

According to Kayla (2019), language improvement can be supported through talking, singing to the infant during diaper change or washing time, as this promotes expressive language advancement. Furthermore, perusing a book to the infant and permitting them to investigate with their hands, no matter whether they are responding or not, allows the baby to learn how.

3.2.4 Social skills

Social skills are needed for the babies to regulate and interact with all people of different ages. At this stage, babies can look at the faces longer, especially when being carried, and smiles in connection with something that makes them happy. Therefore, it is important for the caregiver to be careful how they respond when around the infants. (Kayla, 2019.)

Social development is achieved during skin-to-skin contact, feeding (breastfeeding or bottle feeding), telling stories, singing, and providing love, care and attention always needed. This can be done by the caregiver and the rest of the family around them. Caregivers can promote social skills to infants, like talking and explaining everything done step by step while maintaining face contact, which helps in developing language and cognitive skills. (Sarah, 2020.)

3.3 Challenges when taking care of a newborn baby at home

3.3.1 The situation of the mother or caregiver

Burniske et al., (2013), emphasizes the importance of a mother's age in the care for a newborn baby. It goes further to say that it is estimated that about 16 million adolescent girls give birth every year worldwide. Because a girl has given birth, she will be categorized as a woman, but she is not mature yet and does not have the knowledge and skills to look after a baby and herself. According to Slomian et al., (2019), motherhood brings on immense physiological and psychological changes and responsibilities. Çinar et al. (2014), found that confidence is needed if a new mother is to adapt into her role as a caregiver, but this is not easy if the woman is not fully matured yet and is more likely to struggle when caring for their newborn babies. According to Salemani et al., (2014), delayed maternal age has a positive impact on the neonatal health and survival.

Different research studies indicate that families with married couples are usually in a better position to yield better results when caring for a child. The research also shows that single parent households face risk of economic disadvantage, which poses challenges in acquiring the necessary resources for childcare. The single parent has challenges in getting enough time

dedicated to childcare and selfcare, and there is a lot of emotional and mental stress that comes with having to bear the responsibility of caring for a child alone. All the above-mentioned factors will affect the quality of care the baby will receive if they are in a single parent household. (Waldfogel et al., 2010.)

According to research conducted by the University of Eastern Finland (2021), undocumented women in Finland delay accessing pregnancy care, which results in poor health of their babies when they are born because they are not screened early for infectious diseases. Caring for a child born with infections aggravates the challenges new mothers face. Language difficulty hinders communication and understanding between the immigrant mothers and the health workers. This means that the mother might misunderstand the instructions given to her on how to care for her new-born baby when she gets home, or she might fail to ask for help even if it is available due to a lack of confidence in communication. (Small et al., 2014.)

3.3.2 Education and financial situation of the caregiver

Numerous studies conducted in developing countries over decades show a nearly universal positive association between maternal education and child survival. This relationship persisted even in families whose social-economic status had stayed the same. The studies indicate that education greatly contributes to how a mother is going to care for her baby at home. (Kamal, 2012.) Amongst less educated families, quacks are more trustable than the authentic health facilities and when mothers are not educated, they might fail to understand or even trust the instructions given to them by the health workers, and this will affect the quality of care they give to their babies (Banerjee, 2018).

Low-income mothers have higher birth rates and higher infant morbidities compared to mothers with higher incomes. They also found that low-income mothers do not access the required health facilities at the same rate as high income mothers. This is mainly because the parent with low income will have challenges in logistics involved in visiting the health centers, which might force them to ignore routine visits. (Hannan et al., 2016.)

Poverty has a damaging influence on child health and development. This can be due to malnutrition and not having the requirements for the baby. The caregiver/parent who is having financial challenges will not be in a good state of mind to concentrate on providing quality care for the newborn. The shortage of household items needed in caring for the baby might also

pose challenges to the caregiver and force them to compromise on the quality of care given. (Hurt et al., 2017.)

3.3.3 Medical condition of the caregiver

When the person who oversees the care for the baby at home is not in good health, either physically or mentally, the quality of the care they provide to the baby will be affected. For example, postpartum depression (PPD) creates an environment that prevents the mother from taking care of their baby, which in turn affects its overall development. Although postpartum depression comes in about a month from birth, it has a strong impact that arrests any progress the mother might have made in caring for the baby. A mother with PPD will not be able to smoothly conduct mundane activities like feeding, washing, and playing with the baby. Also, the overwhelming negative feelings the mother gets negatively affect her relationship with her baby and her co-caregivers. (Slomain et al., 2019.)

