Family-centered Care in NICU

Literature review

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Degree Thesis

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Abstract:
Family centered care is philosophy that recognizes the role of the parents and its importance in the child's life. It values family wellbeing as whole and provides care for all its members. Nurses are the main figures that can enforce this care model and implement it in the neonatal units.
The aim: was to understand what family centered care is? In the neonatal intensive care family centered care was provided to families facing separation from their newborn. Family centered care lays the foundation for parental involvement in the care and increasing their presence at the hospital. Research questions for this thesis are.1) What are the benefits of implementing Family Centered Care in neonatal units? 2)What are some of the challenges concerning family centered care?
Methodology: Peer reviewed scholarly articles, books and other data bases were researched for relevant and evidence-based care model that displayed the importance of family centered care. The author used inductive analysis to dense written data, through open coding the author choses three main categories that supported the benefits of family centered care. Repetitive themes and patterns were placed under each category to answer the first section of the research question.
Result: The findings in this thesis supported the benefits of family centered care mentioned in the articles. This holistic care approach caters for the entire family and not only the premature baby. Theories and evidence-based results shown that maternal bonding such as skin-skin contact increases the survival rate of these children. Bringing this care model in NICU need to plan from organizational level through staff and finally families to fully implement this practice.

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Abbreviations

FCC: Family centered care

NICU: Neonatal intensive care unit

LBW: Low birth weight

1 INTRODUCTION

The arrival of a preterm child and its admission to the neonatal intensive care units may cause challenges and emotional problems to families. Isolation from the child can bring fear, and stress to the parents. Mothers with preterm children in the NICU are more likely to suffer from depression compared to other new mothers (Fleck, 2016). New neonates also suffer from the change of the womb to the neonatal intensive care unit. Neonates are exposes to different sensory inputs, temperature and olfactory sensations (Bernardo et al., 2017).

This thesis attempts to understand and explain family centered care as a care model for the NICU. This care model recognizes the pivotal role of the parents in the child's life. Health care officials develop partners relationship with the parents evolving around the interest of the child (Kenner and Lott, 2013). Family centered care revolves around the belief that the family is a constant in the child's life. Parents have the right to be nurturers and providers, in the neonatal intensive care that can happen beside the cot (Dobbin, 1994). Family centered care benefits include the presence and participation of parents. Infants with parents present on the ward gained more weight, had reduced mortality from neonatal infections, less antibiotics, increased exclusive breastfeeding, early discharge and reduced readmissions. (Bastani, Abadi, and Haghani 2015).

The author as a nurse student and mother had experienced separation from her child after brief hospitalization. After the experience the author researched care models available to families and their children during hospitalization. The thesis consists of two research questions that enable the writer to research both the benefits and challenges of family centered care. The author chose John Bowlby's attachment theory to explain the complications that occurs early maternal separation.

2 BACKGROUND

Every year an estimated 15 million premature babies are born worldwide; Low birth weight (LBW) or preterm births are considered the main causes of mortality and morbidity for neonates and infants. Over 1 million infants die from preterm birth related complications. It is believed to be the main cause of infant mortality after pneumonia in children under five years. The main cause for low birth weight for neonates is preterm birth (Bastani, Abadi and Haghani, 2015) . Neonatal intensive care unit (NICU) is specialized for caring for preterm children with medical or surgical or other developmental issues. These units are getting more complex and advanced as smaller and smaller children are surviving. A team of various health care professional work closely with obstetricians to achieve quality care. Nurses are trained to perform neonatal resuscitation and treat symptoms that arise early phase of child (Kenner and Lott, 2013).

Pediatric and neonatal intensive nursing is constantly improving and progressing with new technological innovations that are used to monitor newborn baby's vitals. Newborn or neonates are monitored with advanced equipment to detect rapid changes that occur during the clinical picture of the child (Dixon and Crawford 2012). Neonatal intensive care unit is designed to care for high risk newborn with medical, surgical, and developmental difficulties. The environment focuses to meet the needs of the infants physiologic and neurobehavioral function keeping in mind the social interactions of the infant and the effects of stress and overstimulation in the ward. Caring for medically ill preterm or low birth weight (LBW) neonates has great impact on their survival and decreased mortality for these vulnerable population. Neonatal intensive care has increased survival rate through advances in obstetrics and neonatology (Kenner and Lott 2013).

The Hospital District of Helsinki and Uusimaa neonatal intensive care units provide care for the neonates 24hr a day, around 2000 neonates are treated every year in the unit. The unit care for premature children, children who have trouble in breathing, Children born with birth defects, neurological disorder or infections, Complications resulting from birth or caused my illness of the mother.150 out the 500 neonates weigh less than 1500 grams, and two out of three of the neonates are almost preterm. The unit is equipped with machinery used to for the medical interventions for the children, like incubators, ventilators, monitoring, machines, and IV machines. Many of the surgeries or procedures can be done

in the unit. Some of the children that no longer require intensive care treatment are transferred into another unit or visit the outpatient clinic (Terveyskylä, 2019)

2.1 Family centered care in NICU

Traditionally women gave birth at home, and the baby's crib was next to the mother. The gradual shift to hospital births, anesthesia, aseptic and surgery introduced mother infant separation. Hospitals introduced nurseries that cared for the children the first few days, babies were brought to their mothers only for breastfeeding. The effects of maternal separation greatly manifest in those mothers whose children are placed in incubators. Emotional closeness between parents and their neonate is most important in the neonatal intensive care unit (Császár-Nagy and Bókkon 2017).

According to Foster FCC evolved from John Bowlby's researches that was reinforced by Platts report, psychologist and researchers. In 1959 the Ministry of Health and Central Services Counsel in London published Platts report that allowed parents visitation access, parental presence ,and involvement in the hospital care. While in the USA they were going through changes in their family centered care model, identifying eight key elements like, recognition of the parents as the main and constant factor the child life, corporation between the health care staff and the parents, respect, communication, individuality, parents to parent support, and well executed health design delivered to them (Foster Whitehead, and Maybee 2016).

Family centered care focuses on the family's role as the center of care . The delivery of health is built upon respect, collaboration, communication, participation and inclusion of the parents in the all aspects regarding the care of their child. According Shirazi (2018) the American academy of pediatrics defines FCC as an approach to healthcare that directs policies, design facilities, plan daily interactions among families and the healthcare staff members Family centered care facilitates family partnership, empowers parents and builds on their strengths to provide care for their infants. Family centered care advocates parents to nurture their infants and follow their developments (Bernardo et al., 201; Shirazi et al, 2015; and Kenner and Lott 2013).

The most common principle of family centered care is "giving care to the family as a whole". Caring for the entire family helps reduce maternal stress, improve psycho-social

function and enhance family wellbeing. Effective communication, encouraging parents, and promoting intimate relationship between the child and mother increased maternal satisfaction, confidence and helped facilitate parental role (Bastani, Abadi, and Haghani 2015) Family centered care promotes inter-disciplinary teamwork. This enhances the nurse's knowledge in care, promotes social and communication skills. Nurses view family centered care as appositive change, for example connecting with parents, the weight gain of infants and reduction in hospitalization. Professional satisfaction and qualification capabilities were reported because of family centered care (Ramezani et al, 2014).

Family centered cares philosophy is attributed with "families' care taking" this involves evaluation of the family's needs. Researches has described FCC as the best quality of care that determines families' mental and physical difficulties. Family centered care's holistic approach maintains families with dignity and respect. Nurses provide quality care plans for families and not only patient. Family centered care honors the cultural background of the family. Ethnicity, religion and the socioeconomic background of the family are considered when planning for the care of each family (Ramezani et al, 2014; Kenner and, Lott 2013).

