

THE REALIZATION OF BABY-FRIENDLY HOSPITAL INITIATIVE (BFHI) STEP 4 IN FINLAND – EARLY INITIAL BREASTFEEDING AND SKIN-TO-SKIN CONTACT ACCORDING TO MOTHERS AND MIDWIVES

Mervi Hakala

MNSc, PhD student, Staff nurse (acting), midwife

Northern Ostrobothnia Hospital District

Oulaskangas Hospital, Finland

mervi.hakala@student oulu.fi

Pirjo Kaakinen

PhD, Assistant Professor (acting)

Research Unit of Nursing Science and Health Management, University of Oulu, Finland

Medical Research Center (MRC) Oulu, Finland

pirjo.kaakinen@oulu.fi

Maria Kääriäinen

PhD, Professor (acting), consultant

Research Unit of Nursing Science and Health Management, University of Oulu and Northern Ostrobothnia Hospital District Medical Research Center, Oulu, Finland.

maria.kaariainen@oulu.fi

Risto Bloigu

MSc

Medical Informatics and Statistics Research Group,

University of Oulu, Oulu, Finland

risto.bloigu@oulu.fi

Leena Hannula

PhD, senior lecturer, midwife

Metropolia University of Applied Sciences, Finland

leena.hannula@metropolia.fi

Satu Elo

PhD, adjunct professor, senior university lecturer, consultant

Research Unit of Nursing Science and Health Management,

University of Oulu and Oulu University Hospital, Finland,

Medical Research Center (MRC) Oulu, Finland

satu.elo@oulu.fi

Contributions

(1) the conception and design of the study: MH, SE; analysis and interpretation of data: MH, RB (2) drafting the article: MH, SE, and revising it critically for important intellectual content: MH, SE, MK, PK, LH (3) final approval of the version to be submitted: MH, SE, MK, PK, RB, LH

The realization of BFHI Step 4 in Finland – initial breastfeeding and skin-to-skin contact according to mothers and midwives

Background: Breastfeeding and skin-to-skin contact are the best start for infant life. Breastfeeding ensures the best trajectory for development and growth while preventing many diseases later in life. It is recommended that initial breastfeeding occur during the first hour and that generally exclusive breastfeeding is adopted during the first six months.

Objective: The aim of this study is to describe how initial breastfeeding and skin-to-skin contact (Step 4 of the BFHI) is implemented in Finnish maternity hospitals as well as to explain the factors connected to it. The information can be used to develop maternity care during the immediate postpartum period.

Design: Cross-sectional study

Methods: The data were collected from mothers who had given birth as well as their midwives via questionnaire during the spring of 2014 during one week at eight maternity hospitals in Finland. The response rate was 59% for the new mothers (n=111), while it was 57% for the midwives (n=272). The data were analysed statistically and the open-ended questions in the questionnaire using content specifications.

Findings: Based on the results, initial breastfeeding succeeded well after vaginal birth. Initial breastfeeding began, on average, at 41 minutes of age and lasted for 51 minutes. Of mothers, 87% regarded it a very positive experience. Initial breastfeeding was delayed mainly because of caesarean section and for reasons related to an infant's condition. Many background factors such as midwives' age, mothers' parity and the mode of childbirth were statistically significant in respect to the success of initial breastfeeding.

Conclusions: More attention should be placed on the initial breastfeeding of infants born by caesarean section and primiparous mothers.

Keywords: initial breastfeeding, BFHI, step 4, infant, quantitative research/questionnaires

INTRODUCTION

The Baby-Friendly Hospital Initiative (BFHI) is meant to protect, promote and support breastfeeding in all places providing care to pregnant women, women giving birth, birth mothers and breastfeeding infants. Due to an alarming decrease in breastfeeding, the World Health Organization (WHO) and The United Nations International Children's Emergency Fund (UNICEF) launched the global BFHI programme in 1991. The programme aims to ensure that every infant receives the best start for breastfeeding. The programme includes a practical guide called the 'Ten Steps to Successful Breastfeeding' for maternity wards (Table 1). WHO recommends starting breastfeeding within the first hour after childbirth (WHO, 2009). Nowadays mothers and newborns stay at a maternity hospital a minimum six hours up to five days after birth. Although it is a short time, it is a crucial period for the success of breastfeeding. The time spent in the hospital provides mothers with the support they will need for breastfeeding at home. In particular, the steps provided in the BFHI guide during the first days contributes immensely to the success of exclusive breastfeeding at home (Hannula et al., 2008a; Perrine et al., 2012).