Kurth et al., (2016), mention that during their study, mothers reported that sleep deprivation while caring for a newborn is one of the biggest problems that affect the quality of care the baby gets and that the mothers said that they felt a heavy psychological burden that affected their ability to care for the baby.

4 GOAL AND PURPOSE OF THE THESIS

The goal of this research is targeted at mothers, fathers, and caregivers that are or will be handling the care of a new-born baby and who use the English language to communicate in Finland.

Our purpose is to provide research-based information to caregivers on how to care for babies six months old and below at home. This thesis will help create guidelines through a brochure that can be dispersed to new and visiting parents and caregivers. It will give step by step guidelines to caregivers on how to care for their babies and what to avoid. With the right information, mothers, fathers, and caregivers can create a safe and happy environment for their baby and allow it to develop smoothly. In addition, the researched information will be utilised by the nurses and midwives when guiding pregnant women and their families during antenatal care and home visits after delivery.

Research question:

1. How can a new-born baby be cared for at home after delivery?

5 RESEARCH METHODS

5.1 Review of the literature

The authors used literature review methodology for this bachelor's thesis. Literature review is described as a thorough survey and identification of all literature sources that are related to a specific topic that the author wants to write about. After identifying the research question(s), a systematic approach is used in seeking and analysing all related literature to achieve a successful literature review. (Aveyard, 2014)

Literature reviews provide the reader with summarized and appraised new insights of the topic. It can also be used for different reasons, such as finding answers for clinical problems, providing insights of how the study was carried out to compare outcomes and answer the clinical problems, and students acquire knowledge, especially when there is limited time during studies and have a lot of literature on the topic. Even though there are various kinds of literature reviews that range from classical narrative to systematic reviews, they all use the principles that include the search and selection of literature, appraisal, and combination of the research results. (Coughlan & Cronin, 2017, 4.)

5.2 Literature search and selection criteria

The literature search was done by searching different databases such as Cinahl complete, Ebsco ebook collection, SeAMK Finna, Google Scholar, PubMed, Sage journals, and Academic search elite. Variability, reliability, and relevancy were the biggest determinants of literature choice. The most common key words and phrases used in the literature search were: Neonatal care, newborn care, newborn hygiene, sleep, safety, preventative care, nutrition, and elimination.

The selection criteria for our literature material were mainly based on its relevancy, evidence-based publication, peer reviewed, full text, recent research of not more than 10 years.

5.3 Selection Criteria

Table 1: Inclusion and Exclusion for data selection

	Criteria	Inclusion	Exclusion
1	Time period	2010 – 2021	Any material published before 2010
2	Subject area	Papers on the sub-topics of the research question. Sleep, Hygiene, Nutrition, Preventive care, Elimination, Safety	Any literature that was not targeted at neonatal care
3	Research area	Healthcare and social services	Literature outside these perimeters
4	Publication	-Peer reviewed and Evidence based	Contributions to edited versions, conference papers, personal opinions
5	Availability	Full text Free access	Full text not available Not free

5.4 Data processing and analysis

Having specified the research question, the different sub-topics of this question were identified and were the basis for the data search. These sub-topics were care for a newborn in terms of nutrition, elimination, thermal care, hygiene, safety, sleep, and preventative care. These were also the main key words used in the search of the relevant literature with the analysis of the found literature concentrating on the evidence-based care in these sub-topics.

5.5 Ethicality and reliability of the study

According to Langlais (2014), ethics is fundamental to the integrity and success of not only the research and the researcher, but also the institutions they are affiliated to. Principles like honesty, accuracy, conformity, morality, and confidentiality are expected of the researcher when conducting any research. During this research, the researchers were aware that a lot of ethicality and authenticity issues arise during research, and so they were careful not to end up with any of such issues. They identified early on the most likely ethical and authenticity issues that could arise with the chosen research method. This thesis used the literature review method, so the main ethical issues could be concerned with how the researchers use the source literature. The researchers also had to be mindful of the language and tone used in the

development of the guidelines in order not to offend any users, as there were targeted people from different backgrounds.

