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Interventions for promoting breastfeeding in the Nordic countries – a scoping review

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Abstract

Breastfeeding as a practice varies widely between cultures and countries. The rates of breastfeeding vary depending on different determinants. The World Health Organisation has issued recommendations concerning breastfeeding and these recommendations include breastfeeding as the only nutrition for an infant until the age of 6 months. The aim of this study is to describe and present an overview of different interventions to promote breastfeeding among mothers in prenatal and postnatal health care settings in the Nordic countries. The objectives of the study are to find the different factors that affect breastfeeding and to see how nurses can promote breastfeeding. This thesis was conducted as a scoping review in order to describe current research on breastfeeding support and 12 articles were included in the final review.

The results show that there are different factors that affect breastfeeding such as prenatal anxiety, mental and psychological factors, BMI, depression and hence causing a risk of decreasing the number of infants that are exclusively breastfed. However, the study found different measures of support that can be used in order to promote and encourage mothers to breastfeed such as having continuous breastfeeding support, involving father's and family-oriented support. More research is needed in order to investigate how breastfeeding support is conducted the Nordic countries and how it relates to national and international recommendations and descriptive studies on how breastfeeding is practiced.

Language: English Key words: breastfeeding, factors, promotion, nurse, interventions breastfeeding duration, Finland, Sweden, Denmark, Norway

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1 Introduction

It is said that the history of breastfeeding is as long as the history of humankind. Breastfeeding has historically had two rivals that have been hindering the mother from breastfeeding the child. These are the use of a wet nurse and the use of milk substitutes. Breastfeeding as a practice was compromised more than ever during the industrial revolution when scientific strives where made and milk formula was able to be produced and more women started working (Galanakis, 1999).

WHO has issued recommendations concerning breastfeeding and these recommendations include breastfeeding as the only nutrition for an infant until the age of 6 months. Breastfeeding is also recommended as a complement to food until the age of two. In addition, breastfeeding is recommended to be initiated within the first hour after birth – this is called the early initiation of breastfeeding. This first breastmilk produced by the mother is called colostrum and is considered the perfect food for new-borns (WHO, w.d.).

Breastmilk is well known to strengthen the infant's immune system and protect the infant from various diseases and malnourishment. Breastfeeding has also been shown to have different benefits for the mother, such as a decreased risk of premenopausal ovarian cancer compared to mothers who do not breastfeed. Breastfeeding also has a bonding effect between the mother and the infant. (Al-Nuaimi, Katende, & Arulappan, 2017).

In Finland the National Institute for Health and Welfare (THL) have recommendations similar to the WHO recommendations. Although there are recommendations like these, only 1-2% of new-born get exclusively breastfed until the age of 6 months. The average time duration of breastfeeding is 7-8 months. Out of this 7-8 month the average duration of exclusive breastfeeding is 2 months. Challenges that have been identified in Finland is the supporting of the early initiation of breastfeeding. Also supporting exclusive breastfeeding up to 4 months has proven to be a challenge (National Institute for Health and Welfare (THL, 2019).

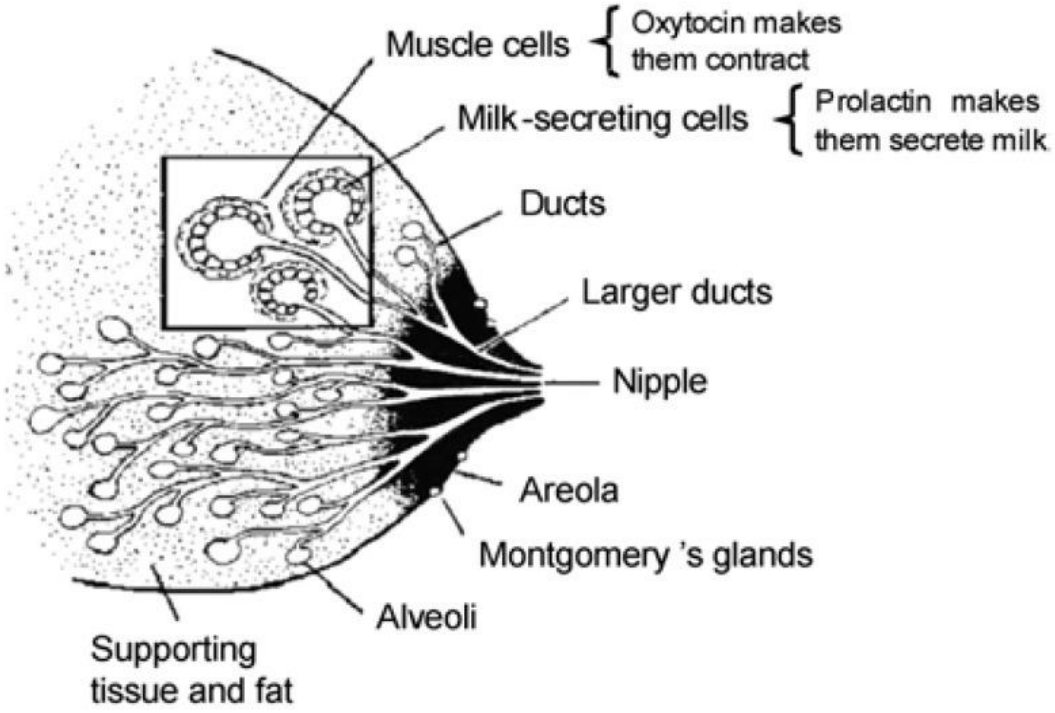
Breastfeeding promotion is of particular interest to the author and there is a motivation to gather and to compile information about factors that affect breastfeeding and how these

factors can be managed through interventions to promote and support breastfeeding to mothers and their network.

2 Background

The anatomy of the breast comprises of the nipple, the areola, mammary tissue, supporting connective tissue, fat, blood, lymphatic vessels and nerves. The mammary tissue consists of small ducts called alveoli which produce milk. Milk is stored in the lumen. The milk is transported through ducts by muscle contraction to the nipple. The nipple and the areola are protected by an oily fluid during breastfeeding and also gives every mother a unique scent that attracts the baby (WHO, 2009, p. 5).

Figure 1: Anatomy of the Breast



(WHO, 2009, p. 5).

2.1 Hormones involved in breastfeeding

Prolactin and oxytocin are the main hormones involved in the lactation process. Impulses are sent to the brain when the baby suckles the breast. The impulses directly affect the pituitary gland which then secretes prolactin and oxytocin. Prolactin is needed for the production of

milk in the alveoli. Prolactin levels are high during pregnancy and encourages the growth of mammary tissues. Prolactin is produced after every feed in order to have milk ready for the next feed. Milk production does not start immediately due to progesterone and oestrogen levels that are high during pregnancy and they inhibit the effect of prolactin. Milk secretion starts after birth when the levels of progesterone and oestrogen are low. Prolactin is released as the baby is breastfeeding. During suckling the release of pituitary hormones is affected, which leads to suppression of ovulation and menstruation (WHO, 2009, p. 6-7).

Oxytocin affects the myoepithelial cells in the alveoli to contract and hence making the milk produce to be released. Oxytocin reflex is known as the "let-down reflex" or the "milk ejection reflex". Oxytocin is secreted fast and hence making breastfeeding easy as the milk stored is available to feed the baby. The oxytocin effect begins immediately when the mother is breastfeeding the baby or when the baby is also suckling (WHO, 2009, p. 7- 8).

2.2 Breastfeeding in the Nordic Countries

In a global setting the Nordic countries, which comprises of Finland, Sweden, Norway, Iceland and Denmark, have a high rate of breastfeeding but only a small percentage of new-borns are breastfed in accordance with the recommendations issued by the WHO. In a report (Nordic Nutritional Recommendations) issued by the Nordic Council of Ministers in 2012, the following rates of exclusive breastfeeding at four months were presented; 23% in Finland, 60% in Denmark, 63% in Iceland, 51% in Sweden and 46% in Norway. This same report issued recommendation concerning breastfeeding in the Nordic countries that are in accordance with WHO recommendation. In the Nordic countries breastfeeding should be complimented only with vitamin D supplements due to low amount of sunlight (Nordic Council of Ministers, 2012).

The Nordic Nutritional Recommendations - report (2012) also states that breastfeeding rates in the Nordic countries have slowly increased from the 1970's but at the time of the publishing of the report, the exclusive breastfeeding rates have in other hand declined in Finland and Sweden, but it must be noted that the overall breastfeeding rate has increased. The report states that in light of the notions of a decline in exclusive breastfeeding rates, "it is deemed

very important to further protect, promote, and support breastfeeding in all of the Nordic countries" (Nordic Council of Ministers, 2012).