Baby-friendly hospitals have a baby-friendly hospital certificate and they provide clear instructions to midwives regarding how to support breastfeeding (Wedding et al., 2011). These instructions support early initial breastfeeding, skin-to-skin contact, counselling on good breastfeeding positions, checking infants' latch-on position, day-and-night rooming in and the breastfeeding of infants together with supporting exclusive breastfeeding practices (avoiding unnecessary supplementary foods, pacifiers and bottles use) (WHO, 2009). Nowadays, 1% of infants are exclusive breastfed during the first six months in Finland (National Institute for Health and Welfare THL, 2012), but breastfeeding is increasing throughout the world, now standing at 38% on average around the world (UNICEF, 2015; WHO, 2015). Initial breastfeeding within one hour of birth increases the probability of exclusive breastfeeding at discharge (Beake et al., 2012; Perrine et al., 2012; Tang et al., 2013) and better exclusive breastfeeding later at home (Moore et al., 2012; Koskinen et al., 2014). Since breastfeeding is important for a newborn baby, there is a need to understand the current situation of initial breastfeeding in Finland better.

BACKGROUND

Initial breastfeeding is healthy for infants, because the colostrum includes many various kinds of protective ingredients against infections and has a positive influence on the immune systems of infants (Walker, 2010; Kirkwood et al., 2013; WHO, 2015). Colostrum is natural, safe, and the best source of nutrition for infants, and they can digest it easily. It is rich in proteins, vitamins and minerals, which infants can assimilate quite well. Colostrum is very nutritious, and only a small amount is enough to feed an infant (THL, 2009; Deufel and Montonen, 2010). Initial breastfeeding is also important for later exclusive breastfeeding (Haxton et al., 2012; Moore et al., 2012; Perrine et al., 2012; Tang et al., 2013) and the self-efficacy of mothers at home (Koskinen et al., 2014). Early sucking during the first hour of life in developing countries prevents mortality (Chomba et al., 2008; Sloan et al., 2008; Kirkwood et al., 2013; Neovita Study Group, 2016) and the morbidity of infants (Horta et al., 2007; American Academy of Pediatrics, 2012; WHO, 2015;). Skin-to-skin contact and early initial breastfeeding increase the frequency of breastfeeding (Quasem et al., 2003), balance the blood sugar levels of infants and also prevent hypoglycaemia (Romano, 2007; Walters et al., 2007; Moore et al., 2012). It has a positive effect on exclusive breastfeeding at discharge (Marín Gabriel et al., 2010; Haxton et al., 2012) and the prevalence of exclusive breastfeeding between the age of one and four months (Moore et al., 2012). Initial breastfeeding encourages positive interaction between mother and infant (WHO, 2009; Burns et al., 2012; Edwards et al., 2015).

Although the advantages of initial breastfeeding are appreciated throughout the world, there are still cultural differences. In some Asian cultures, they do not believe that colostrum is healthy for infants and recommend beginning breastfeeding after three days (Ith et al., 2012; Tang et al., 2013). In Europe, however, breastfeeding is initiated sooner (García-de-León-González et al., 2011; Hannula et al., 2014), as it is in the United States (Pérez-Escamilla, 2007; Levitt et al., 2011; Isoyama Venancio et al., 2012). Initial breastfeeding has been studied at the global level because of the numerous positive effects on later exclusive breastfeeding at home (Marín Gabriel et al., 2010; Haxton et al., 2012) and the health of both infants (Walters et al., 2007;

Moore et al., 2012; Debes et al., 2013) and mothers (Burns et al., 2012; Moore, 2013; Saxton et al., 2015).

Step 4 of the BFHI's ten-step programme was created to 'help mothers initiate breastfeeding within a half-hour of birth'. This step also includes skin-to-skin contact and it is recommended to begin as soon as possible within the first few minutes after birth. The skin-to-skin contact should continue for at least one hour after birth (WHO, 2009). A longer period of skin-to-skin contact is suggested, if the infant has not suckled within the first hour after birth (WHO, 2009). Skin-to-skin contact (Brodribb et al., 2013; Ruxer et al., 2013; Chiou et al., 2014; Tootelian et al., 2014) is important for later exclusive breastfeeding.