This philosophy of care is complex health care model. Family centered care has evolved throughout the years and still is, developing countries have recognized it and are revising this health care model and implementing it in their units. Over the years there are has been changes with family centered care model and how to implement it in a children unit, but one concept has remained the same, it has put parents and the patient at the center of the care. It encourages nurses to step in the parent's position, perhaps understand the needs of parents with ill child (Staniszewska et al., 2012)

Neonatal intensive cares can be stressful environment for parents, the hospitalization of premature babies not only affects the child but also the family emotional wellbeing. Caring and maintaining the parent's mental wellbeing is the holistic approach of care (Shirazi et al., 2015). Neonatal intensive care unit is one of the units that have embraced this care model and implemented it into their care. Family centered care recognizes the influence and the position of the family. The care is based on the individuality, the cultural and moral beliefs of each family. Neonatal care shifted from routine and tasked based care to

more family oriented and reciprocal collaboration between health care personnel and parents (Mirlashari et al., 2018).

The nurse is in a unique position to implement Family centered care in the neonatal units. Nurses can experience obstacles such as demanding parents, more responsibility with the usual patient care. Despite the challenge nurses agree that family centered care has long term benefits for the infant and family in NICU. The two major roles of the nurse in family centered care is providing medical and emotional care to the infants, embowering, educating and supporting parents. The nurse encourages and enhances parental involvement with the level that is comfortable for the parents. This includes emotional support, educating parents to develop skills needed to care for the young neonates (Mirlashari et al., 2018).

3 THEORETICAL FRAMEWORK

In neonatal care units the idea of family integrated care is essential to the wellbeing of the infants and their families. The isolation and hospitalization of young neonates from their families induce stress and delay in parental attachment. However, the strict hospital routines, the ward environment, Technology, the appearance of their child, the inability to care for the baby and the staff's attitude to parental involvement can further create detachment between the parent and the child. According to Bowlby and Robertson in 1960 stated the adverse effects of the deprivation of mothers from their children. Bowlby believed that it is essential for the mental health development of the infant to be cared for one main figure usually the mothers

3.1 Bowlby's attachment theory

John Bowlby (1907-1990) is a British child psychiatrist known for writing the basic tenets of the attachment theory. The theory is joint work between john Bowlby and Ainsworth, which revolutionized the relationship between the mother and her child, and its disruption through various ways such as, separation, deprivation and bereavement. John Bowlby graduated from Cambridge University in 1928, were he received training in developmental psychology. Bowlby volunteered at school for young troubled children and later in his career collected data from hospitalized children from their parents. He discovered the correlation between early separation of mothers from their infants and later behavioral problems in the child's life. It was the experience of that school that persuaded Bowlby to develop career in child psychiatric (Bretherton, 1992).

Attachment was described as bond or close relationship between two individuals. But in Bowlby's attachment theory, attachment is described emotional and enduring bond between infant and its mother. Securely attached children use this bond is as haven, and secure base to explore its environment (Pennestri et al., 2015). Attachment bond is based on the need for safety, security and protection from danger. At a young age the child is vulnerable and weak, which instinctively attracts to its care giver, as evolutionary perspective it promotes protection and survival. The attachment figure is often regarded as the parent, which the child considers as comfort and distress reliever. Fear is often seen as a stressor that activates the attachment behavior in infants. Attachment behavior is

explained as the infants seeking proximity to the attachment figure, Attachment is part of the many interactions parents and infants share such as feeding, playing and problem solving. (Prior and Glaser 2006). Physical availability and emotional responsiveness reassure the child and offer a safe base to explore. Physical presence does not only bring comfort but also has a great impact on the actual survival chances of the child (Wallin, 2007).

Innate attachment behavior includes searching, monitoring and trying to get closes to a protective key figure in the child's life. This is usually displayed as clinging, crying and calling. The key figure is used as a secure base to explore unfamiliar environment or objects. Children whose attachment is secure roam around freely to explore and return to their mother. If the key figure is absent this behavior ceases into existent. Safe heaven or seeking protection in their attachment figure, the survival instinct of the child includes fleeing to their mothers when threat is faced, such as unknown environment, loud sound. Seeking physical proximity here does not only apply the need for protection from danger but also ongoing availability by their care giver (Wallin, 2007).

There are four different phases of attachment that babies go through, the boundaries between these phases are not distinguished easily, the first phase is the initial attachment phase where the child can not differentiate or discriminate adults and can interact with any adult with proximity. However, studies have shown that infants are learning to recognize parents from other adults. The second phase is called attachment in making, this is between 8 weeks to 6 months of age. With better vision and audio, the child can differentiate familiar faces from other. The third phase is clear cut attachment which begins from 6 months until well over one year old. The child stays proximity to the key figure by means of locomotion or communication, attachment is evident in front of everyone. The relationship between the mother and the child becomes task oriented, the child discovers ways to terminate his discomfort and his behavior becomes means for achieving those goals. The four phase is the formation of goal corrected partnership. It does not begin until two years of age or much later. In this final phase the main change is the child recognizes the mother as a separate individual with their own set of goals. The child becomes less self-centered, this lays the foundation for partnership and more complex mother child relationship (Prior and Glaser, 2006).

Separation and anxiety are also one of the papers published by Bowlby on attachment between the mother and the child. The disruption or separation of the mother infant attachment, children responds several ways including protest, despair, denial or detachments. Protest originates from the separation from the mother resulting in anxiety, after this stage the child mourns and grieves for the mother. If the relationship is not restored the child develops defense mechanism denying the trauma, or even worse such as emotional detachment and repression (Bretherton, 1992).

Ainsworth contribution to the attachment theory were important finding too Bowlby's theoretical foundation. Ainsworth first field research was conducted in Uganda, it contained rich materials that supported Bowlby's theory. Three main attachment patterns were observed by Ainsworth. Securely attached children cried less and showed content in the presence of their mothers and explored more than others. Insecure infants cried more even with the presence of their mother and explored less. The last group is not yet attached group that showed no difference in their behavior regarding the presence of their mother or not. Ainsworth correlated secure attachment to maternal sensitivity, it is related with to relaxing and pleasant mother infant relationship. Mothers who were quick to respond to their child cry in the first three months, their babies cried less and developed other communication skills or facial expressions. Feeding was also smoother, and they required less contact later, if contact occurred it was affectionate and loving (Bretherton 1992).

3.2 Family centered care and Bowlby's attachment theory

Attachment and bonding between mothers and their infant can shape future interaction in the child's life. It is essential for the child to develop healthy attachment to the mother; positive relationship facilitates development in their social competency and cognitive and language development. Mother-infant bonding is unique and starts from the infants in the mother womb through their lifetime. It is continuous interplay of sensory cue developed through touch, visual and sound. The infant's behavioral clues give parents the ability to understand and respond to their need (Fleck et al., 2016).

Mother-infant interaction is a complicated process of human growth and development. Two factors that influence the mother-infant attraction are maternal identity and the experience of becoming mother to a child. The actual birth of the child is a strong emotionally anticipated event, Mother feel joy, happiness, euphoria and love resulting from the childbirth. Mothers release naturally oxytocin that heighten maternal instinct, keeping the newborn closely, responding to the needs of her new child are all part of the maternal identity (Fleck et al.,2016).