2.3 Breastfeeding practices around the world

Breastfeeding as a practice varies widely between cultures and countries. Rates of breastfeeding varies depending on different determinants. These determinants where studied in the Gulf cooperative countries. Determinants for a low breastfeeding rate were employment, contraceptive use, breastfeeding problems, marketing of breast milk substitute, shyness over breastfeeding in public spaces and inadequate teaching and support from health care professionals. Determinants for a high breastfeeding rate were low income level, rural residency, low education and increased level of multiparity (Al-Nuaimi, Katende, & Arulappan, 2017).

A study conducted in rural areas in India showed that all mothers, who participated in the study, breastfeed their children. Approximately 84% of the mothers reported that they practice exclusive breastfeeding. A majority of the mothers did not consult with health care professionals concerning lactation (Krishnendu & Devaki 2017). Breastfeeding rates and practices vary a lot in a country as well depending on determinants brought up earlier. In Bristol in the UK the breastfeeding rates reported by mothers at the 6-8-week health check of the baby vary from 20-80% depending on the area residency (Condon & Ingram, 2011).

2.4 Breastfeeding benefits for the infant

Breast milk is composed of proteins, fats, carbohydrates, minerals, vitamins and water. (Kent, 2007). Breastmilk is the optimal food for the infant when it comes to the nutritional values and properties. It contains all the nutrition a growing infant need, except enough of vitamin D (for infants born in countries with little sunlight, for example in Scandinavia) (THL, 2019 p. 63). About 50-70% of iron gets absorbed from breastmilk while the same figure for milk formula is 5-10%. This means breastfeeding prevents anaemia in infants (THL, 2019 p. 64). The breastmilk is not only nutrition but also helps the infant to develop immunity, even though the mother might be exposed to viruses. These viruses in other hand helps the infant to develop immunity and helps in the long-term health. The mother's diet does not affect

breastmilk directly, but it is converted to a natural nutrition that helps the infant to grow and get all the required nutrients. Breastfeeding does not only provide a meal for the infant but also helps the infant to start socializing by being close to the mother and interacting (Godfrey & Lawrence, 2010).

2.5 Breastfeeding benefits for the mother

Apart from the nutritional value for the infant breastfeeding, it is also a practice that should be encouraged because of the many benefits it has for the mother who breastfeeds. Women who breastfeed for at least one year have a reduced risk of type 2 diabetes, cardiovascular diseases, ovarian cancer, postpartum depression, breast cancer. The bonding experience of breastfeeding not only helps the child but also the mother to create a stronger bond with the child, especially with postpartum depression being one of the most common complications after birth for the mother. Lactation helps the mother to reduce stress by involving hormones such as oxytocin, cortisol and prolactin which have antidepressant effects (Godfrey & Lawrence, 2010).

2.6 Breastfeeding support

A study by Yang, Gao, Ip, and Chan (2016) investigated the predictors of breastfeeding self-efficacy. The study used questionnaire to measure the breastfeeding efficacy and the level of network support using the Breastfeeding Self-efficacy Scale - Short Form and the Network Support for Breastfeeding Scale. 571 Chinese mothers where part of the study. Breastfeeding self-efficacy scores were correlated with support from the husband, the parents and the nurse/midwife. Higher scores of supports from these persons was consequently correlated with higher breastfeeding self- efficacy scores (Yang et al., 2016).

A study by Mannion, Hobbs, McDonald and Tough (2013) investigated the mother's perceptions of the attitude of the partner towards breastfeeding. The study was conducted with a questionnaire that was comprised of questions including known factors about support from the partner that affect breastfeeding, for example "Do you feel supported by your partner to breastfeed – why or why not?" (Mannion et al., 2013).

The study also used the Breastfeeding Self Efficacy – scale that comprises of questions related to the mothers' confidence in breastfeeding. This study found that women who received support and encouragement from their partner were more confident to breastfeed than mothers who received less support from their partners or if their partner had a negative attitude towards breastfeeding. Receiving support from the partner to breastfeed increased the women's ability to breastfeed even though they might have had a bad experience related to breastfeeding in the past. Support from fathers was described as for example helping to transport the baby to the lap for breastfeeding or helping with domestic chores (Mannion et al., 2013).

A survey conducted in Denmark concluded that neonatal intensive care units have breastfeeding support as a high priority. Most of the NICUs had written guidelines and policies and for example aimed to early skin-to-skin contact. However, breastfeeding support in the NICUs varied and some reported non optimal support of breastfeeding. Minimizing mother-infant separation was reported as one improvement to be sought after (Maastrup, Bojesen, Kronborg, & Hallström, 2012).

3 Influences and limitations of breastfeeding

There are many factors that influence the mother on the decision of breastfeeding. Factors include sociocultural and medical factors. The influence of the father has shown to be great. A father who is involved in the care taking of a child increases the rate of breastfeeding among mothers, while a father who discourages breastfeeding lowers the rate of breastfeeding even if the mother knows that it is beneficial for the child. Since breasts are portrayed sexually in many cultures, there is often controversies regarding breastfeeding in public spaces. A lowered support from the public concerning breastfeeding in public has shown to decrease the rate of overall breastfeeding. Medical factors include the increase of premature births. Premature births often lead to prolonged separation between the mother and the child and hence breastfeeding might not be possible, at least directly after birth (Sriraman & Kellams, 2016).

A study done at children hospital in Bristol UK showed that the community did not think that breastfeeding was a standard to provide food to the infant, even though they had places

where the mothers would go to be able to breastfeed their children. The mothers had bad experiences with breastfeeding in public and some also had been told not to breastfeed in places like shops or cafes. Some of the members were even uncertain if breastfeeding in public was legal. Mothers that were positive were able to breastfeed while outside their homes. They got more information of different places where they could breastfeed and not be afraid (Condon & Ingram, 2011).

A study conducted in the US investigated how the length of maternity leave affects the duration of breastfeeding. The study included 6510 mothers. The results showed that the longer the mother stays on maternity leave the longer the mother continues breastfeeding (Ogbuanu, Glover, Probst, Liu, & Hussey, 2011).

Other social and legal factors that affect the rate of breastfeeding include the length of the maternity leave and the breastfeeding breaks given to mothers in workplaces. A global comparative analysis investigating the breastfeeding policy at workplaces in 182 countries found out that 25% of the countries had no policy in place concerning breastfeeding breaks at the workplace while 71% of the countries guarantee paid breastfeeding breaks at the workplace. Countries where there is a guarantee of workplace breastfeeding breaks usually guarantee the break until the child is one year old. This same study showed that policies supporting breastfeeding breaks at the workplace correlate with higher rates of exclusive breastfeeding (Heymann, Raub, & Earle, 2013).

3.1 Interventions used to increase breastfeeding rate around the world

Since breastfeeding rates vary a lot, there have been many campaigns in the effort to increase breastfeeding. A mass communication campaign about exclusive breastfeeding that was run on TV in Vietnam during one year from 2012 to 2013 increased the rate of exclusive breastfeeding from 26% to 48%. The result also showed that mass communication together with counselling available for mothers had even a greater effect on increasing exclusive breastfeeding (Alive & Thrive 2014).

An experimental study at a university hospital in Thailand investigated how the exclusive breastfeeding rates were affected in first time mothers by the Breastfeeding Skills Training

and Support Program (BSTSP) and thus evaluate the effectiveness of this program. The study was conducted as a randomized control trial with two groups. One group was assigned to the BSTSP while the other group was a control group and received only usual care from hospital nurses and midwives. The results of this study showed that there was a significant increase in the duration of exclusive breastfeeding in the group that was assigned to the BSTSP compared to the control group that received usual care (Prasitwattanaseree, Sinsucksai, Prasopkittikun, & Viwatwongkasem, 2019).

The World Health Assembly Resolution 65.6 signed the *Comprehensive implementation plan on maternal, infant and young child nutrition* in 2012. It includes six global nutritional targets for 2025. One of its goal is to increase the rate of exclusive breastfeeding rate during the first six months to at least 50%. The WHO guideline on "*protecting, promoting and supporting breastfeeding in facilities providing maternity and new-born services"* (WHO, 2017) is an update of the ten steps to successful breastfeeding. The guideline examines the different steps of the ten steps to successful breastfeeding and includes evidence for practice that can be implemented in order to protect, promote and support breastfeeding in different health care centres for example in maternity and new-born services. The outline of the themes of the key recommendations in the guideline are presented in table 1 (WHO, 2017).