According to Singh (2020), writing a research paper is hard work and takes a lot of effort, but this is undermined by plagiarism, which is the biggest vice plaguing the academic writing community and the fact that information is readily available from an infinite source has made it hard to protect intellectual property when the digitalized flow of data allows us to access any material we want online. This results in several challenges for students and researchers, since acknowledging sources of information used becomes a big part of the process of academic writing. To avoid infringement and malpractice, we had to emphasize academic honesty when researching for and writing our thesis. This we achieved by listing every source used according to the format which is recommended by the instructions of written work in Seinäjoki UAS principles and using an anti-plagiarism software to check our work as we progressed.

6 RESULTS OF THE STUDY

6.1 Caring of the newborn nutrition

According to Joshi et al., (2016), breast or human milk is the greatest gift that every mother can offer to the growing infant due to its immunological, nutritional, behavioral, and economic advantages, as well as enhancing growth and neurological development of an infant. Breast milk is suggested as ideal and exclusive for early nourishment for all newborn children from birth to at least six months of age, as it provides vitamins, minerals, and nutrients (Behzadifar et al., 2019). Some studies that were carried out in developing countries showed that exclusively breastfed infants are less likely to suffer from acute respiratory and gastrointestinal tract infections, Urinary Tract Infections, otitis media, necrotizing enterocolitis, bacteremia, and allergies, thus preventing mortality in the first months compared to non-breastfed infants (Joshi et al., 2016).

The main feeding methods for an infant below 6 months of age are breastfeeding and bottle feeding (Kotoswki et al., 2020). Breastfeeding provides short- and long-term benefits both to the mother and the infant. Breastfeeding creates a bond between the mother and the baby, due to the closeness, and enhances the mother's self-esteem knowing that she provided the infant with the best food for its body (Joshi et al., 2016). However, if breastfeeding is not possible, breast milk can be expressed and stored in different containers or bottles, putting into consideration that each bottle should have what the baby can consume per feeding and whatever remains is discarded. This way, the infant is receiving the same nutrients and benefits as the breastfed baby. This is also applicable to the infant formula. When bottle-feeding, it is important to put into consideration the positioning of the infant and the bottle, the teat flow rate, venting, compressibility, material, and bottle size to enable infants to have control on the milk flow as compared to breastfeeding where the infant has control on the milk intake. (Kotowski et al., 2020.)

Successful breastfeeding is achieved through proper positioning of the mother and the baby, the baby's alertness, rooting reflex, active sucking reflex, and good breast attachment and numerous studies show a measurably critical relationship among position and attachment factors for causing nipple sores (Kalarikkal and Pfliegerhaa, 2020). Various studies indicated that

the causes of breast problems like nipple sores, mastitis, cracked nipples were in association with poor positioning and attachment of the infant to the breast. A study carried out in Libya on breastfeeding practices indicated that poor attachment and positioning were common in teen mothers compared to other ages, and good positioning and attachment were well established in multiparity compared to primipara due to the earlier experiences. (Goyal et al., 2011.)

Correct latching and positioning are very important in preventing lactation problems and early cessation of breastfeeding. A good latch is characterized by the baby's gum placed over the lactiferous sinuses, tongue under areola, baby's chin touching the breast, mouth wide open and cheeks rounded, and lips turned out and not inward. However, for a good latch to be successful, the mother needs to be comfortable and in a good position to breastfeed. Various breastfeeding positions have been used mostly by the mothers and are known as the traditional breastfeeding positions. These include the cradle, cross-cradle, side-lying, football, and the most recent Biological Nurturing (BN) known as laid back breastfeeding (LBBF) that was introduced in the 1990s. (Wang et al., 2021.)

However, according to Anderson et al., (2016), nursing mothers need to avoid certain medications or drugs that are contraindicated while giving breastmilk. Infants below the age of 2 months are more affected by the drugs in the breastmilk. There are classes of drugs that should be avoided or minimized, if need be, that include, opioids, multiple CNS depressants, and topical and systemic iodine. Street drugs such as cannabis, cocaine, and PCP (phencyclidine) should be avoided as they affect the neurodevelopment of the infant. (Goyal et al., 2011).