Preterm children have a higher risk to develop disorganized attachment than full term children. Insecure-avoidant children tend to minimize expressions of negative emotions, avoid proximity to their mother, insecure-ambivalent children show signs of resistance and dependency to their mother. The fourth category that preterm children are at risk is disorganized attachment. Children with disorganized attachment fail to show appropriate strategy to seek proximity to their mother at times of distress. They show bizarre behavior that is incoherent and lacks goal. These children develop mental disorders later in their lives (Pennestri et al., 2015).

Separation of mothers and their infants has adverse effects on both, Research shows that children separated from their mothers from the first two hours after birth had poor maternal bond a year later. Children that had skin-skin contact with mothers displayed better self-regulation, were less frustrated and able to calm and sooth themselves. Early maternal interaction between mothers and child include touch, Smell of mother's odor, voice and face (Császár-Nagy and Bókkon, 2017).

Family centered care emphasizes the importance of parental presence and active participation in neonatal care. Revolutionizing neonatal care, medical and health care organizations developed a new care model observing neonatal behaviors and need in the intensive care units. This care model is based on individuality and communication principles. Family centered care considers neonates as individuals rather than fetuses. This new care theory is interpersonal, team oriented and multidisciplinary one (Ramezani et al., 2014).

Neonatal children are separated from their mothers, this brings disruption to the mother-infant attraction between babies and their mother. This innate attraction toward the mother is just equally strong of a full-term baby. The hospitalization, live threatening events, and unknown neonatal behavior also affects the mother willingness to bond with the child (Fleck, 2016)

Family centered care has few interventions to increase the quality of mother-infant attachment. Since the framework of NICU nursing is FCC, mothers are allowed 24-hour presence beside the neonate s bed. Active involvement in childcare facilitates infant development, early discharge and decrease readmission (Bastani, Abadi and Haghani, 2015).

Other ways of increased mother-infant attachment include physical contact such as touch, massage and kangaroo mother care or skin to skin contact. Kangaroo mother care as a care method that involves placing the naked preterm child between the parent's bare chests. Evidence has shown that significant improved were shown by stable preterm with no medication. Skin to skin contact with the mother helps develop physiological, emotional and cognitive regulatory process. Kangaroo mother care. Kangaroo mother care decreases salivary cortisol level and the heart rate of the child, establishes sleep-awake cycle, stabilizes infant temperature and decreases infant crying (Császár-Nagy and Bókkon, 2017).

4 AIM AND RESEARCH QUESTIONS

Family centered care is practiced and is seen to have positive results in the care of neonates in intensive care. To decrease preterm admission and mortality healthcare organizations are implementing different care models in the neonatal intensive care. The aim for this paper is family centered care, to understand it and familiarize it to the readers. My research questions for this thesis are.

- What are the benefits of implementing Family Centered Care in neonatal units?
- What are some of the challenges concerning family centered care?

5 METHODOLOGY

In this section of the thesis the writer tries to explain the specific procedures taken to investigate the research questions. Tries to define the selection process of the data and explain how the raw data was analyzed. The main purpose of this section is to show how data was collected or generated. The second section answers how the data was analyzed.

5.1 Data collection

The method for this thesis is a literature review that allow the writer to analyze both new and old data written on this subject. Eleven peer reviewed articles collected from various scholarly websites. The data was exclusively picked from academic websites such as CINAHL, PUBMED, Sage, and Google scholar. These academic websites were used to find reliable scholarly studies, or journals. The author used research words such as Neonatal intensive care unit AND Nurses role. The author reviewed the vast articles published on this subject. Family centered care came up on majority of the published articles that defined the different aspects of care included in neonatal the nurse's role.

To further narrow down the articles the author chose research phrases such as the Family centered care And Neonatal intensive care. In CINAHL 455 articles were available after the inclusion and exclusion requirements. The writer chose most of articles from CINAHL, and the rest from PubMed and Science Direct. The author chose articles that were available in Arcada and Helsinki university library. The writer used snowballing method to review relevant articles some of the author's citied articles that were relevant to the subject. After finding the articles the writer checked them on CINAHL search database to check if they are peer reviewed articles. Figure 1on page 13 displays the authors data collection method. The writer picked the peer reviewed articles available for use, and the remaining ones that were not peer reviewed for background and discussion section of the thesis.

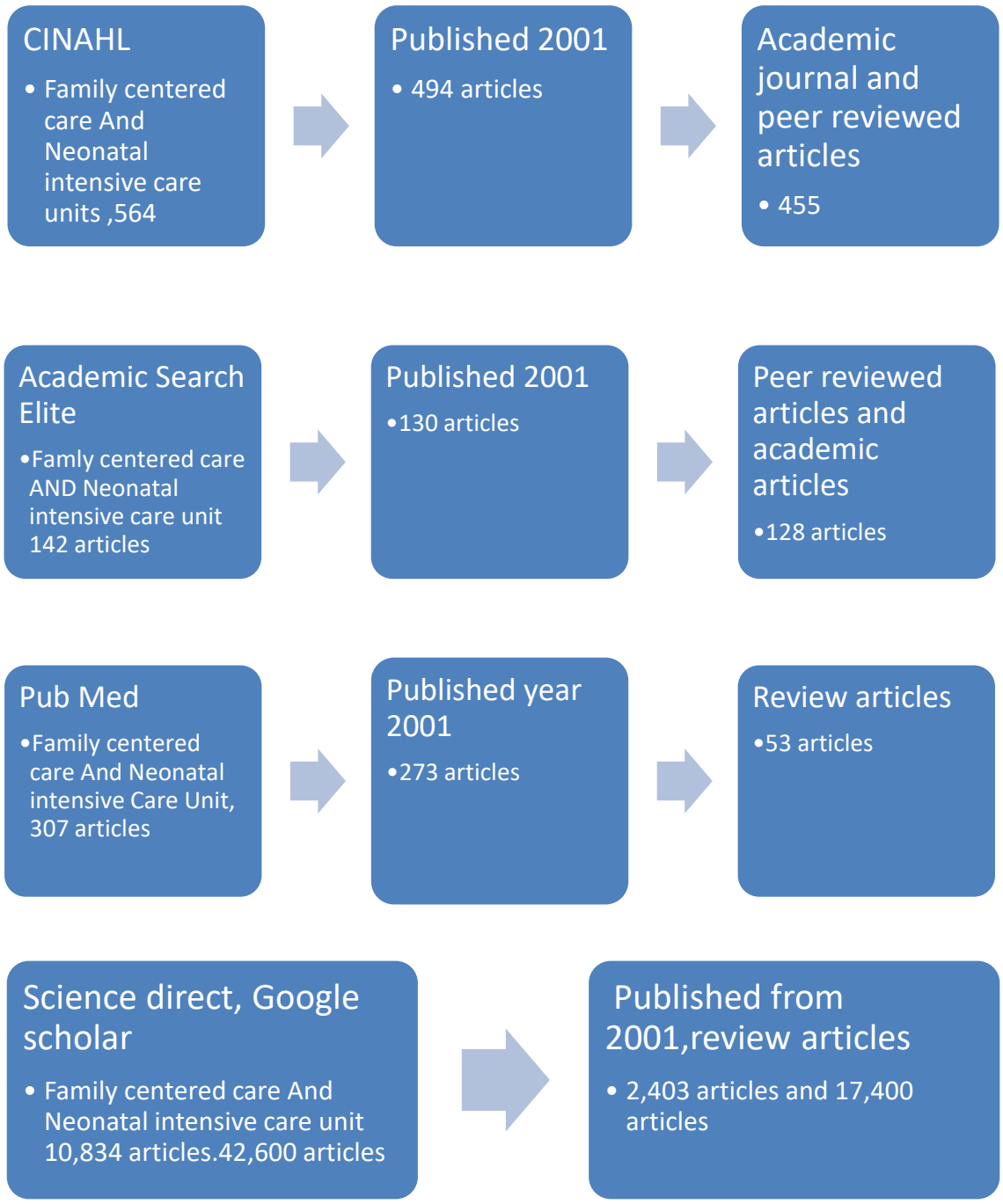


Figure 1:The data collection method

The inclusion and exclusion criteria were used as guide for the articles required for the thesis. The articles needed in English and available at Arcada or other universities data search. Only peer reviewed article that were checked and revised by experts, the articles should not be older than 20 years. The author also displayed in details the inclusion and exclusion criteria in the table below.1.1.