Table 1: Outline of themes in key recommendations for protecting, promoting and supporting breastfeeding

Immediate support to initiate and establish breastfeeding	Feeding practices and additional needs of infants	Creating and enabling environment
• Early skin-to-skin contact • Early initiation of breastfeeding • Showing mothers how to breastfeed • Showing mothers how to express breastmilk • Rooming-in • Demand feeding	• Early additional foods or fluids • Avoidance of pacifiers and dummies • Avoidance of feeding bottles and teats	• Breastfeeding policy • Training of health workers • Antenatal breastfeeding education for mothers • Discharge planning and linkage to continuing

(WHO, 2017)

WHO together with UNICEF launched an initiative in 1991 called the Baby-Friendly Hospital Initiative (BFHI). This initiative was an effort to make all maternity facilities centres of support for breastfeeding. One criterion for a hospital to become a Baby-friendly Hospital is that they implement the Ten Steps to Successful breastfeeding. The BFHI has also successfully increased the rates of breastfeeding. For example, in Cuba the rate of exclusive breastfeeding was tripled in six years. In Cuba as of 2005 49 out of 56 hospitals and maternity facilities are Baby-friendly (WHO, 2005).

3.2 Breastfeeding week

The world breastfeeding week is held every year. Breastfeeding is the most essential process for an infant to begin their life. The 2018 theme was "*Breastfeeding: Foundation for Life" — "a recognition of the importance of breastfeeding to a baby's future*" (WHO, 2018). The World Health Assembly celebrates the World Breastfeeding week with its member states. This is also an important global event and it is held to promote, encourage and maintain breastfeeding in all parts of the world (WHO, 2018).

Early breastfeeding protects the infant from death. Good breastfeeding interventions could save about 823,000 children who are under five each year. In parts of the world where there is insufficiency of clean water, basic health services, breastfeeding is still safe for infants and protect them from diseases e.g. because of unclean drinking water (WHO, 2018).

4 Aim

The aim of this study is to describe and present an overview of different interventions to promote breastfeeding among mothers in prenatal and postnatal health care settings in the Nordic countries.

Research questions

1. What factors are associated with lower breastfeeding rates?
2. How can nurses promote mothers to breastfeed?

5 Theoretical framework

In this thesis two theories will be used, the health promotion model by Nola Pender and the theory of planned behaviour by Ajzen.

The health promotion model fits well in the study as it helps nurses to understand why people choose to act in a certain way and what factors influence their behaviour towards certain behaviour and how to influence these factors in order to promote health behaviour (Pender, 2011). The theory of planned behaviour will also be used as it will also shed more light on what influences the decisions of choosing or not choosing health promoting behaviour (Ajzen, 2005).

5.1 Health Promotion Model

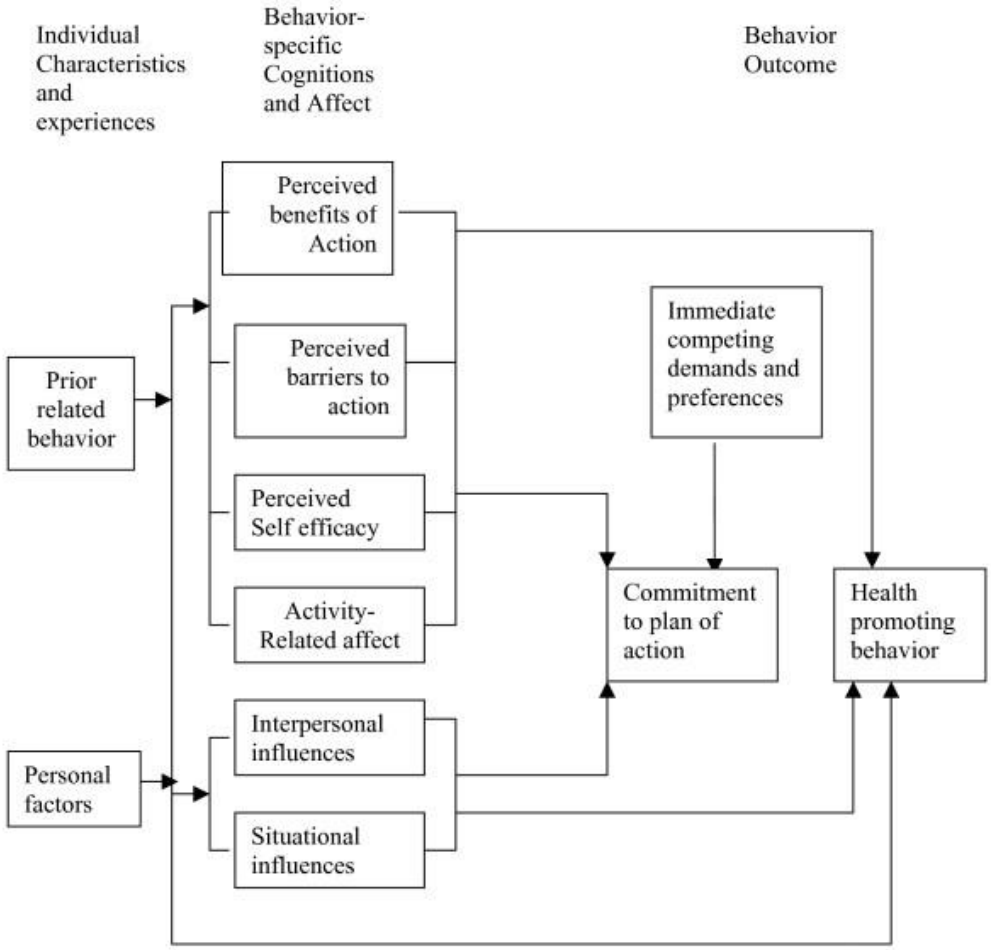
The Health Promotion Model by Pender (1982) is a model that helps nurses to understand factors that influence different health behaviours. The understanding of these different factors further helps nurses to promote a healthy lifestyle (Pender, 2011).

The theory includes these factors as concepts that affect health behaviours. These factors are described in the Health Promotion Model (figure 1). The model can be divided in three stages – one affecting the following. The first stage is *Individual characteristics and experiences,* for example a person's prior experience of the effectiveness of previous interventions and the emotion related to that affect the behaviour and willingness to take part in behaviour promoting health. The second stage is *Behaviour-specific Cognitions and affect,* which includes behavioural factors and for example how well a person can understand the potential benefits of a certain health promoting behaviour. These behaviour-specific related factors are seen as very important to investigate because these factors can be modified through for example nursing interventions (Pender, Murdaugh & Parsons, 2015, p 36-39).

The third stage of the model is *behavioural outcome.* This is the stage where behavioural outcomes can be seen. This third stage includes health promotion behaviour but according to the model it is still important to note that even if health promoting behaviour has been reached it can still be affected by competing demands and/or preferences (Pender et al., 2015) e.g. bottle-feeding over breastfeeding. These can be seen as threats to an initiated

health behaviour. Immediate competing demands are factors that are difficult to have control over such as work-related factors. Preferences are easier to have control over for example choosing breastfeeding over bottle feeding even though bottle feeding is preferred. The ability to have control over competing demands and preferences are of course also affected by personality and interpersonal factors (Pender et al., 2015, p 35 & 39).

Figure 2: Health Promotion Model (Revised)



(Pender, Murdaugh & Parsons, 2015, p. 45).

The theory also makes assumptions about people and their health behaviour. An example of an assumptions is the following: "*Persons seek to create conditions of living through which they can express their unique human health potential*" (Alligood, 2018, p. 328). The assertions that the theory makes are related to the factors that influence health behaviour. The assertions are based on that individuals are motivated to strive for health by different

cognitive processes. An example of an assertion is the following: "*prior behaviour and inherited and acquired characterises influence believes, affect, and enactment of health-promoting behaviour"* (Alligood, 2018, p. 329).

This particular theory helps us to understand how people choose or decide how they behave. This theory also takes a nursing perspective of promoting health behaviour. This theory helps us to understand the factors of how people choose to behave or makes them behave the way they do. In a nursing setting and more specifically breastfeeding intervention – settings this theory makes us aware of what factors are more available to be modified than other factors. For example, in accordance to the theory, *behaviour specific cognitions and affects* such as perceived barriers to action can be more easily modified to promote health promoting behaviour than a person's prior experiences that forms the personality of a person. In this study we will better understand the interventions to promote breastfeeding due to this theory or model.