Alcohol consumption is not advisable while breastfeeding, as it has an impact on milk production and the growth and motor function of the newborn baby. If taken excessively, it may also cause high infant sedation, fluid retention, and hormone imbalances. (Gibson and porter, 2018.) In case of alcohol consumption, nursing should take place after hours or more, thus minimizing its concentration in the breast milk. Nursing mothers should avoid smoking due to its increased association with infant respiratory allergy, SIDs and the effect on the milk supply and poor weight gain. (AAP, 2012.)

6.2 Caring of the newborn excretion

The first stool of a newborn baby is known as meconium and it comprises all the things that the baby ingested while still in utero, like amniotic fluid, skin cells, and water. In a study carried out to determine the time taken for the first stool and it was concluded that meconium is delayed if it is not passed within 48 hours of life and, therefore, a newborn baby should be re-evaluated. It is usually sticky and darkish green-black in color, but that changes as nutrition is well established. However, it is important to know that breast milk and formula are digested differently, and that is why it is possible for a breastfed baby not to pass stool for even 3-7 days if the belly is not rigid, and the baby feels comfortable, whereas the formula-fed baby is constipated if no stool passed for 2-3 days. This may indicate that the baby has an allergy to the formula, or a sign to change another kind of formula, but visit a pediatrician. (Okoro and Enyindah, 2013.)

Newborn babies pass urine once in the first 24 hours and then twice for the following 24 hours. For the next days, the frequency increases as the child is fed more and possible to have more than 5 diaper changes in a day, but in case it is fewer than that, it implies that the baby needs more fluids. In addition, there are pink-orange uric crystals that are sometimes found in the diaper during the first 3 days of a baby's life, but when this continues, it is a sign of dehydration, and more feeds should be given. (Davidson et al., 2012.)

6.3 Thermal care for newborn baby

Normal body temperature of a newborn infant is between 36.5°C to 37.5°C and any temperature below or above is harmful to the baby. Studies have also shown that keeping a baby warm reduces mortality and morbidity rates. Bodies of newborn babies are not equipped to produce sufficient heat needed for the survival and development of the baby. Babies exhibit responses to low temperatures by crying and acting irritably, which prompts the mother to swaddle them, thus giving them the needed body heat. Newborn babies need thermal protection to maintain the required temperature. (Lunze, 2012.)

The smaller the baby, the higher the temperature needed for its development. A mother can achieve the required temperature by keeping the room warm at least at 25°C and free of cold draughts, but with good ventilation for fresh air, skin to skin contact to help the baby's body retain heat, wrapping the baby in warm clothes to help retain body heat and prevent

hypothermia, and by avoiding putting the baby in direct sunlight or too near a heat source. (McCall, 2018.)

6.4 Hygiene care of a newborn baby

According to Kuti et al., (2019), infections contribute to approximately 25% of the 2.8 million neonatal deaths worldwide annually and of these deaths, more than 95% are caused by sepsis-related conditions, which are, in turn, caused by contaminated environments. They also add that practicing good hygiene is one of the proven practices that can help reduce infections in infants as well as adults. Saffari et al., (2014) mentions that hygiene is the different activities by which people maintain good health by practicing personal cleanliness and cleanliness in their surroundings that includes, but is not limited to, activities such as keeping clean the body, skin, hair, nails etc. This can be achieved by regular bathing, hand washing, washing all clothes, and keeping the living environment clean.

Diarrhea is one of the leading causes of mortality and morbidity among infants in developing countries. Diarrhea is often associated with poor hygienic conditions, which result in contamination of the baby's food and other feeding utensils. Breastfeeding is one of the easiest ways to avoid diarrhea caused by poor hygiene in babies. If the hygiene in a home is not up to standard, or conditions where the baby lives do not allow the promotion of good hygiene, breastfeeding would be the best option, because breast milk does not only have nutrients that help the baby fight off infections, but it is also easier and safer to use than baby formula. This means that it has fewer chances of being contaminated. (Gribble et al., 2012.)

An infant's skin epidermal barrier is less developed, which requires that the parent develops an appropriate skincare regime for the baby. Water is usually needed to cleanse the baby skin of water-soluble impurities and particulates, but it may not be sufficient. It is also advisable to couple it with some form of baby cleanser, although the chosen cleanser must not damage the skin barrier by removing components of the skin. (Duan et al 2019.)