Table 1: Inclusion and exclusion criteria

Inclusion criteria	**Exclusion criteria**
i. Articles or journals from academic search engines such as CINAHL, PUBMED, Google Scholar. ii. Articles available at Arcada or Helsinki university library. iii. Articles that are free and in full text. iv. Articles written in English. v. Articles written "2001-2019". vi. Peer reviewed scholarly articles.	i. Articles written before 2001 ii. Articles not relevant to this topic iii. Articles not written in English. iv. Articles that are not peer reviewed or not from academic search websites v. Articles that are not in full text or not free

The author chose eleven articles that fit the criteria. These articles were written scholars that are known to the subject, that used both old and new finding on the subjects. The articles were written in different parts on the world which allowed the author to get insight in how different countries take the concept on family centered care. Gender comparison on family centered care is also visible in some of article. The writer listed the articles in the next page.

Presentation of chosen articles

1. Gooding et al. (2011) Family support and Family -centered care in the Neonatal intensive care unit: Origins, Advances, Impact. Seminars in perinatology

2. Griffin,(2006) Family -Centered care in the NICU. Journal of Perinatal and Neonatal Nursing

3. Mirlashari et al. (2018)Dark and Bright—Two Sides of Family-Centered Care in the NICU: A Qualitative Study. Clinical Nursing Research

4. Banerjee et al. (2017)Family centered care and family delivered care- What are we talking about? Journal of neonatal nursing

5. Valizadeh et al. (2018) Fathers: The Lost Ring in the Chain of Family-Centered Care. Advances in neonatal care

6. Benzies.(2016) Relational Communications Strategies to Support Family-Centered Neonatal Intensive care. The Journal of Perinatal & Neonatal Nursing

7. Fegran and Helseth. (2008)The parent–nurse relationship in the neonatal intensive care unit context –closeness and emotional involvement. Scandinavian Journal of Caring Science.

8. Kelly. (2017) Putting families at the heart of their baby's care. Journal of Neonatal Nursing

9. Higman and Shaw. (2008) Nurse's understanding about the delivery of family centered care in the neonatal unit. Journal of neonatal nursing

10. Raiskila et al. (2016) Parent and nurse perceptions on the quality of family-centered care in 11 European Neonatal units. Australian Critical Care

11. Staniszewska et al.(2012)The POPPY Study: Developing a Model of family centered care for neonatal units. World views on Evidence-Based Nursing

5.2 Data analysis

The writer used qualitative content analysis on this study, Qualitative content analysis which is commonly used for nursing science research. Qualitative analysis is used to analyze, interpret the meaning of qualitative data. There is debate on the trustworthiness of qualitative content analysis, Qualitative analysis gives authors the opportunity to collect empirical relevant data and reduce data into concepts, create categories or conceptualized system or map. The writer didn't form any hypothesis in the data collection or preparation stage of the study, the research question stated what to analyze and create. The author chose inductive approach gave the author the openly code and create content on this subject. Through inductive reasoning themes emerged from written material and data (Elo et al., 2014).

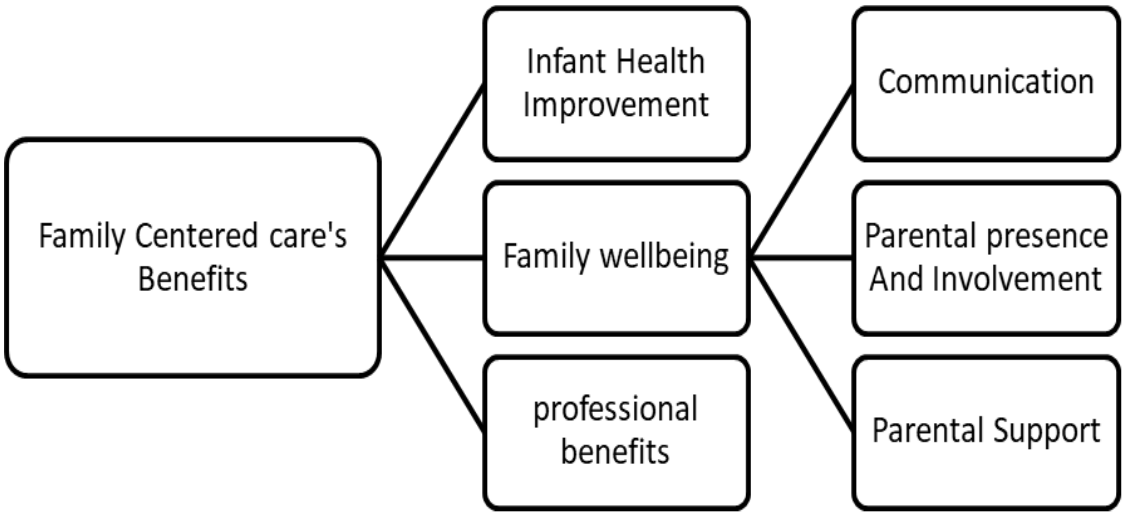
Inductive qualitative analysis refers to systematic procedure that analyses qualitative data. It includes detailed reading of qualitative data and deriving concepts and themes interpreted by the researcher. Inductive content analysis is used commonly in grounded theories. According Thomas, Miles and Huberman stated three broad tasks were included in inductive content analysis, data reduction, data display and conclusion drawing or verification of data. Data reduction consists of set of procedures to create meaning from complex data through the development of categories. The main purpose of inductive analysis is to let results emerge from consistent dominant themes inherited from the raw data (Thomas 2006).

The writer used detailed systematic reading to identify themes that were recurring. The writer used the research questions to guide or provide focus for only relevant articles. But the finding came directly from analysis of the articles chosen by the author. The author read through articles multiple time made notes and identified common repetitive themes through the articles.

The Data retrieved from the First research question where the benefits of family centered care. Three major categories emerged from the data were Family wellbeing, Infant health improve, and Professional benefits. Three further sub-categories' (*Communication, parental presence and involvement, and parental support*) emerged from how family wellbeing was achieved using family centered care. Communication was mentioned in almost all the articles. Parental presence and involvement in the care were the foundation of family centered care. Another category that didn't have a lot of research but mentioned in a

few articles were organizational and staff benefits from family centered care. The author didn't find a lot of information on this category, but still found it valuable as it brings positive effects on the nurses and the unit.

Figure 2:Data analysis of family centered care benefits



The second research question the author wanted to investigate included the challenges against family centered care. After reviewing most of the articles regarding the challenges of family centered care. Three categories were repetitive, the first category is environmental barrier which include, the nature of the NICU, the open bay units, the lack of privacy, organizational policy all contribute to the separation of parents and their children. The other two categories were staff and parental barrier, the author combined them since each one of them had direct influence on the other. The writer also added a data analysis figure 1.1 to further explain the analysis of the data.