Skin-to-skin contact helps infants begin initial breastfeeding more quickly and easily (Bystrova et al., 2009; Widström et al., 2011; Moore et al., 2012) after both vaginal birth (Aghdas et al., 2014; Brennan and Callaway, 2014; Redshaw et al., 2014) and caesarean section (Brady et al., 2014; Sundin and Mazac, 2014). Skin-to-skin contact has a positive influence on infants' sucking (Bystrova et al., 2007; Moore et al., 2012) and it allows infants to suck at precisely the time they are ready to suck (Walters et al., 2007; Bystrova et al., 2009), and so it should be first therapy to first line management for sucking problems (Vasquez and Berg, 2012). Skin-to-skin contact and initial breastfeeding release the hormone oxytocin, resulting in pleasurable feelings and bonding between the mother and infant (Burns et al., 2012; Moore, 2013; Edwards et al., 2015). They promote the production and flow of breast milk (Koskinen, 2008; Burns et al., 2012). In Finland there is lack of studies on the implementation of initial breastfeeding and skin-to-sin contact, and therefore this topic has been chosen. An earlier study of the actualization of initial breastfeeding (Koskinen et al., 2014) has been conducted in the southern part of Finland.

AIM OF THE STUDY

The aim of this study is to describe initial breastfeeding and skin-to-skin contact (Step 4 of the BFHI) implementation in Finnish maternity hospitals. The information can be used to develop maternity care for mothers during the immediate postpartum period.

The study addresses the following three questions:

1. How is initial breastfeeding implemented by mothers and midwives?
2. What background factors are connected to the realization of initial breastfeeding?
3. How is early skin-to-skin contact connected to the realization of initial breastfeeding?

METHODS

The data was collected using questionnaires, one questionnaire for postpartum mothers and the other for midwives. The mothers filled the questionnaire at the ward before discharge and the midwives filled it after birth. The questionnaires contained a cover letter containing information of the study.

Data collection and study population

The data were collected from eight maternity hospitals in Finland, during one week in spring 2014. These hospitals were chosen using random sampling, so that the study includes two representative hospitals for every type as described by the National Institute for Health and Welfare (under 750 deliveries, 750–1500 deliveries, over 1500 deliveries, university hospital) (THL, 2014). Two of the hospitals were baby-friendly. All mothers who had given birth during this week, as well as their labour room midwives, were asked to participate in this study. Each maternity hospital provided a contact person who shared information orally about the study and distributed the questionnaires to birth rooms. After the mother had made the decision to take part in the study in the birth room, the midwife filled her questionnaire and distributed the questionnaire for mother. The mother filled the questionnaire later at the postnatal ward.

The number of mothers who gave birth in a labour room during the data collection period was 509, but the final sample consisted of 279 births. 111 postpartum mothers filled the questionnaire, and the response rate was 59%. 272 midwives returned their questionnaires, with

a response rate of 57%. One hospital district did not give its permission for their new mothers to be included in the study, but gave permission to the midwives to be included.

Questionnaires

The questionnaire for new mothers included 31 questions. There were seven background questions (Table 2 and 3; Figure 1). The breastfeeding questions dealt with initial breastfeeding (6 questions), including the experiences of the new mothers, their success and start time in breastfeeding, whether they received counselling for breastfeeding, the content of such counselling and the possibility of engaging in initial breastfeeding without interruption. Other items or questions covered skin-to-skin contact (2 questions), rooming in (3 questions) and exclusive breastfeeding (15 questions). The other outcomes about skin-to-skin contact, rooming in and exclusive breastfeeding were reported elsewhere. The questionnaire for midwives included 22 questions. There were nine background questions (Table 2 and 3). The other questions had to do with initial breastfeeding (6 questions), including starting time, duration, success of initial breastfeeding, the need for counselling and sucking of infants without interruption, and skin-to-skin contact (7 questions). The responses of both mothers and midwives were measured using a 3–7 point Likert scale, dichotomous (yes/no) and open-ended questions.

Both questionnaires were developed for this study with the help of the Federation of Finnish Midwives expert panel, other midwives and experts of instrument and they were based on earlier studies of BFHI. The questionnaires included 18 questions from Hannula's instruments (Hannula, 2003; Hannula et al., 2008b). The content validity of the instrument was evaluated by three different expert panels: midwives (n=6), committee members from the Federation of Finnish Midwives who are also midwives (n=7) and experts in developing the instrument to fit the requirements of nursing science (n=3). A few changes were made to the questionnaires after the evaluation, such as adding a 'no experience' alternative to the question: What kind of experience was skin-to-skin contact/initial breastfeeding? After the expert evaluation, a pilot questionnaire was used in three maternity wards, and based on the results, no changes were made to the questionnaire for midwives. For mothers, the pilot questionnaire helped to clarify

four questions. After the pretest, instructions to filling the questionnaires were added and questions which caused misunderstanding were modified. The questionnaires were formulated in both Finnish and Swedish.