Ness et al., (2013) emphasize the importance of the choice of skincare product to be used when taking care of the baby and that the product itself plays an important role in the overall health of the baby.

There is a structural difference between baby and adult skin, it is important to develop a special skin regime for the baby with products that are friendly to baby skin and have been recommended by the relevant authorities on the subject. Parents generally have a wide range of baby skincare products to choose from and at affordable cost, so all that is needed is research into which one is best for the baby. Cook further compared the use of four common baby cleansers to the use of only water for cleaning the baby and found that the difference was minimal but leaned more in favour of using both water and cleansers together. It is a common practice to bathe a baby 2 to 5 times a day and that bathing was generally a common cultural norm according to the different literature they reviewed. The main justification for the practice of bathing the baby multiple times is that regular bathing is essential for the baby's good health. (Cooke 2018.) However, further discussions and interviews conducted revealed that this practice of multiples baths a day exposed the baby to undesirable thermal conditions (Adejuyegbe, 2015).

Grossman (2012) says that to keep your baby healthy from infectious pathogens being transmitted back to the baby's body, it is important to constantly practice clean diapering habits by changing the diapers regularly, constantly cleansing of the diaper changing area to reduce environmental contamination, and good hand hygiene. Babu (2015), found that it is safer and cheaper to use disposable diapers compared to the use of cloth diapers in neonatal care. It was also confirmed that using disposable diapers decreased the incidence or risk of sepsis and infections. According to Blume-Peytavi et al. (2018), various skin conditions affect the diaper area in infants with diaper dermatitis (DD) one of the most common ones. Good hygiene and skincare practices are essential in the prevention and management of these skin conditions.

6.5 Sleep and rest of a newborn baby

Sleep is a time characterized by mixed changes in brain activity in addition to being a resting period of the sensory activity and responsiveness to external stimuli. It, therefore, follows that sleep is related to the resulting cognitive development of the baby. There is not much study that has been done on sleep in newborns, but by going with the findings of various studies on sleep in infants, sleep is fundamental for the development of the baby. (Tham et al., 2017.)

Managing the sleep of a newborn is one of the most challenging tasks of looking after a newborn baby. Newborn babies are not yet accustomed to a typical sleep schedule, and this means that they will sleep and be awake at times that do not fit into the schedule of the caregivers. Most new parents, unless they had a class on baby care, might be disturbed by the baby's sleeping habits, which might cause unnecessary worry. Typically, babies sleep for about 9 hours during the day and 9 hours during the night. They will wake up at least every 3 hours to eat. With time, a parent can train the baby into an ideal sleep pattern. Sleep disorders in babies might be indicators of other issues, like jaundice. (Villines, 2020.)

Developing a sleep pattern for the baby is very important, but it is not easily achieved. A baby adjusts to the rhythms of the world gradually as they move from sleeping 8 hours during the day and 8 hours during the night to sleeping only 3 hours during the day. This sort of sleep pattern will start to emerge at about 8 weeks. However, this does not mean that the baby's night sleep will no longer be interrupted. It is later at six months that the baby will slip into a regular sleep pattern. The first 2 months of a baby sleep is divided into two categories: these are active and quiet sleep. Active sleep is the first 25 minutes when the baby has just fallen asleep, and it is still active through body, eyes, and irregular breathing. It is imperative that no disturbance, whether noise or touch happens during this time because the baby will most likely wake up. Quiet sleep on the other hand is after 25 minutes of sleep and the baby is fully asleep. The baby breathes rhythmically, makes sucking motions, and has few muscle movements. During this time, the mother can move on and do other things as the baby is in deep sleep and is not likely to wake up. (Brink, 2013.)

6.6 Preventative care of a newborn baby

Temperature assessment, fever, and illness are part and parcel of taking care of an infant. Parents need to take the temperature of the newborn baby if there are signs of illness. The axillary temperatures of 36.5°C – 37.5°C are considered normal and used as a standard. Many methods can be used to measure the temperature of the newborn with the rectal having the best result. However, rectal temperature measurement comes with the risk of trauma, so it should be used with care. Parents should ask the health worker how to measure the baby's temperature properly because it is an important indicator of the state of health of the baby. Temperatures of 38°C and above are considered a fever and parents should see the health worker immediately because a newborn baby is at risk of catching a lot of infections. Parents

should never administer over the counter or any other drugs without a recommendation or prescription from a health worker. (Davidson et. Al., 2011.)