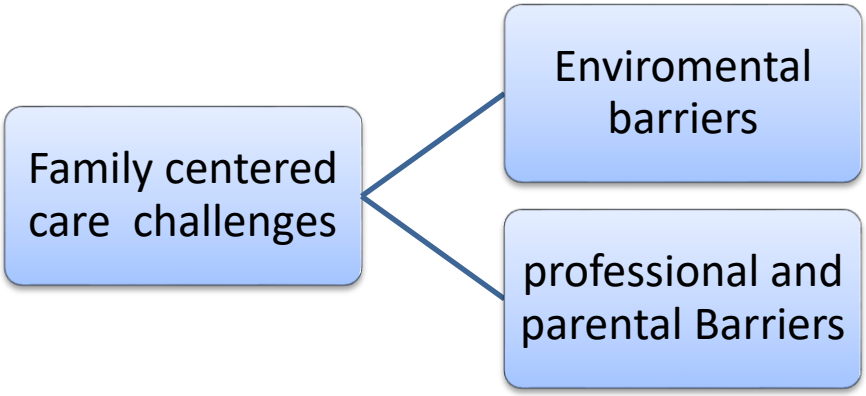


Figure 3:Data analysis of research question 2

5.3 Ethical consideration

Ethics is import dimension in science research and is often used in discipline and practice. Ethics can be described as a set of rules that guide the human morale, even though what is ethically permissible changes through cultures and races, we have conducted universal set of rules when it comes to science research. In scientific research authors must follow of ethical guidelines for the research to be ethically acceptable and reliable. and rights of the author and human subjects. Some key elements in ethical research include, informed consent, confidentiality, transparency in communication respect, and responsibility.

The Finnish advisory board of research Produced guidelines for responsible (2012) came with guidelines for responsible conduct of research. The aim was to prevent scientific misconduct, promote responsible conduct of research. This thesis followed Arcada ethical guidelines through the data acquisition, research and the evaluation .The data is reliable evidence based that can be used in clinical practice. The author critically evaluated the research data and evaluated the need for it in clinical practice. The validity and reliability of the collected data was proven through the academic search engines that published scholarly articles(Tenk 2012).

Scientific misconduct is defined as the plagiarizing and misleading the research community. The writer did not form any prerequisites prior to the thesis. To avoid the presentation of false data and research misconduct. the writer did not misappropriate other author's research, the data has appropriately cited referenced all the information retrieved from various authors following Harvard referencing guide.

In this thesis. Scientific misconduct such as fabricating data, making up results that support my findings were avoided. The author did not plagiarize data from other article and wrote her own data and findings. Selected articles where chosen only to their relevance to the topic.

6 RESULTS

In this chapter the writer presents the finding extracted from our analysis. The finding shows the repeated themes or categories throughout the articles. After detailed reading the Author chooses three main categories to answer the first part of the research question. Family wellbeing, infant health improvement organizational and staff benefits as the main categories. The second part of the thesis attempts to answer the second research question. The author found two main categories, Organizational barrier and professional and parental barriers the writer combined professional and parental barriers, because in some cases they affect each other. Nurse -parent relationship affects their judgment on family centered care. For the implementation of family centered care to succeed in the unit co-operation from both sides is necessary.

6.1 Benefits of family centered care

Some of the basic principles of family centered care is the support and the wellbeing of the family. It has been well documented that the birth of hospitalized preterm causes to significant anxiety and stress. Some these factors are the physical, emotional separation from the child, altered parental roles and the actual condition of the baby. Parents with preterm children have doubts of their parental role and competence, Due to the hospitalization and restrict hospital regulation they also find it hard to bond with their new child. It is not surprising that mothers with preterm children experience higher rate of depression compared to other mothers (Banerjee et al., 2017, Griffin, 2006; Kelly, 2017).

6.1.1 Family wellbeing

One of the common themes in the articles included improved mental health of the parents achieved from family centered care practice. Encouraging and supporting families to take care of their children brings better outcome for both the family and the infant. The strongest evidence of parental wellbeing was contributed to skin to skin contact. Holding their infant was linked to stress reduction, feeling of confidence and competence in parenting. These developmentally supportive cares have positive impact on maternal sensitivity and

affectionate behavior. Some additional benefits of kangaroo mother care practices include reduced maternal post-partum depression and anxiety (Gooding et al, 2010; Kelly 2017)
Family centered care also offers early intervention for parents such as parental support group programs or peer support to enhance the mental wellbeing of mothers. Some of these intervention models offer parental education support programs. Mothers who have participated in family empowerment programs or mothers who have been in contact with internet-based support groups such as March of Dimes online community have shown better outcomes for parents and infants (Banerjee et al., 2017)
Parental involvement in care has proved to have positive impact on parents. Neonatal nurses can impower the intuitive strength of parents to care for their infants. Opportunities such as holing the child, bathing, infant and comforting can improve parent mood and stress level and the parental process (Griffin, 2006).
Parents build on their strength through participating in the care of the child and experiences that promote self-independence and competence in parenting. Research was done on the benefits of parental involvement and giving their parental role and identity in the NICU, Increased bonding with their child is promoted. In a semi structured interview of neonatal nurses understanding of family centered care described the benefits of parental involvement in the care of their child. [*The more you involve the family and parents whilst the baby is with you, the more confident they are going to be, the better the understanding they are going to have of their baby and the care they might need when they go home*](Higman and Shaw, 2008; Banerjee et al., 2017).
A strong nurse-parent relationship highlights the importance of promoting and educating healthcare staff in family interactions. Families in NICU suggested that the best information they receive is from the nursing staff Nurses are in position to provide parental empowerment which helps parents gain confidence and control (Higman and Shaw, 2008; Gooding et al., 2017). Essential parts of family centered care include staff members to r respect the role and choice of parents and parents to respect the skills and knowledge of nurses. This mutual respect builds on caring relationship based on trust and partnership between parents and nurses (Raiskila et al., 2016). There are few strategies that improve the health care staff relationship with the parents. It is recommended that creating welcoming environment, introduction to team members, encouraging parents and offering emphatic listening strengthens the Nurse -parent relationship. Positive interaction with parents and parents is correlated with greater satisfaction and greater willingness by the

parents to seek support and information for the care concerning their infants (Benzies, 2016).

Communication

Communication is the corner stone of family centered care. Mothers with high risk pregnancy need early interventions to increase better outcome for their child, good multidisciplinary communication and inclusion with the parents are key features of family centered care (Gooding et al, 2011; Higman and Shaw 2008).

Communication and partnership are included in family centered care. Parents recognize both effective and ineffective communication in the NICU. Nonhierarchical interaction, appropriate respond to parental needs and ability to empathize with parents are part of effective communication. Ineffective communication was part of inconsistent information in the ward, failure to recognize parents, or encourage parents to ask questions Communication was linked to have direct positive or negative impact on parental satisfaction, the care and treatment of the child, ability to participate in decision making, and the health outcome of child and parent. Some of the factors affecting the way communication is delivered and received are the characteristics of the health care personnel, parents, patients and the country they live in (Benzies, 2016).

Nurses are the advocates and mediators between physicians and families. Collaboration between families means sharing frequent honest information of the infant's health status and condition to the parents. Including parents in medical rounds helps parents understand their child status. Communication makes the parents included in the decision making and give them opportunity to share their own perspective. Shared decision making helps parents not to feel overwhelmed and not feel the whole responsibility of the child at time of stress, updates on ongoing treatment plans, ability to feel in charge can influence the mother's self-confidence, parental satisfaction, and feel connected to her infant (Griffin, 2006).