Analysis of data

The data were analysed using SPSS Statistic for Windows version 22.0 (IBM 2013). The background information was examined using descriptive statistics (frequencies, percentages) and the differences between background variables and main variables were studied using the Chi-Square test, the Fisher-test and the Kruskal-Wallis-test. The results presented are statistically significant ($p < 0.05$) (Polit and Beck, 2012). Open-ended questions were analysed using content specifications (Elo and Kyngäs, 2008; Kyngäs et al., 2011).

Ethicality of study and reliability

Permission was requested from all the hospitals that participated in the study. Approval was sought from the Regional Ethics Committee of the Northern Ostrobothnia Hospital District and Turku Clinical Research Center, and both unambiguously reported that the study does not require the approval of the Research Ethics Committees based on the Medical Research Act (1999/488). It is sufficient to receive permission from each participating hospital (Ministry of Social Affairs and Health 1999). Participation in the study was voluntary. Midwives were informed about the study by a contact person both orally and via a cover letter. Mothers were informed about the study by midwives both orally and via a cover letter. Both midwives and mothers gave their knowledge-based oral consent on the basis of the information provided. Questionnaires were anonymous and names weren't recorded. (Polit and Beck, 2012). Good scientific practice was followed when implementing the study by using an adequate number of references and adopting appropriate methods for collecting and handling the data with respect to the representative sample. Good and careful scientific practice also helped to ensure the reliability and credibility of the study (Polit and Beck, 2012; TENK, 2012).

Data was collected from hospitals in both northern and southern Finland and these hospitals are representative of the entire country. Hence, the results give a good picture of how initial breastfeeding and skin-to skin contact is implemented in Finnish maternity hospitals. However, the ability to make generalisations based on the study suffers from the fact that one hospital district, and by implication two hospitals in regard to the mothers' questionnaire, chose not to participate in the study. The response rate was good and the sample size was large, thus for the most part the study is reliable and supports the external validity of the findings (Polit and Beck, 2012).

FINDINGS

Characteristics

The mean age of the mothers (n=111) was 29.7 years (range 19–46) and the average length of pregnancy was 39 weeks. The mean birthweight of infants was 3560 grams, and the Apgar scores were one minute/9, five minutes/9 and 15 minutes/10 (Table 3). Two of the eight hospitals had a baby-friendly hospital certificate. There were no differences between the baby-friendly hospitals and the hospitals without the certification in the findings. One set of twins is included in the data. The mean age of the midwives was 41.8 years (range 23–63), and they had on average 13.7 years of work experience (range 0–37) (Table 2).

The midwives (96%, n=253) had received 20 hours of breastfeeding counselling training based on WHO recommendations. The obstetrics characteristics of new mothers included age, parity, manner of childbirth, infant's birthweight (Table 2), whether the hospital had a baby-friendly hospital initiative certificate and the type of maternity hospital, as well as whether or not the mother received any pain relief medication during the birth (Figure 1).

Success of initial breastfeeding

New mothers (55%; n=60) estimated that they had succeeded in initial breastfeeding very well. There were statistically significant differences in initial breastfeeding between primiparous mothers and multiparas. Primiparous mothers were less successful in initial breastfeeding than multiparas ($p=0.031$) (Table 4).

The midwives estimated that 75% (n=190) of all new mothers were successful in initial breastfeeding. There were statistically significant differences ($p<0.000$) between initial breastfeeding among the primiparous women (60%) and multiparous mothers (87%). According to the midwives, infants born by vaginal birth (78%) and by caesarean section (50%) have statistically significant differences in initial breastfeeding ($p<0.000$). Midwives reported that initial breastfeeding of vaginal birth infants was more successful than caesarean section infants.

There was a statistically significant difference in initial breastfeeding success between the gestational age of infants ($p<0.001$) and the Apgar scores (5 minutes/ $p=0.023$ and 15 minutes/ $p<0.001$). Infants (30%; n=10) who were born at 36 weeks or less were less successful in initial breastfeeding than infants (84%; n=116), who were born at 39–40 gestational weeks. The better the Apgar score was, the better the initial breastfeeding succeeded (Table 4).