5.2 Theory of Planned Behaviour

This theory is based on the assumptions people take into consideration before they take actions. The theory uses three determinants that determine the behaviour of a person; personal factors such as individual beliefs and attitudes toward a certain act or behaviour, social factors such as societal norms and perceived attitudes of others towards a certain act or behaviour, control of a behaviour which simply means a person`s perceived ability to engage in certain acts or behaviours (Ajzen, 2005, p. 117-141).

The Theory of Planned Behaviour has been used in studies to investigate how mothers' subjective norms predict breastfeeding behaviour and habits. For example, a study conducted by Swanson and Power (2005) used the theory of planned behaviour to construct a questionnaire to investigate how well the different parts of the theory of planned behaviour could predict breastfeeding habits. The study found that subjective beliefs of breastfeeding does indeed predict if a mother will breastfeed or if she will bottle-feed (Swanson & Power, 2005).

Based on all this, the theory of planned behaviour will help us to understand what factors influence and predict breastfeeding. It may also help nurses and other relevant healthcare professionals to understand how mothers make the decision about breastfeeding and how/where the interventions to promote breastfeeding should be directed depending on what factor influences the mother not to breastfeed.

6 Methodology

Based on the article search, the decision of choosing the methodology to be a scoping study was made. This decision of the methodology was made because the articles concerning breastfeeding promotion and the role of the nurse in the Nordic countries, that were found were few and consisted of both qualitative and quantitative studies. A scoping study can be defined as a study which has the purpose to "map *rapidly* the key concepts underpinning a research area and the main sources and types of evidence available" (Mays, Roberts, & Popay, 2001, p. 194, as cited in Arksey & O'Malley, 2005). A scoping study can be used in order to provide more information about the state of research of a particular subject and about research gaps in literature. Arksey and O'Malley describe that this sort of scoping study can be a study method in itself and can potentially lead to a full systematic review (Arksey & O'Malley, 2005). The outcomes of a scoping review are usually presented in a narrative manner rather than using statistical language in a high extent (Peterson, Pearce, Ferguson & Langford, 2017).

When conducting a scoping study, the aim is to "identify all relevant literature regardless of the study design" (Arksey and O'Malley, 2005). The framework of conducting a scoping study as adopted by Arksey and O'Malley (2005) was used in this study and can be divided into five stages and are the following:

1. identifying the research question
2. identifying relevant studies
3. study selection
4. charting the data

5. collating, summarizing and reporting the results

(Arksey & O´Malley, 2005).

6.1 Identifying the research questions

When deciding what research questions to have it is important to include the critical parameters (for example study population etc.) and also not making the research questions too specific since it may hinder missing any relevant studies or articles (Arksey & O´Malley, 2005). The first research question is stated as "What factors are associated with lower breastfeeding rates?" and the second one is "How can nurses promote mothers to breastfeed?". The first research question is set to understand what factors are associated with lower breastfeeding rates. These factors may include health problems, intra-personal attitudes and attitudes of the network and society. The second research question is to understand how these factors stated in the first research question as well as other factors can be met by nurses and how nurses can promote mothers to breastfeed. The nurses included in this thesis are all nurses that work with mothers in prenatal and postnatal settings.

6.2 Identifying relevant studies

According to Arksey and O´Malley, in order to identify the relevant studies, it is important to conduct a thorough search in order to find studies that answer the research question. The search can be conducted in different ways such as searching through different databases, different specific journals and reference list (Arksey & O´Malley, 2005). In order to identify the relevant studies to be used, it was important to find relevant search words. The search was conducted by using different search words for each research question. In order to find articles, key words from the research questions were used. The following search words were used, for research question 1; "Breastfeeding duration" and "factors" and "Finnish" or "Swedish" or "Danish" or "Norwegian" or "Icelandic" and "mothers". For research question 2 the following search words were used; "Breastfeeding promotion" and "nurse" and "intervention" and "Swedish"/ "Norwegian"/ "Danish"/ "Finnish", "Icelandic" and "Finland/" Sweden"/" Norway" / "Denmark"/ "Iceland".

6.3 Study selection

The searchers were made through NOVIA university of applied science Tritonia library. The following databases were used; Google scholar, PubMed, EBSCO, CINALH and Sage. The article search process is shown in the PRISMA flow diagram (appendix 1). PRISMA flow diagram is used to show the process of the article search in a systematic approach. This systematic approach visualizes the different phases of the literature review, starting from the article search (Moher, Liberati, Tetzlaff & Altman,2009).

The inclusion criteria for the articles was as follows; full text articles, in English, from Nordic countries, articles published between 2010-2020, qualitative and quantitative articles and relevant articles that answered the research question. The exclusion criteria for the articles were: masters or bachelors' thesis, not in English, duplicate articles, articles published before 2010, articles not relevant to the research questions and articles which did not fit into the geographical area of the study. Studies from Åland island, Greenland and Faroes island where also excluded. 633 papers were found during the article search and 12 studies were included in the final review.

6.4 Charting and analysing of the data

Arksey and O'Malley (2005) describes this stage as the stage where the main features of the studies included are charted. The charted data can be presented in a narrative manner and decisions about what to extract from the studies must be done in a manner so that the data extracted from the different articles can be compared to each other (Arksey & O'Malley, 2005).

The articles collected where then grouped according to different categories. The articles are presented in Appendix 2.

- Title
- Author name
- Year of publication

- Aim/objective
- Study design and Methodology
- Results/conclusions

6.5 Collating, summarizing and reporting the results

In this final stage its where the results are presented. Reporting results in a scoping study have a purpose to present an overview of the studies found (Arksey & O'Malley, 2005). In this thesis the results will be presented in a summary where the information relevant to the research questions will be outlined.

7 Ethical consideration

Ethical consideration recommendations are applied to prevent deceit in research, promote responsible research practices and enhance the quality of thesis (Arene, 2018).

The Finnish Advisory Board of Research Ethics also issue recommendations for responsible conduct of research (RCR). These guidelines are in accordance with the international guidelines of research ethics and are applied in all the academic disciplines in Finland (Finnish Advisory Board of Research Ethics, 2012 p. 28-29).

Recommendation are given that when doing the research, it is good to keep in mind to always be *"honest, careful, open, and to respect the work of other researchers*". (Arene, 2018, p. 7-8). The research should be made in a good and organized way (Arene, 2018, p. 7-8). The Copyright Act needs to be followed and it is important to remember to give the correct references for the work being used which is from other people's previous work (Arene, 2018, p. 11).

Since this thesis is conducted as a scoping review the plagiarism ethical consideration is to be taken in account, meaning that all literature used need to be referenced appropriately and by following the Novia University of Applied Science instructions for thesis writing.

8 Findings

The findings are presented according to the research questions. The findings related to the first research question “what factors are associated with lower breastfeeding rates” results are presented first and then the findings related to the second research question “How can nurses promote mothers to breastfeed” are presented.

8.1 What factors are associated with lower breastfeeding rates

A study by Kronborg, Vaeth & Rasmussen (2013) investigated to what extent the relation between BMI and early cessation could be explained by different factors. This study included 1375 mothers who in a questionnaire gave complete information about breastfeeding duration and BMI after birth. The questionnaire also included other questions about socio-demographics, psychosocial factors, weight after birth, pacifier use, weight of infant and perinatal conditions. The study found that high mothers with high BMI after birth have a significantly higher rate of exclusive breastfeeding cessation when other factors are not adjusted for. When other factors were adjusted for the study showed that primiparous mothers with high BMI have a high risk of early exclusive breastfeeding cessation while multiparous mothers with high BMI show no higher risk of early breastfeeding cessation (Kronborg, Vaeth, & Rasmussen, 2013).

Cato, Sylvén, Lindbäck, Skalkidou and Rubertsson (2017) also found that a high BMI contributed to early breastfeeding cessation. EBF lasting for only two months postpartum can be affected by different factors among mothers. These factors include high BMI, having the first child, contact with any psychiatric/psychological care and experience of emotional distress while being pregnant. Other risk factors included receiving the hands-on approach and the first breastfeeding session being at the maternity ward. A negative experience related to the first breastfeeding session and the labour were also factor’s to negatively affect exclusive breastfeeding (Cato et al., 2017).

Maternal education level is associated with duration of total breastfeeding. Mothers with higher education had a higher level of total breastfeeding duration when compared to mothers with a basic education. The authors in this study conclude that higher education

among mothers makes it easier to adapt to the infant dietary recommendations (Thorisdottir, Gunnarsdottir, & Thorsdottir, 2013).