Communication, information and support were the fundamental base for the Poppy study (2012) in Britain. Communication started from admission and continued till discharge. Parents were given booklets, leaflet on the ward, and introduction to the ward. Explanation on machines and tubes that were connected to the infant and their purpose. When it

comes to the early days each parent reacts different, so individuality must be kept in mind when providing information to the parent. Parents also found helpful to attend the doctor rounds that provides the medical status of the infant. Explaining the medical terms to the parents is essential, parent's inability to understand medical terms leads negative experience in the NICU (Staniszewska et al., 2012).

Communicating about the condition of their infant empowers mothers in their role. Communication between health care members and parents increase self-confidence, sense of control and feeling connected to the infant (Griffin, 2006). Canadian qualitative study reports that some of the factors affecting parental satisfaction was a strong communication relationship between parents and health care staff. In another study conducted in Italy to improve communication, researcher combinied education for the NICU multidisciplinary team, Communication guidelines for everyday problems, problem documentation, this lead to increase parental satisfaction with communication in the NICU (Benzies, 2016).

Improved communication between families and healthcare professionals leads to shared decision making and involvement of parents in the treatment plans of the child. Parents desire to participate the discussion daily decision making, rather than informing new treatment plans or changes of the child routine care this helps alleviate discomfort (Griffin, 2006).

Parental presence and involvement

Parents with the infants in neonatal intensive care unit have higher levels of stress, anxiety. This can be caused by many factors such as the child's illness, the parental role in the NICU, the child's appearance, invasive procedures or neonatal environment. Parents can also feel confused about their role in the neonatal intensive care, the child is looked after by professional. This can cause parents difficulty coping to come to the hospital (Banerjee et al., 2017). The key principle of the family centered care revolves around parental involvement and unlimited presence in neonatal units. This means that the nurse is in unique position to encourage the parents to have unrestricted access to the hospital. Family centered care allows the parents to be present at neonatal rounds, reports, admission and emergencies at the level of care that they desire (Griffin, 2006).

Parental involvement has benefits for both the mothers and the infants. It facilitates development for parental role. The presence of mothers beside their children increases parental satisfaction. Parental attachment and touch can help the neonate's physical state, cognitive and psychological development. (Mirlashari et al., 2018). Parental presence can be included in the design or the layout of the ward, the design of the ward has impact on parents, the open layout with higher noises, no bedside space for parents and nurses to coexist does not apply with the FCC care model. Single Family rooms also support the family centered care theory practice, single rooms give parents privacy and enables infant child attachment. In the single-family rooms nurse can supervise parents to care for the child. Some basic tasks that the nurse can incorporate parental involvement in care could be diaper change, taking temperature, swaddling and kangaroo care (Griffin 2006). Family presence and involvement is vital for nurse-parent relationship (Fegran and Helseth, 2009). The ability to collaborate with the parents is seen as competence. Early interventions of family centered care model bring increased parental satisfaction, reinforces their parental role, decreased stress and feeling helplessness, and knowledge of their child medical status (Griffin 2006).

Parental support in Family Centered Care

There are several ways of providing support to neonatal unit families. The most common themes in Family centered care support is providing education to parents and peer support. The hospitalization of the young child is stressful and leaves parents with anxiety and worry. Family centered care practice offers parents with education session, material related to the development of their child, and following standardized policies such as breastfeeding, kangaroo care and infant massage helps parents reduce stress (Gooding 2010, Staniszewska et al:2012)

Peer support is helpful to parents in the NICU. Parents with infants of same condition provide hope, information and advice. Support groups offers parents a place to share feeling and receive advice in return. Peer support has positive influence psychological well-being, parent copping and parent staff communication. Parent support groups are crucial for parents that don't have extended families support (Gooding et al, 2010; Staniszewska et al., 2012) Online and technological support groups are also available for parents, it offers valuable information at any time, this support is offered to parents that don't feel

comfortable face to face support groups, or families that live far away from the NICU. Parents described helpful when given websites with their infant's progress and information (Gooding et al., 2011).

6.1.2 Infant health improvement

Family centered care has revolutionized the care of children in the NICU, it is suitable care model for children in a hospital setting. The physical presence of parents has positive impact on the infant's growth and developmental. Collaboration with parents has positive effects on the child such as physical, cognitive and psychological developments. (Raiskila et al, 2016; Mirlashari et al.,2018). Family centered care in the NICU lead to early discharges and effectively reduces rehospitalizations (Valizadeh et al., 2018).

The setting of the NICU has changed through the influence from Indian subcontinent and eastern Europe. The lack of trained and skill full neonatal nurses led to bringing mothers the cot side and supporting them in taking care of the infant. This resulted in low mortality, mortality from neonatal infection, less use in antibiotics. Improved weight gain, earlier discharge and reduced re admission rates (Banerjee et al., 2017 Kelly, 2017).

A pilot study in Tallinn Estonia incorporated mothers in the care of children, it resulted in improved weight gain, reduced neonatal infections and increased breastfeeding rate. Care -by-parent models required parental presence, and supported that parents care for children 24hr a day. There were no specific structured educational programs offered to parents. The model demonstrated significant outcome for the infant. These outcomes include reduction of neonatal infections, reduced length of stay and decrease in bronchopulmonary dysplasia. (Banerjee et al.,2017).

Recent study done in Stockholm suggested that unlimited parental presence in the NICU and providing skills for developmentally supportive care has reduced the length of stay in hospital for premature infants (gestation week less than 37) in 5.3 day shorter. (Gooding et al, 2017). Skin to skin contact is one of the strongest family centered care practices in the NICU, previous studies have correlated improved infant health resulting form increase sleep duration, decreases apnea episodes, regulated heart rate, increased maturation of circadian rhythm. And lower infection rates. Parental involvement indicates positive impact on infant morbidity (Gooding et al., 2017).

Similar studies have shown that hospitalized premature children are at risk of physical or emotional parental abuse later in life. Premature infants whose families visited less in the NICU had higher risk being abused by the parents. Family centered care can contribute to reduce the risk of negative outcomes such as neglect or abuse. Family centered care offers increased parent-infant bonding, attachment with their babies (Gooding et al, 2011 Higman and Shaw, 2008).

6.1.3 Professional Benefits

Without organizational commitment family centered cannot integrate in the NICU. In England Bliss is the biggest charity foundation for premature babies and children born with sickness. This foundation had close collaboration with many different professionals such as neonatal doctors, neonatal intensive care units. The main objective was to make sure parents stay involved in their children care during hospitalization. Bliss supported the implementation of family centered care in the neonatal intensive care units. Many organizations also support the care model and recognize it as the "Gold standard in the NICU (Mirlashari et al., 2018). Research has shown significant differences in how to deliver family centered care. Some of the solutions Bliss offered to the challenges of implementing family centered care including, providing enough funds to support staff education and training (Kelly, 2018).

Family centered care plays important role in encouraging parents in caring for their infants. Family centered care demonstrates consistent support for families in the NICU. Evidence has shown the benefits of incorporating FCC in the NICU reduces the length of stay, leads to early discharge and prevent further hospitalization of infants (Valizadeh et al., 2018). Health organization can reduce the costs of neonatal intensive care unit's expenditure by designing neonatal intensive care units that facilitates FCC, the reduction of length of stay, early discharges, and lower readmission reduce costs (Raiskila et al.,2017). Nurses view on family centered care concept is positive. They believe the concept paves the way for better outcomes in terms of the parents and the baby. Nurse understand the infant is part of the family and care has been temporarily transferred to the NICU nurses. Nurses reported that the health improvement of the infant brings positive feeling, the gratitude and appreciation of the parents brings job satisfaction. The staff developed a sense of pride for their job (Mirlashari et al., 2018).