Starting age of initial breastfeeding

Mothers estimated that 80% (n=108) of infants began initial breastfeeding within the time frame of one hour or less. There was a statistically significant difference between suckling time and mode of childbirth ($p=0.006$). Vaginal birth infants began to suck during the first hour (94%, n=81) much more commonly than infants who were born by caesarean section (6%, n=5). There was a statistically significant difference between the starting of initial breastfeeding and mothers' medication use during birth ($p=0.018$). Infants whose mothers (31%, n=34) had received epidural analgesia started to suck later than infants whose mothers did not receive it. The other pain reliefs (Figure 1) were not connected to the starting age of initial breastfeeding (Table 4).

The mean starting age at the time of initial breastfeeding was 41 minutes after birth, as estimated by the midwives (n=237). Initial breastfeeding began by 60 minutes in 85% of infants (n=200). Initial breastfeeding started earlier among multiparous mother than primiparous mothers ($p<0.000$). There were statistically significant differences between the starting time of initial breastfeeding and the midwives' age. Among those who were aged 51–60 years (82%), initial breastfeeding began 40 minutes earlier than in the younger (21–30 years, 44%) group of midwives. There was a statistical significant difference between suckling time and mode of birth ($p<0.000$). The vaginal birth infants (89%; n=189) begun to suck earlier than the infants who were born by caesarean section (45%; n=10) (Table 4).

Duration of initial breastfeeding, unremittingness and reasons for interruption

The mean duration of initial breastfeeding, as estimated by the midwives (n=226), was 51 minutes. In 24% (n=54) of cases, the breastfeeding took less than half hour, whereas in 78% (n=176) of cases it took less than one hour. There was a statistically significant difference between the duration of the initial breastfeeding and parity ($p=0.008$). For primiparous mothers (21%, n=20) the duration of initial breastfeeding was less than 20 minutes and with multiparous mothers (70%; n=92) it took more than 40 minutes.

Midwives responded that breastfeeding was done without interruption in 77% (n=183) of cases and the mothers (n=106) responded that breastfeeding was done without interruption in 94% (n=100) of cases. The reasons for the initial breastfeeding being interrupted included the mothers' own needs (n=18, 30%) (e.g. going to the toilet, showering, eating), various routines (n=15, 27%), the condition of the infant (n=8, 14%), the business of the ward (n=7, 13%) and the mother's condition or need for treatment (n=7, 13%).

Initial breastfeeding was done without interruption mostly during the morning shift (n=73, 86%), and less during a double shift (n=11, 36%) ($p=0.003$). There were statistically significant

differences in the interruption of sucking between age of the midwives ($p=0.034$) and pregnancy week ($p=0.001$). The midwives who were aged 51-60 years ($n=60$, 88%) interrupted infants sucking less than the younger midwives. Infants born during 39–40 weeks of pregnancy ($n=131$, 83%) were able to suck more often without interruptions than those born after 36 weeks or less of pregnancy ($n=10$, 30%). There were also statistically significant differences between the interruption of initial breastfeeding and Apgar scores ($p=0.001$). Infants who have better Apgar scores were interrupted less by midwives than those who had low Apgar scores (Table 4, 5).

Need for counselling during initial breastfeeding and adequacy of it

The majority of mothers ($n=102$, 88%) felt that the implementation of counselling for initial breastfeeding was sufficient. Most of mothers (78%) respond that they would need counselling for initial breastfeeding. There were also statistically significant differences between counselling of initial breastfeeding and medication ($p=0.030$). The mothers whose pain was relieved using Entonox reported to have received inadequate counselling of initial breastfeeding more often than mothers who had not received Entonox (Table 4).

Half of mothers (46%; $n=114$) needed counselling of initial breastfeeding according to midwives. There were statistically significant differences between primiparous and multiparous mothers ($p<0.000$) and the mode of childbirth ($p=0.001$) for counselling of initial breastfeeding. Primiparous mothers ($n=80$) needed counselling of initial breastfeeding more than multiparous mothers (24%, $n=34$). The mothers whose infants were born by assisted vaginal childbirth needed more counselling of initial breastfeeding ($n=26$, 73%) than the mothers whose infants were born by normal vaginal birth ($n=195$, 41%) (Table 4).