A study to investigate the initiation of complementary feeding and duration of total breastfeeding looked at two groups. The first group comprised of infants that received complementary food from 4 months and in the second group the infants were breastfed exclusively for 6 months. The results showed that the infants that were breastfed exclusively for 6 months had a longer breastfeeding duration than the infants who received complementary food from 4 months (Jonsdottir et al., 2014).

Prenatal anxiety and depression are factors that are associated with breastfeeding cessation, while breastfeeding cessation is associated with postpartum anxiety and depression. Mothers with prenatal anxiety and depression are therefore at particular risk for postpartum anxiety and depression (Ystrom, 2012).

8.2 Parents assumption on breastfeeding

A study investigating the attitudes of parents toward breastfeeding during pregnancy revealed the following. The parents thought that breastfeeding is important for the infant. The parents also viewed breastfeeding as something that brings the family together. Many parents regarded breastfeeding as an act that brought joy to the mother and baby. Some parents also had different views on breastfeeding, such as thinking that breastfeeding is stressful to the mother. Some parents also stressed the importance both parents been able to feed the infant (Laanterä, Pölkki, Ekström & Pietilä, 2010).

8.3 How can nurses promote mothers to breastfeed

A study by Kronborg, Maimburg and Væth (2012) investigated how an antenatal training program affects breastfeeding duration. Women participating in a program called “Ready for child programme” were compared to a control group. Data was collected through questionnaires. The program consisted of different lessons such as delivery process, pain relief, breastfeeding, role of the parent to mention a few. After attending the programme, women had an increase in confidence and level of knowledge to breastfeeding. when compared to the control group even if the training programme itself did not increase

breastfeeding duration when compared to the control group. The authors state that the result suggests that primiparous women should receive knowledge during the pregnancy to better handle breastfeeding (Kronborg, Maimburg and Væth,2012).

A study by Ekström, Guttke, Lenz and Hertfelt Wahn (2011), studied the long-term effects of professional breastfeeding support. Midwives and child-health nurses participated in a process-oriented training programme which consisted of lectures and discussions for example about problem solving, professional stance and practical skills related to support during childbirth and breastfeeding. Women who met caregivers that had participated in the training program (intervention group) did not have significantly higher rate of breastfeeding initiation when compared to the control groups. The duration of exclusive breastfeeding was significantly higher among mothers in the intervention group when compared to the baseline control group (control group A). There was no difference between the intervention group and the control group for which the data was collected simultaneously (control group B). No significant differences between the groups was found for the total duration of breastfeeding. The mothers in the intervention group showed a significant correlation between duration of exclusive breastfeeding and the preparation to be a parent that they received from caregivers at the maternity ward (Ekström et al., 2011).

Ekström, Kylberg and Nissen, (2012) conducted a study of the same research sample as the previously mentioned study by Ekström et al., (2011). Fewer infants in the intervention group were given breastmilk substitute for medical reasons when compared with control groups. There was a significant difference between the intervention group and the groups regarding the introduction of breastmilk substitute with the infants in the intervention group being older when introducing breastmilk substitute. The authors conclude that the process-oriented training program for midwifes and postnatal nurses can result in infants being introduced to breast milk substitute later. The reason for this can be that mothers in the intervention where informed better by the caregivers about good breastfeeding practices (Ekström et al., 2012).

Interviews with mothers and midwives revealed that mothers and midwives have differing views when it comes to breastfeeding support. The mothers stated that they want to be seen and supported as an individual and get more confirmation if they are breastfeeding normally

or not. The mothers also pointed out that physical contact from the midwife might affect them negatively. The mothers also stated follow-up by the midwife as important and wanted more time with caregivers in order to be more confident in their breastfeeding. Support individualized to the needs of the mother increases mother's confidence. Uncertainty in mothers is associated with the support not being individualized, the lack of confirmation and information from different caregivers not being uniform. (Bäckström, Wahn & Ekström, 2010).

In the same study by Bäckström et al. (2010) the interviews with the midwives revealed that midwives tend to think that they do give individualized support to breastfeeding mothers. Midwives stated that an important factor in breastfeeding support is to listen to the needs of the mother, showing the mother respect, take previous breastfeeding experience into consideration and give the mother confirmation to make the mother more confident. Midwives also said that a limitation in breastfeeding support is the differing views of a mother by midwives, in other words, different midwives interpret mother's needs differently. Therefore, listening to the mothers was seen as very important in order to give appropriate individualized support to the breastfeeding mother (Bäckström, et al., 2010).

The previously mentioned study by Ystrom (2010) stated that anxiety and depression are risk factors for early breastfeeding cessation. The author concludes that mothers who show signs of these risk factors should receive support and should be taught coping strategies to deal with a possible early breastfeeding cessation (Ystrom, 2010). The study by Thorsdottir et al. (2013) stated that since mothers with basic and medium level educational level have a shorter duration of breastfeeding there is a need for directed guidance for these groups in order to support breastfeeding.

Interviews with child-health nurses revealed that parents' views on breastfeeding and experience is important for the child-health nurse to know as it leads to individualized support been provided for the family. During the first breastfeeding initiation it is seen as important for the environment to be quiet and peaceful. The importance of educating parents on the different benefits and techniques of breastfeeding is also emphasised. The experiences child-health nurses have is that providing early support to parents lead to a positive initiation of breastfeeding and promotes the relationship between the parent and the infant. The nurses

in the study thought that. Child-health nurses stated that adapting to the role as parents and confidence are factors that affect breastfeeding. Early discharge from the hospital was also seen as negatively affecting breastfeeding. When parents received support and education on breastfeeding it strengthens their confidence and prevents early introduction of formula to the baby (Grenholm, Söderström & Lindberg, 2016).

Intensified breastfeeding support was associated with higher rates of exclusive breastfeeding. The duration of the father's presence at the hospital postpartum increased the duration of both breastfeeding and EBF. In this study families who received intensified breastfeeding support were a part of an intervention group. In addition to intensified breastfeeding support intervention group comprised of training of the staff (midwives and nurses). The importance of the father's presence is seen as an indicator that breastfeeding support should family-oriented (Hannula, Kaunonen & Puukka, 2014).

9 Discussion

In this chapter the method is discussed, and the findings are discussed, interpreted and summarized.

9.1 Method discussion

The method chosen for this thesis is a "scoping review". When searching for literature related to the research topic, a limited of amount of research articles was found. Choosing a scoping review as a method allowed the author to include a wide variety of research articles in order to describe the state of research in this area. Studies undertaken as scoping reviews can include quantitative, qualitative and grey materials (Arksey & O'Malley, 2005). A possible limitation of a scoping review is that the quality of the research articles found is not evaluated, so was the case in this scoping review. All articles found did not specifically answer how nurses do promote breastfeeding. The findings in this scoping review show more generally how breastfeeding should be supported by caregivers. The scoping review also shows that there is a lack of research about how health care professionals working with mothers do actually support breastfeeding and how support is done in practice in relation with national and WHO guidelines. Another limitation of this scoping review is that some relevant articles might have

been missed in the article search. Also, some possibly relevant articles could not be included since full access was not possible for the author. Unpublished research articles and grey materials were not used either, which is a limitation. The publishing year of the articles was limited to 2010-2020 in order to find up-to-date data. Older research might, however, also been up relevant and up to date. The literature search was conducted through different databases such as Google scholar, PubMed, EBSCO, CINALH and Sage and also by using different search words in order to find relevant studies. After the search process and elimination of irrelevant studies, 12 articles where used in the research for which 10 were quantitative and 2 were qualitative.

It is important for a researcher to be critical of the trustworthiness of every phase in a study (Elo et al., 2014). In the case of this study it means to scrutinize the trustworthiness of the preparation and the reporting phase. In this part of the methods discussion the trustworthiness is discussed for these phases. Trustworthiness can be evaluated in the terms of credibility, dependability and confirmability (Guba & Lincoln, 1989, as cited in Bitsch, 2005).

Credibility refers to how comparable the research results are to the objective reality (Bitsch 2005). Regarding the data collection the research articles do represent the current research at least to some extent. It is still important to state the author is not experienced in conducting literature reviews and a limited timeframe in conducting the literature review was a reality. In addition to not using some databases, all this might have resulted in that some relevant articles were not found and therefore not included in the study.

Dependability can be defined as the stability of the study or much of an agreement there would be in the results of a replicated study at a different time (Bitsch, 2005). To ensure dependability in this study searches and search words were documented and presented. Because of the nature of the study being presenting the current literature it is obvious that the results of this study might in some time be irrelevant, when new research is conducted and published. This study should therefore be seen as a scoping review of the current literature at the time of the publishing of this scoping review.