Conditions that might result in Failure to Thrive (FTT) in children should be monitored early and referred to a pediatrician for further investigation and management. The research goes on further to explain that FTT is the lack of expected normal physical growth or failure to gain weight for a baby or infant. This is usually the result of poor nutrition for the baby. The monitoring of the baby's weight and growth rates becomes routine from the first day of life. (Goh et al., 2016.)

Newborn babies are at risk of overweight, which predisposes to child, adolescent, and adult obesity. Research indicates that children who were overweight at 6 months were more likely to also be overweight at 12 months or beyond. The research also found that overweight was more common in formula-fed infants before six months. They concluded that breastfeeding was the biggest intervention against overweight in infants because it is naturally balanced with the needed nutrients for the growth of the baby compared to formula. (Reifsnider et al., 2018). Childhood obesity is an epidemic and addressing it continues to be a challenge. There has been increasing focus on the presentation of infant obesity because when it develops, it is likely to persist. National estimates indicate that 8.1% of infants are overweight. Most obesity interventions are targeted at school-age children, which might be too late, since usually obesity develops earlier and persists. It is, therefore, very important to start monitoring and managing the weight of the newborn as early as possible. (Lumenge et al.,2015.)

6.7 Safety care of the newborn baby

According to Moon et al., (2016), approximately 3,500 babies die from sleep-related accidents every year in the US. The most common cause of these accidental deaths is SIDs. Moon found the following recommendation on practices to prevent sleep-related accidental deaths in infants: avoid the prone or side positions when putting a baby to sleep, for these two positions increase the risk of rebreathing expired gases, which may result in hypercapnia and hypoxia. The side sleep position has also been known to have a high risk of the baby rolling over on its stomach, which may lead to suffocation. It is, therefore, important that babies are put to sleep in the supine position for every sleep period. (Moon et al., 2016.)

Liu (2016) states that road traffic crashes are the leading cause of death and injury among children under 14 years. Motor vehicle accidents are the leading cause of injury and morbidity in children in Israel. The importance of using car safety seats for infants cannot be overstated and to ensure that the baby is safe during travel, a car seat should be used from the moment the baby is discharged from the hospital and any other time the parents must travel with the baby (Everntov- Freidman, 2014).

7 CONCLUSION AND FURTHER RECOMMENDATIONS

7.1 Limitations of the study

This study is a literature review, so it naturally follows that most of the limitations encountered were related to date sourcing. The study was primarily targeted at mothers and caregivers at Seinäjoki maternity clinic in Finland, but the search resulted in limited literature from Finland. Most of the material used was research conducted globally. Most of the relevant literature from Finland was in the Finnish language, which required translation. Information sources like graphs, charts, or maps were not effectively used because they were not easily interpreted. This meant the loss of the opportunity to use more relevant data. The literature search turned up a lot of sources, but many were not full text, which meant that the complete research could not be accessed in these cases.

7.2 Observations and recommendations

This study aimed to provide information on how to care for newborn babies at home to parents and caregivers. The study covered all aspects of caring for a newborn with emphasis on nutrition, elimination, sleep, hygiene safety, and preventative care. It was targeted at promoting the wellbeing of the baby in the first six months of its life after it leaves the hospital.

After reviewing different literature sources about the topic, it became clear that the quality of care a newborn receives has a strong impact on their immediate and future development. It is also clear that, although caring for a child is assumed to be a natural skill, it does not come easily to most parents, so regular guidance and intervention by health workers, where necessary, is needed.

Early education on why and how to care for a newborn baby is the best way to achieve an improved quality of neonatal care. Expectant parents, current and potential caregivers, health workers, and other members of society must familiarize themselves with information on medically approved newborn care practices. Where possible, these practices should be available to all age bearing adults.

The most important thing to bear in mind when taking care of a newborn baby is that the health state of a newborn baby is not only delicate, but also unpredictable. A newborn baby's body is

fragile, and their condition can worsen in a very short time, so whenever in doubt, the caregiver should not hesitate to consult a medical practitioner, even for matters they consider insignificant. They should never wait for the situation to escalate.