6.2 Challenges of Family centered care

Babies in the NICU units need to have the best possible outcomes regarding their mental and physical health. Families in the units must be able to care for their babies comfortably without having to leave for personal reason such as, eating, sleeping, showering or having to reset their parking time. The province must be able to provide basic needs for families to accommodate these parents, especially if they are willing to stay at home and care for their child. Providing sleeping utilities, kitchen, and spare bed to sleep or helping them with transportation costs can increase units to provide high quality family centered care (Kelly,2017).

6.2.1 Environmental Barriers

Family centered care encourages parents to stay in the unit, neonatal intensive care units are obliged to provide families with family accommodation, kitchen and accessible food, car parking. Parents are provided with comfort chairs next to the cot, to have long skin to skin sessions. Lack of facilities that provide adequate service for parents in the NICU units bring barrier to parents wanting to spend time with their infants. This brings significant impact on bonding between parents and infants, decreasing breastfeeding rates in the NICU (Kelly,2017 Banerjee et al;2017). According to Kelly the Bliss report done in United Kingdom (2016) *Families kept apart: barriers to parent's involvement in their babies' hospital care* stated that.

- One in three hospitals did not have facilities that dedicated to accommodating parents who had critically ill babies.
- Five out of 29 hospitals offered enough sleeping space units for parents to stay beside their babies.
- 40 percent of neonatal units did not have or very limited kitchen facilities for parents to warm food or hot drinks.
- Third of the hospitals in 2013 changed their free parking policies for parents. Quarter of the hospitals in 2013 raised the cost of parking for parents

These are some of the hospital design system that can bring barrier and challenges to give high quality FCC to parents. Parents are already emotionally stressed with having a child in the NICU. Having the right facilities that cover the basic needs of parents can alleviate

some of the emotional and financial pressure, this enables parents to focus on the care of their child (Kelly,2017)

6.2.2 Professional and parental barriers

The NICU open environment can create a thin barrier between the nurse's professional world and parents' personal world. Lack of privacy exposes both parents and nurses. Even though nurses viewed family centered care beneficial. There are problems that may rise with its implementation, shortage of staff, too little time, Attitudes against parental presence (Higman and Shaw, 2008.)

Nurses are the central force in brining and encouraging parents to participate in the care of their child (Raiskila et al., 2017). Lack of training and adequate education in neonatal nurses can be a barrier to the implementation of family centered care. Newly trained neonatal nurses view the medical and technical aspect of the care more important than the interaction with the families. Some nurses view the interaction, guidance and educating parents adds more to already existing workload. Staff storage makes it harder for nurses to spend time with the families (Higman and Shaw, 2008).

Nurses view interacting with the parents is the most challenging part in family centered care. Nurses need to have the professional barrier to protect the parent's integrity and their own emotional wellbeing. The quality of interaction between nurses and parents depend on nurse own communication skills. Nurses' failure to build parent -nurse relationship is described as painful. Emotional exhaustion is also another part of nurse's perception against family centered care. Having supportive role in the parent's life can affect the nurses own mental wellbeing (Fegran and Helseth, 2008).

Parents in the NICU experience this close relationship both physically and emotionally with the nurses in the ward. Parents perception of the NICU can be different, their perception of the staff's competence can also be different. Parents expressed strong need for respect. Family centered care is related to mutual trust and respect between nurses and parents. Nurses and parents rated emotional support as the weakest aspect of family centered care. Nurses also recognize providing emotional support as challenge. This new information highlights the need for educational initiatives and communication skills (Raiskila et al., 2016).

Gender difference makes it harder to implement family centered care in some parts of the world. Countries such as Turkey and Iran neonatal units have different policies than west. Both parents aren't allowed to stay together in the unit. Fathers are the missing ring in the chain of family centered care. This could be related to different factors such as, mother's enthusiasm, NICU policies, and fathers reluctant to participate in the care. Lack of enthusiasm in implementing family centered care in these countries are mainly due to financial and educational barriers. Some neonatal units restrict father's visitation. Due to religious and cultural demands fathers aren't allowed in the units or have restricted visitation (Valizadeh et al.,2018).

In one of the studies done on nurses and parents' perception of family centered care revealed that fathers, the fathers were less present than mothers and scored less for quality of FCC in the units. Fathers are the primary wage earners and protector of the family, and the mother is the milk-provider and nurturer. Nurses are automatically inclined in supporting mothers' education and guidance over fathers (Raiskila et al., 2017).

7 DISCUSSION

Family centered care is a philosophy of care which creates best platform to create partnership and co-operation between healthcare professional and parents. Neonatal intensive care unit is highly demanding unit and it is technologically more advanced. The environment is stressful to new parents with premature of sick newborn. These factors make parents vulnerable to problems. Caring and promoting the family wellbeing, building on their strengths and empowering their competence to care for their child are some of the key elements of FCC (Shirazi et al.,2015 Kenner and Lott, 2013).

The aim was to familiarize what is family centered care is, and what benefits does it bring to the NICU. Most of the articles described it as best strategy of care for children and their families in the hospital. Health care professional regard FCC as golden standard in the NICU. Parental presence and participation enable infant health improvement and parental satisfaction in the NICU (Shirazi et al.,2015, Ramezani et al.,2014).

This thesis attempts to explain the benefits of family centered care for newborn children and obstacles against implementing family centered care. Family centered care affects each one in their own way and evidence has shown that infants and parental health well-being improves when offered to FCC as their care model (Bernardo et al., 2017).

The second research question of this thesis was the challenges or barriers affecting the implementation of FCC in the pediatric or neonatal intensive care units. Some of those barriers came from the nurses in the ward, or organizational barriers such as policies that contradict with the care model, no additional training, Clinical factors also influence the implementation of FCC, those include difficult working conditions, lack of proper management or intra personnel conflicts. Parents can also be a barrier to implementing or accepting FCC due socio-economic or cultural reasons (Shirazi et al., 2015).

7.1 The Rational and logic behind Family Centered Care

As presented in the finding chapter the writer displayed few categories that Family Centered Care has affected or benefited from. Families, neonates, nurses and the neonatal health administration all affected by this care model. Healthcare staff responsible is to provide the best evidence-based care to patients. Neonatal intensive care unit is different from the comfort in the mother's womb. The child is exposed to all kinds of negative sensory input, loud machines, light, less oxygen and nutrients. Separation from parents is also another negative factor in the NICU. Infants are emotionally, physically psychologically separated from their parents. these factors induce stress to both the parent and the infant (Bernardo et al.,2017; Altimier, 2015).

Mothers with an infant in the NICU find it difficult bonding and doubt their competence to care for the child. Parental role is also difficult to find in the NICU, mothers stay aside as their child is cared for by specialized skilled nurse. This brings further complication during discharge. Highly monitored ward to home setting with no monitoring and no guidance can bring stress to mothers. Family centered care provides enough education and guidance to parents in the NICU. Parents or caregivers become confident in their competence to care for the child in the ward and after. Parents become equal parents and gain knowledge in the child condition with the collaboration of healthcare team. (Banerjee et al,2017).