Confirmability refers to the objectivity of the researcher (Bitsch, 2005). The literature search, reporting of the findings and interpretation should be evaluated in order to make sure that these parameters are independent, related to the actual data from the articles and not

affected by the opinions and individual interpretations of the researcher. When extracting data from the articles included all relevant data related to the research questions were included. Since the data extraction only was done by one person there might have still been data that the author did not see as relevant but might have still been relevant. Presenting the data or the findings was done in a manner so that all relevant data found was presented under each research question withholding any interpretation of the data. Interpretations were done in the discussion section. The order of the presented findings was not set up in any hierarchical way.

9.2 Findings discussion

Factors affecting breastfeeding are many. The study by Kronberg et al. (2013) and Cato et al. (2017) found the BMI of the mother to be a factor affecting breastfeeding duration. However, Kronborg et al. (2013) concluded that BMI only affected breastfeeding cessation among primiparous women when other factors were adjusted for. These findings can show us that factors affecting breastfeeding are multifactorial. These findings show that nurses supporting breastfeeding should take risk factors into account when planning the support for an individual mother. However, risk factors should not be overinterpreted as breastfeeding is affected by multiple factors.

Another factor affecting breastfeeding is the level of education of the mother. Basic and medium level of education affect the duration of breastfeeding negatively when compared to mothers with higher education. Support should therefore be directed towards mothers with lower education (Thorsdottir et al. 2013). For the nurse or the midwife this can mean that it is good to be aware of the educational level of the mother to have a better understanding of the mother as a person. First time mothers should receive more antenatal breastfeeding education to increase the knowledge, since knowledge helps the new mother to cope with breastfeeding (Kronborg et al., 2012).

The health promotion model by Pender presents three stages to understand health behaviour; *individual characteristics and experiences*, *behavior-specific cognitions and affect* and *behavioural outcome.* This model explains how health behaviour is affected by individual factors and experiences (Pender et al., 2015, p. 36-39). The health promotion model helps us

to understand that behavioural factors are affected by previous experiences (e.g. breastfeeding experience/multiparity) and personal factors (e.g. BMI). The model thus helps us to better understand the results of Kronborg et al. (2013) that breastfeeding is multifactorial and risk factors can not only be determined with one factor, e.g. BMI in this case. The health promotion model explains to us why education level and knowledge about breastfeeding could be seen as a personal factor affecting behavioural factors. These factors can affect behavioural factors such as perceived benefits and barriers of action since knowledge and education can help mothers to understand the benefits of breastfeeding and how to best manage breastfeeding when there are problems, which then affect behavioural outcomes positively.

One thing that stood out in the articles that were found was the mental and psychological factors affecting breastfeeding. Laanterä et al. (2010) found that first time parents generally have a good attitude towards breastfeeding and saw it as important even though it was seen as possibly stressful for the mother. Ystrom (2012) found prenatal anxiety and depression as a risk factor for early breastfeeding cessation as well as early breastfeeding cessation being a risk factor for anxiety and depression. This is aligned with the results from Cato et al. (2017) which found emotional distress during pregnancy to be affecting EBF duration. It is also important for the caregiver to know the previous experience and attitude of the parent when it comes to breastfeeding to better meet the needs and better individualize the support (Grenholm et al. 2016; Cato et al., 2017). The midwife or nurse providing prenatal support should be aware of the mothers' psychological challenges, attitudes, experience related to breastfeeding and needs when planning for the individual support for the mother. Since early breastfeeding cessation can lead to anxiety and depression continuous breastfeeding support can be important.

The theory of planned behaviour explains that behavioural decisions are made on the basis of personal factors such as beliefs and attitudes, social factors such as norms in the society and perceived attitudes of others (Ajzen, 2005, p. 117-141). The findings in the study by Laanterä et al. (2010) are therefore positive since attitudes, according to the theory of planned behaviour affect breastfeeding. The health promotion model helps us also to understand why psychological factors such as emotional distress and depression during

pregnancy as risk factors for early breastfeeding cessation. These psychological factors can be seen as affecting for example the confidence of mothers.

The health promotion model by Pender presents three stages; is *individual characteristics and experiences*, *behavior-specific cognitions and affect* and *behavioural outcome.* This model explains how health behaviour is affected by individual factors and experiences (Murdaugh & Parsons, 2015, p 36-39).

The need of continuous breastfeeding support was also noted in the study by Bäckström et al. (2010) The mothers interviewed in this study stated that follow-ups after birth is an important part of breastfeeding support since it increases confidence in breastfeeding. This is aligned with the findings from the study by Hannula et al. (2014) that found intensified breastfeeding support being something that increases exclusive breastfeeding rates among mothers. Training caregivers was found to be a positive factor affecting how well breastfeeding support was provided. This was seen both in Ekström et al (2012) and Hannula et al. (2014). Mother's receiving differing information from different caregivers can lead to decreased confidence (Bäckström et al. 2010). Practical and theoretical education and training of the health-care professional can therefore be viewed as important component in breastfeeding support in order to keep it evidence based.

The health promotion model describes perceived self-efficacy and barriers to action as behavioural factors affecting behavioural outcomes (Pender et al., 2015). This model thus helps us to understand why intensified support and follow-ups are beneficial. These increase the confidence of breastfeeding mothers and facilitate health promoting behaviour. The finding that well-trained caregivers has a positive effect on breastfeeding is interesting and is something that should be taken seriously. The health promotion model also shows that interpersonal factors affect health behaviour. In this case the relationship between the mother and the caregiver can be seen as a factor affecting health promoting behaviour.

The way or practice of breastfeeding support has been found to be important. Hannula et al. (2014) found that involving the father in the support can affect breastfeeding positively. Support should include education about techniques and theory since it makes mothers more confident in their role as a mother. Child-health nurses also state that the environment during the first breastfeeding session should be quiet and peaceful (Grenholm et al., 2016). The

hands-on approach has been found to affect the breastfeeding mother negatively (Cato et al. 2017). Carefully listening to mother is very important to know what the needs of the mother are and how to best individualize support for the mother (Bäckström et al., 2010). These results indicate that the individual mother should be the focus when giving breastfeeding support. The caregiver should always facilitate breastfeeding in the best way possible but not go too far in the line of helping the mother with a hands-on approach. Breastfeeding support should be family-oriented since it is something that obviously affects the whole family and is something that the whole family plays a role.

The health promotion model explains that health can best be directed at the behaviour specific factors (Pender et al., 2015). Personal factors and previous experiences cannot be modified as easily as behaviour specific factors. Interpersonal influence affects health behaviour and thus family-oriented support seems also as a natural way to go. Support in knowledge is important for perceived benefits as we have previously mentioned. The importance of breastfeeding technique training and creating a peaceful and quiet environment for the first breastfeeding session can be also explained with the health promotion model. Situational influence, perceived self-efficacy and activity related affect are behavioural factors that can be modified with these support types just mentioned. To create a peaceful environment helps the mother to have a good first experience and technique training increases the self-efficacy by increasing confidence in breastfeeding. Every mother is different and there are many combinations of different factors affecting breastfeeding as the health promotion model also explains. For the caregiver to listen to the mother seems naturally important in order to individualize support. The caregiver, as previously mentioned, is part of interpersonal influence and should thus think thoroughly on what kind of support works for this mother and what does not work.

The health promotion model explains that health can best be directed at the behaviour specific factors (Pender, Murdaugh & Parsons, 2015, p 36-39). Personal factors and previous experiences cannot be modified, while behaviour specific factors can be.

10 Conclusion

The main aim of this study was to describe how health-care professionals can support breastfeeding. The findings show that breastfeeding duration and success is affected by multiple factors. These factors can be physical, psychological and socioeconomical and further affect behavioural factors as explained in the health promotion model. These factors are again something that the caregiver should be aware of when promoting and providing support for breastfeeding. Breastfeeding support needs to be emotional educational, practical and individualized to a mother to be successful. As explained in the health promotion model the caregiver is a part of interpersonal influence of a breastfeeding mother and that is why training and educating caregivers in breastfeeding support is deemed as very important. Caregivers need to listen carefully to know the specific needs and factors that can affect breastfeeding. The findings of this study also indicate that there is a need for more research investigating how breastfeeding support is conducted in prenatal and postnatal settings.