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APPENDIX

Appendix. Guide: New-born baby care at home after delivery

A GUIDE



How to care for a newborn baby at home

Information

- THL, 2019: We are having a baby https://www.julkari.fi/bitstream/handle/10024/132228/2019%20We%20are%20having%20a%20baby_web.pdf?sequence=12&isAllowed=y
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Safety

Most babies younger than 6 months die every year because of injuries of which could be prevented by looking out for the potential risks.

- To avoid car accidents, whenever travelling, by car, always put the baby in the back seat in a rear -facing car seat and making sure that the seat is installed correctly and tightly.
- To avoid injuries from falls, never leave the baby alone and unattended on high surfaces like the changing tables, beds, sofas or chairs. Always place the babies in their cribs when not holding them.
- To avoid injuries from burns, never carry a baby and hot liquids the same time as babies wave the fists and grab things in their sight.
- Have a working fire alarms in the house especially the sleeping rooms in case of any fires.
- To avoid choking, clear away the baby's surrounding of all small, tiny objects.
- To avoid SIDs, place the baby in their own cribs or bassinets with no pillows, stuffed toys or loose beddings. And avoid use of water beds, bean bag or anything that is soft enough to cover the face.
- Keep away plastic wrappers and bags from the baby's surroundings.
- Avoid leaving babies with young children without supervision.
- In case of any injury, call your doctor immediately and seek medical attention.

NEWBORN NUTRITION

Breast milk is the greatest gift for every newborn baby below 6 months of age. Breast milk provides the immunological, nutritional and behavioral and economical benefits to the mother and the baby.

Breast milk can be provided through breastfeeding and bottle feeding. Exclusively breastfeed the baby for 6 months before introducing other feeds not even water. You can give only medications prescribed by the doctor.

If breastfeeding is not possible, express the breast milk into clean containers and store them in different bottles in amounts that can be consumed by the baby as per feed and discard the remainder after feeding.

Successful breastfeeding can be achieved through proper attachment of the baby on the breast and ensuring that mother is in good comfortable position.



Cradle hold

Cross-cradle hold



Football hold

Side-lying position

SLEEP AND REST

Newborn babies have different variations in the need for sleep and sleep rhythms.

- Most newborn babies sleep a lot and wake up only to feed every 1-4 hours. At 2 weeks, they start staying awake longer and by 3 months, they are awake 6-8 hours.
- It is important to teach the baby's a sleeping pattern that matches the sleep-wake routines of other family members.
- Let the baby sleep in their own bed and in the parents room.
- Allow the baby to sleep outdoors for fresh air. During winter, covering the baby well and place them in a safe place but only in temperatures less than -10 degrees. During spring and summer, place them away from different sunlight
- keep the lights low and resist the urge to play with the baby.
- Always place the baby on their back while sleeping and never on the side or belly to avoid SIDs.
- Make sure the crib/bassinet meets the safety standards
- Avoid overheating the room and noise in the bedroom.

New Born Hygiene

Infections contribute greatly to the neonatal deaths worldwide and this can be due to the contaminated environments and it is therefore important for every caregiver to put in consideration the following

GENERAL HYGIENE

1. Practice good hand hygiene before and after handling the baby and everything in their surrounding. This includes also visitors coming to see the baby.
2. Wash thoroughly and sterilize all the baby's utensils and store them in a clean area to prevent diarrhoea.
3. Bath the baby regularly and wash the clothes separately from the rest of the family.

SKIN CARE

1. Make sure to use baby friendly skin products that are recommended by the pediatrician.
2. Practice clean diapering habits by changing diapers regularly and constantly cleaning the diaper changing area and wash hands after.
3. clean baby's face , skin folds, back of the ears, hands and armpits on a daily basis 2-5 days.
4. Avoid daily bathing as can dry the skin too much and in case of dry skin, use a drop of oil to the bath water.
5. Keep the cord dry at all times by exposing it to air and avoid covering it with the diaper.
6. Never use the baby's bath tub for other purposes or share it with other children.
7. No saunas for baby's under 6 months, keep the water at 37 degrees when bathing.
8. Use fragrance free detergents when washing baby's clothes.

Contact a doctor if there is anything abnormal on the baby's skin and around the umbilical stump.