Studies and care practices observed from other neonatal intensive care units like India and Eastern Europe states that family presence and participation in care has provided significant improvement in both mothers and infants wellbeing. Majority of the research mentioned that mothers with children in the NICU are stressed and anxious which can later lead to depression and emotional non-responsiveness against the infant Evidence suggested that of the anxiety and stress is related to guilt, separation of the infant, inability to provide care and comfort, physical appearance of the sick child, NICU environment, conflict with parental identity and role in NICU, (Altimier 2015; Banerjee et al, 2017).

Premature infants are also under stress due to the physical, psychological and emotional separation of the mother. Also due to the drastic change from the uterus to NICU environment the infant faces distress that can have direct impact on their neurodevelopment. The infants state of wellbeing, their environment and the parental presence lay important

foundation for the child neurodevelopment. Observational studies and scholars have advocated the presence of the family in the NICU Mothers being present resulted in infant growth less mortality from neonatal related infection, less use in antibiotics, increased breastfeeding. The presence of families and participation in care benefits the mental well-being of the child and decreases stress level of mothers (Bernardo et al,2017 Raiskila et al,2016 Banerjee 2017).

Nurses working with infants in the NICU need to promote mother-infant attachment. Encouraging mothers to participate in the care process, educating and empowering mothers are some of the key principles of FCC. Observing the infant's behavioral ques and sharing information with the mothers help mothers understand their infants. Providing care for each mother's unique needs and responding in caring and empathetic manner helps mothers decrease their stress and anxiety. Nurses can offer mothers emotional support and guide them to "be in the moment" and help mothers' emotional availability and connect with their child (Fleck 2016).

The theoretical framework of this thesis also supports that the wellbeing of the infant's future promotes a healthy and continuous parent-infant attachment. Bowlby stated that the mental development of the child is related to the attachment or the bond established with the mother or main caretaker. Infants who receive continuous, sensitive and responsive care from their mother respond with secure and right attachment respond. Infants who do not receive sensitive care or experience rejection will develop avoidance behavior and not respond to abuse. The types of attachment they develop are key determinants to the social and emotional relationships they encounter. This theory also emphasizes that importance of parental presence in the early life span of child. According to Prior, Bowlby used predictable behavior once attachment behavior is activated, which would be to seek proximity with the parent expecting to they would remove stressor and bring comfort (Fleck, 2016 Prior and Glaser 2006).

The second part of the findings aim was to answer the challenges facing FCC. Even though studies have brought enough data that states that FCC was state of the art care practice for children and their parents in the hospital. After much review the three main challenges were organizational barrier, staff barrier and parental barrier. The organizational barrier includes applying policies that go against the basic principles of family centered care, Restricted visitations for the parents or one of them, some countries have gender preference due to cultural or religious reasons. The design of the neonatal units is also

one barrier, single family rooms were chosen as more desirable than open bay units. single family rooms provide privacy, intimacy, and can be used to reduce hospital transmitted bacteria (Griffin,2016).

Organizational barrier includes not providing adequate training and knowledge for nurses and shortage of staff, poor selection in new workers, and lack of professionalism. Poor inter-professional relationship, terrible working conditions, burnouts, poor management issues affects nurses when it comes to their role in implementing FCC. Lack of continuous education for nurse's view on parental interaction and communication not important to the care of the infant. Parental relationship with ward staff has impact on parental satisfaction and experiences on the ward. Nurses also face a power struggle or see FCC and a power shift from the nurse being the primary caretaker and the parents as the observer. FCC advocates parental collaboration, participation in decision making, mutual respect and knowledge (Shirazi et al., 2015 ;Benzies, 2016).

Parents can bring challenging behavior as no following ward rules, questioning the nurse's performance, or bring their own family problems to the unit. This brings confusion and overwhelming to the nurse and are sometimes reluctant to having parents in the unit. parents with other children will not have the time to be present at the ward always, travelling, financial strains, and careers all can become obstacles for parents to be present beside their child. It is the nurse's job to create the connection between infants and parents. Technological communications such as emailing pictures or skyping with the parents to inform the child's condition and appearance. Parents still feel connected even if they are not beside the child. (Dobbins 1994., Mirlashari et al,2018).

8 CONCLUSION

Families in the neonatal units are part of their child's life, they are the main decision makers, care takers and family members for the child. Infants need their mothers as their care takers, and mothers need to be present to learn their infant's behavior and bond with their child. Family centered care provides parental presence for the children and is corner stone for the care of hospitalized children. Bringing the family in the care process has brought benefits to the parents, and their child. Parents have become more confident their ability to provide care for the child. Parental identity and role are established when the parent-infant attachment is secure. The overall condition of the premature children improves and their stay at the hospital. Discharge is faster, and readmission is less when parental presence is allowed Hospitals decrease costs with the decrease of hospital stay, staff experience job satisfaction and take pride in their job. Family centered care is the best care option for neonatal children and their families in the NICU.

8.1 Strengths and limitations

The writer views the strength of the study is the topic and its relevance in the working life of student nurses. This form of care practice is what nurses should be taught at school already. This thesis can also be used pediatric or neonatal nurses already working with children in the hospital. The author was not biased at the collection of articles for this thesis, the articles was only chosen for their relevance to this topic. The author picked articles from variety of different countries. And realizes the changes on each country makes to implement FCC in those countries. The time frame between the article is a lot 1994-2018, with this the writer was able to find previous knowledge and updated changes that occurred with this time frame. The writer did not manipulate any or fabricate new information extracted from the reviewed articles. The writer used scholarly websites and relevant scientific articles, secondary and primary data to increase the reliability and validity of this thesis. In the Methodology chapter the author provided details of the data collection method to add to the authenticity and the validity of this thesis. This thesis helps to describe, summarize, evaluate and analyze existing knowledge on family centered care. from other scholarly journals, the author tries to convey enough knowledge and understanding of this research study.

This study is not without limitation, the writer did not have access to great articles due to restriction in the school websites. There are limitations to this research method such as not having access to some majority of the searched academic articles, or language barriers from other scholarly journals. Another Limitation is also the authors personal bias. As the writer mentioned in the introduction ,she is a mother and has been hospitalized with her child. The experience can affect her personal judgment and not be critical on family centered care.

Some of the articles were relevant and more suitable but they were not free or not available at Arcada Finna search engine. The writer chose an older article was written 1994.The article is old dated and needs update to nowadays and cannot be applied to current families in the NICU. The writer living in Finland had no content on the current practices of this topic in Finland. There was only one article that contained the investigation of quality of family centered care in 11 European countries. Information how Finnish neonatal unit's view family centered care could have increased this thesis relevance in Finland.

8.2 Recommendation for further studies

Family centered care is approach that recognizes parental influence. Including parents in the childcare can bring lasting positive changes in the child's physical, cognitive and psychological development. Implementing of FCC requires changing the nurse's attitude and mind set. Research has been done on nurse's experience and perspective of family centered care. (Mirlashari et al; 2018). Parent satisfaction and neonatal readmission were also researched, parent satisfaction was linked with, parental presence, communication flow and participation. Family centered care is viewed as the new neonatal nursing, and parents play significant role in the recovery of their premature babies (Bastani Abadi and Haghani 2015). New re-search can be done in Finland, if family centered care is available in neonatal ward, if not what other care concept like family centered care is available in Finnish NICUs. Further research could be done on fathers and sibling's perspective on family centered care. Nurses perspective on educating fathers and including them in care.

Long term benefits for children and parents given family centered care in the NICU. Parental relationship and child's behavioral changes growing up against control group with no family centered care.

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