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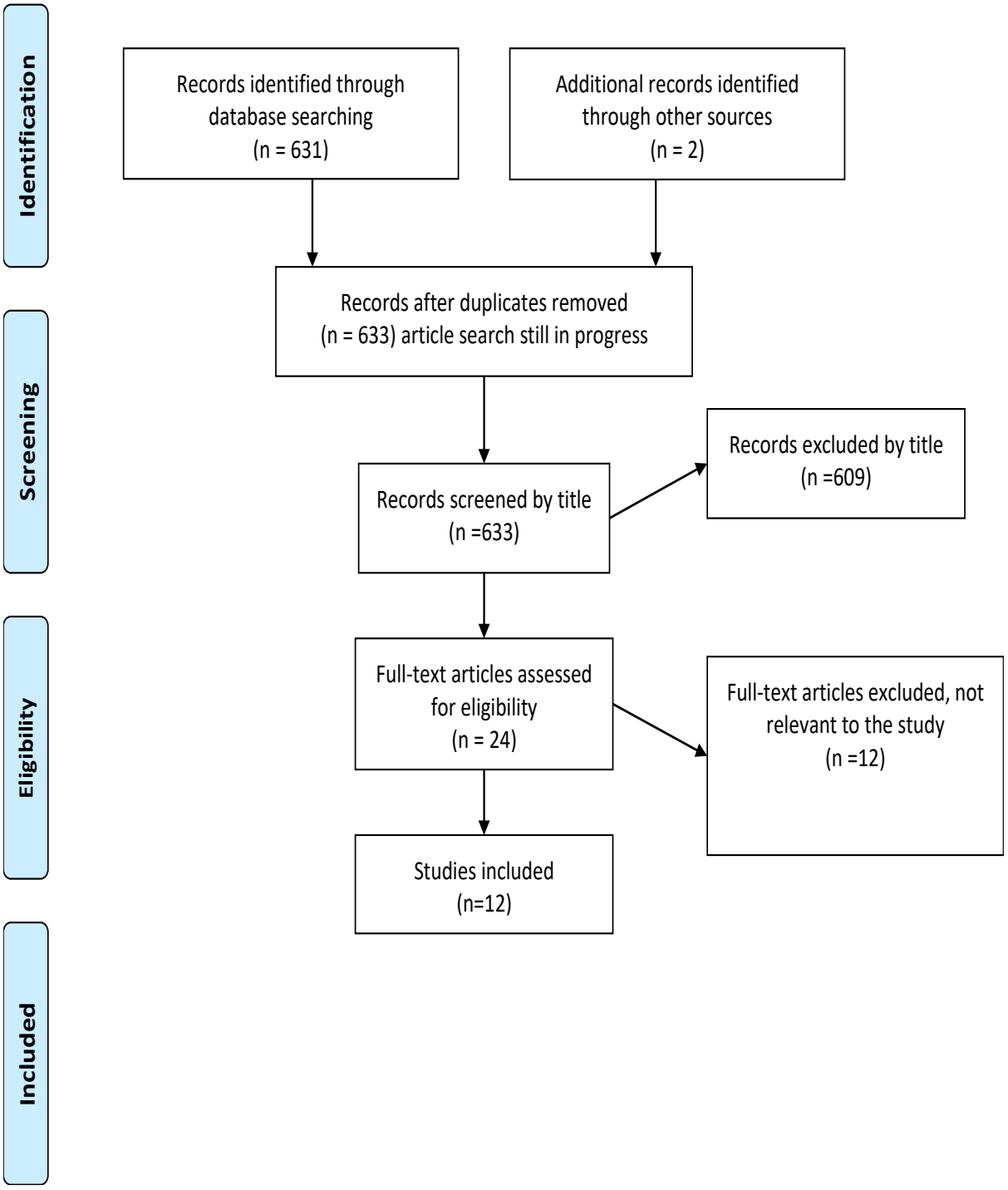
Appendix 1: Prisma flow chart



(Moher, Liberati, Tetzlaff, & Altman, 2009)

Appendix 2: Summary of the articles used.

Bibliography data	Aim	Methodology	Results
Laanterä, S., Pölkki, T., Ekström, A., & Pietilä, A. M. (2010). Breastfeeding attitudes of Finnish parents during pregnancy. *BMC pregnancy and childbirth*, *10*(1), 79.	"To describe Finnish parents' prenatal breastfeeding attitudes and the relationships with demographic characteristics"	"By developing the electronic Breastfeeding Knowledge, Attitude and Confidence scale. 123 mothers and 43 fathers completed the study. The data analysis was done by factor analysis and nonparametric methods".	"The results showed that breastfeeding is seen as important by the parents. However, 54% of the parents wanted both parents to participate in feeding the new-born. Mothers with a vocational qualification, with moderate breastfeeding knowledge or were first-time mothers had more negative feelings towards breastfeeding than mothers with an academic degree, more than one child or high breastfeeding knowledge".
Ystrom, E. (2012). Breastfeeding cessation and symptoms of anxiety and depression: a longitudinal cohort study. *BMC pregnancy and childbirth*, *12*(1), 36.	"To investigate whether breastfeeding cessation is related to an increase in symptoms of anxiety and depression and also to investigated whether the proposed symptom increase after breastfeeding cessation was disproportionately high for those women already suffering from high levels of anxiety and depression during pregnancy".	"This study examined data from 42 225 women in the Norwegian Mother and Child Cohort Study (MoBa). Data from the Medical Birth Registry of Norway and questionnaires both pre- and post- partum. Postpartum. Symptoms of anxiety and depression at six months postpartum were predicted in a linear regression analysis by WHO-categories of breastfeeding, symptoms of anxiety and depression prepartum".	"The results showed that prepartum levels of anxiety and depression were related to breastfeeding cessation (*β* 0.24; *95% CI* 0.21-0.28), and breastfeeding cessation was predictive of an increase in postpartum anxiety and depression (*β* 0.11; *95%CI* 0.09-0.14). Second, prepartum anxiety and depression interacted with the relation between breastfeeding cessation and postpartum anxiety and depression (β 0.04; *95% CI* 0.01-0.06). The associations could not be accounted for by the adjusting variables".
Cato, K., Sylvén, S. M., Lindbäck, J., Skalkidou, A., & Rubertsson, C. (2017). Risk factors for exclusive breastfeeding lasting less than two months-Identifying women in need of targeted breastfeeding support. *PloS one*, *12*(6), e0179402. doi: 10.1371/journal.pone.0179402	"The aim of this study was to investigate factors associated with exclusive breastfeeding lasting less than two months postpartum".	"A population-based longitudinal study Was conducted at Uppsala University Hospital, Sweden. Six hundred and seventy-nine women were included in this sub-study. Questionnaires were sent at five days, six weeks and six months postpartum, including questions on breastfeeding initiation and duration as well as	"Seventy-seven percent of the Women reported exclusive breastfeeding at two months postpartum. The following variables in the multivariate regression analysis were independently associated with exclusive breastfeeding lasting less than two months postpartum: being a first time mother (AOR 2.15, 95% CI 1.32–3.49),

		several other background variables".	reporting emotional distress during pregnancy (AOR 2.21, 95% CI 1.35–3.62) and giving birth by caesarean section (AOR 2.63, 95% CI 1.34–5.17)".
Thorisdottir, A. V., Gunnarsdottir, I., & Thorsdottir, I. (2013). Revised infant dietary recommendations: the impact of maternal education and other parental factors on adherence rates in Iceland. *Acta Paediatrica*, *102*(2), 143–148.	"The aim of this study was to explore whether maternal education and other parental factors affected whether mothers followed the revised infant recommendations from the Icelandic Nutrition Council provided to them in a form of a booklet during postnatal care".	"Mothers of randomly selected healthy infants (n = 200) completed questionnaires on body mass index (BMI), age, education (basic, medium and higher), household income, smoking and parental factors. Dietary data were collected during home visits by a researcher (0–4 months) and through monthly food records completed by parents or caregivers (5–12 months)".	"Each maternal education level increased breastfeeding duration by 0.72 months (95% CI = 0.04, 1.39) and reduced cow's milk consumption by 36.7 mL/day (95% CI = −70.11, −3.03), when adjusted for maternal BMI, age, smoking and family income. Maternal education was not associated with duration of exclusive breastfeeding. Duration of exclusive and total breastfeeding was inversely associated with maternal BMI, B = −0.10 (95% CI = −0.16, −0.05) and −0.13 (95% CI = −0.23, −0.03), respectively".
Kronborg, H., Vaeth, M., & Rasmussen, K. M. (2013). Obesity and early cessation of breastfeeding in Denmark. *The European Journal of Public Health*, *23*(2), 316–322.	"The aim was to investigate to what extent socio-demographic and psychosocial characteristics, parity and prenatal conditions could explain the association between high BMI and early cessation of breastfeeding".	"The data that was used was from a randomized trial of 1597 Danish mothers of singleton infants cluster-randomized, community-based trial designed to compare a group of women in western Denmark".	"Investigated whether the proposed symptom increase after breastfeeding cessation was disproportionately high for those women already suffering from high levels of anxiety and depression during pregnancy".
Ekström, A., Guttke, K., Lenz, M., Hertfelt Wahn, E., (2011). Long term effects of professional breastfeeding support - An intervention, *International Journal of Nursing and Midwifery, 3(8), 109-117.* Available online: https://academicjournals.org/journal/IJNM/article-full-text-pdf/38B9A57966	"This study aims to evaluate the effects of a professional support during pregnancy in relation to mothers' perceived support at delivery and maternity ward, and on the number of breastfeeding sessions during the first three days after birth".	This study was conducted in southwest Sweden. Mothers were randomly assigned to an intervention group and two control groups. The intervention group consisted of midwifes and child health nurses trained in process-oriented breastfeeding program consisting of "evidence-based lectures with collegial discussions on professional stance, reflective processes, problem solving processes, and practical skills in relation to the provision of support	"Mothers in the Intervention group (IG) and Control group B (CGB) (November 2000 to April 2002) perceived significant better overall support, breastfeeding information and preparation for parenting from the professionals in the delivery and maternity wards compared with the Control group A (CGA) (April to October 2000), ($p<0.001$), (n = 540). The IG showed a higher frequency of breastfeeding sessions in the first 24 h compared

		during childbirth and breastfeeding".	with the mothers in the CGB (p<0.008) and a positive correlation between preparation for the parental role and duration of exclusive breastfeeding (p = 0.006)".
Hannula, L. S., Kaunonen, M. E., & Puukka, P. J. (2014). A study to promote breast feeding in the Helsinki Metropolitan area in Finland. *Midwifery*, *30*(6), 696–704.	"The aim of this study was to assess the impact of providing intensified support for breast feeding during the perinatal period".	The study was conducted in Finland and the design was "a quasi-experimental design with non-equivalent control group". The participants were "a convenience sample of 705 mothers (431 in the intervention group, 274 in the control group)". "in this study, families in the intervention group had access to intensified breast feeding support from mid pregnancy, whereas those in the control group had access to normal care. Intensified support included lectures and workshops to health professionals, and families in the intervention group had access to more intensive support and counselling for breast feeding and a breast-feeding outpatient clinic"	The results showed that "In the intervention group (n¼431), 76% of the women breast fed exclusively throughout the hospital stay, compared to 66% of the mothers in the control group (n¼274). In multivariate analysis, the likelihood of exclusive breast feeding at the time of responding (at hospital discharge or after that at home) was increased by the mother not being treated for an underlying illness or medical problem during pregnancy, being in the intervention group, having normal vaginal childbirth, high breast feeding confidence, positive attitude towards breast feeding, good coping with breast feeding, and 24-hour presence of the infant's father in the ward".
Jonsdottir, O. H., Fewtrell, M. S., Gunnlaugsson, G., Kleinman, R. E., Patricia L. Hibberd, P. L., Jonsdottir, J. M., Eiriksdottir, I., Rognvaldsdottir, A. M., and Inga Thorsdottir, I. (2014). Initiation of Complementary Feeding and Duration of Total Breastfeeding: Unlimited Access to Lactation Consultants Versus Routine Care at the Well-Baby Clinics, *Breastfeeding Medicine*, 9(4), 196-202, https://doi.org/10.1089/bfm.2013.0094	"The aim of the present study was to assess the effect of unlimited access to lactation consultants on complementary feeding from 5 to 6 months for infants receiving complementary foods from 4 months of age in addition to breastmilk and their effect on total breastfeeding duration".	"One of the two studies was a randomized controlled trial where participating mothers received counselling from an International Board-Certified Lactation Consultant and had unlimited access to the lactation consultants. The other study was a national prospective cohort study where mothers and infants received routine care at the well-baby clinics at the primary health care centres. The sample of mother–infant pairs who had unlimited access to lactation consultants was recruited in seven healthcare centres in	"Higher proportion of infants of mothers with unlimited access to lactation consultants were fed vegetable and vegetable purées (*p*=0.05) and more than one food type (*p*=0.05) at 5 months. Furthermore, a lower percentage of them had three meals per day at 6 months (*p*=0.001) compared with those receiving routine care at the well-baby clinics. Infants exclusively breastfed for 6 months all had similar duration of total breastfeeding".

		Iceland between November 2007 and November 2009 into a randomized controlled trial".	
Ekström, A., Kylberg, E., & Nissen, E. (2012). A process-oriented breastfeeding training program for healthcare professionals to promote breastfeeding: an intervention study. *Breastfeeding Medicine*, *7*(2), 85–92.	"The aim of this study was to evaluate the effects of process-oriented training in supportive breastfeeding counselling for midwives and postnatal nurses on the time lapse between the initial breastfeeding session, introduction of breastmilk substitutes and solids, and the duration of breastfeeding".	"Ten municipalities in Sweden were randomized to either the intervention or control groups. The intervention included a process-oriented training program for midwives and postnatal nurses in the intervention municipalities. Primiparas (*n*=540) living in either an intervention or control municipality were asked to participate in a longitudinal study to evaluate the care given".	"As a result of the process-oriented training program for midwives and postnatal nurses, the IG mothers had a significantly longer duration of exclusive breastfeeding, even if the initial breastfeeding session did not occur within 2 hours after birth". Fewer infants in the IG received breastmilk substitutes (in the first week of life) without medical reasons compared with the control groups".
Grenholm, E. A., Söderström, P., & Lindberg, B. (2016). Providing Breastfeeding Support: Experiences from Child-Health Nurses. *International Journal of Child Health and Nutrition*, *5*(4), 126-134.	The aim of this study was to "describe child-health nurses' experiences of providing breastfeeding support".	This study was conducted in Sweden. "This qualitative study is descriptive with an inductive approach. A purposive sample of eight child-health nurses recruited from district health care centres participated. Data were collected through focus group interviews and analysed with content analysis".	The results show that "Child-health nurses consider it to be important to provide early breastfeeding support and that early hospital discharge following birth can complicate breastfeeding. Furthermore, the introduction of infant formula and tiny tastes given to the baby can be a barrier to breastfeeding. Parents' confidence influenced breastfeeding, and breastfeeding is promoted by confident parents. Trends and cultural differences have an influence on parents' attitudes toward breastfeeding. Child-health nurses stated the importance of having a consensus breastfeeding policy".
Kronborg, H., Maimburg, R. D., & Væth, M. (2012). Antenatal training to improve breast feeding: a randomised trial. *Midwifery*, *28*(6), 784–790.	The aim of this study was to investigate the effect that antenatal training has on breastfeeding self-efficacy, knowledge and on breastfeeding problems.	This study was conducted in Aarhus, Denmark as a randomized controlled study. It included 1196 nulliparous women. &03 were assigned to the intervention group while the rest were in the control group.	"No differences were found between groups according to duration of breast feeding, self-efficacy score, or breast-feeding problems, but after participation in the course in week 36 of gestation women in the

		Measurements were done by collecting self-reported questionnaires from the women.	intervention group reported a higher level of confidence (p=0.05), and 6 weeks after birth they reported to have obtained sufficient knowledge about breast feeding (p=0.02)". "Antenatal training can increase confidence of breast feeding in pregnancy and provide women with sufficient knowledge about breast feeding after birth".
Bäckström, C.A., Wahn, E.I.H. & Ekström, A.C. Two sides of breastfeeding support: experiences of women and midwives. Int Breastfeed J 5, 20 (2010). https://doi.org/10.1186/1746-4358-5-20	"The aim of this study was to investigate women experiences and reflections of receiving breastfeeding support, and midwives' experiences and reflection of giving breastfeeding support"	This study was carried out in Sweden during 2003-2004. "A qualitative method, content analysis, was chosen for the study. The data came from interviews with women as well as interviews with midwives who were experienced in breastfeeding support".	"The women's and midwives' experiences and reflections of receiving and giving breastfeeding support were conceptualized as one main theme: *"Individualized breastfeeding support increases confidence and satisfaction."* This theme contained three categories: "*The unique woman,*" "*The sensitive confirming process*," and *"Consistency of ongoing support."* In order to feel confident in their new motherhood role, the women wanted more confirmation as unique individuals and as breastfeeding women; they wanted to be listened to; and they wanted more time, understanding, and follow-up from health professionals. In contrast, the midwives described themselves as encouraging and confirming of the women's needs".