Mothers' experiences with initial breastfeeding

Sixty-nine per cent of mothers ($n=77$) experienced initial breastfeeding as being really positive. There were statistically significant differences between infants' birthweights and mothers'

experiences of initial breastfeeding ($p=0.001$). Of mothers whose infant's birthweight was between 3600 and 4099 grams 82% ($n=32$) had a positive experience with initial breastfeeding compared to mothers whose infant's birthweight was between 1890 and 2599 grams. There were also statistically significant differences between mothers' pain relief and experience of initial breastfeeding. Mothers had more positive experiences with initial breastfeeding when they had not received any natural pain relief (as bath, massage, zone therapy etc.) ($p=0.009$) or intramuscular painkillers ($p=0.018$) (Table 4).

Skin-to-skin contact and initial breastfeeding

There were statistically significant difference between the starting time of skin-to-skin contact and initial breastfeeding ($p=0.001$). Sixty-two per cent of infants who started skin-to-skin contact within the first five minutes started to suck in less than 40 minutes. When skin-to-skin contact started after 21 minutes, the initial breastfeeding was delayed by 51 minutes in 75% of all infants (Table 6).

DISCUSSION

Discussion of results

In Finnish maternity hospitals much work has been done to increase early initial breastfeeding and skin-to-skin contact in the last years. There has been education directed at midwives about BFHI around Finland, and many hospitals try to get the BFHI certificate. The responders represent Finnish national statistics (THL, 2015) well in regard to the mothers' backgrounds with respect to their mean age (mean 30.5 years in 2014), need for pain relief (92% needed pain relief in 2014) and mode of childbirth (16.1% opted for a caesarean section in 2014) adding to the generalizability of the study (Polit and Beck, 2012). In this study those mothers' backgrounds were congruent.

This study concludes that infants do well with initial breastfeeding in Finland as has been shown earlier (Hannula et al., 2014). Some of the infants did not suck well at first, but they at least successfully latched onto the breast and tried to suck. In this study there were differences between mothers' and midwives' responses about infants' sucking. Perhaps mothers experience that their newborns do not suck well even if they do if the mothers have required instruction in initial breastfeeding. According to this study, initial breastfeeding succeeds well within one hour after a normal vaginal birth, while there were some problems after a caesarean section. This finding was based on the information provided by midwives, which was slightly more positive than the information provided by mothers. The hospitals without a BFHI certificate were in all findings similar to BFHI hospitals, which is a little bit surprising. But it is really good that nationwide midwives have attached weight to working by the "Ten steps" even without certificate from the smallest to the largest hospital. This shows that the training program of midwives is up to date in Finland.

Mostly initial breastfeeding started within one hour after a normal vaginal birth which is in line with WHO recommendations. The results regarding the success of initial breastfeeding were slightly better than the results from a previous study done in Finland (Koskinen et al., 2014). Initial breastfeeding has been implemented in a BFHI hospital in Australia (Brodribb et al., 2013) and in the US (Ma and Magnus, 2012) really well, where the rate of success for initial breastfeeding within one hour was greater than 90%. However, opposite results of the success rate of initial breastfeeding have also been reported in Australia (McLachlan and Forster, 2006). The findings of the success of initial breastfeeding suggest that when birth gets complicated we can also predict delay in the initial breastfeeding. This would need to be studied further to find out how to help mothers after assisted vaginal birth and caesarean section to initiate breastfeeding.

Initial breastfeeding started on average at 41 minutes of age in this study. This is the normal time for infants to suck (Koskinen, 2008; Deufel and Montonen, 2010). The same result has also been reported in other studies (Moore et al., 2007; Aghdas et al., 2014). In this study, midwives between 51 and 60 years of age had better success in helping mothers with initial breastfeeding shortly after the time of birth than did younger midwives. The study shows the importance and benefit of work experience which other studies show as well (Chung et al.,

2015, Chang et al., 2016). Experienced midwives completed the physical demands of the job in a shorter amount of time. This might also indicate that older midwives can provide more support or create a more relaxed atmosphere for breastfeeding.

Naturally, initial breastfeeding succeeded better and occurred sooner after a normal vaginal birth because the mother and infant are capable of bonding immediately in the birth room and usually share skin-to-skin contact, which support the infant's instinctive behaviours and the sucking reflex and makes it possible for them to begin sucking at once (Aghdas et al., 2014). Initial breastfeeding after a caesarean section is more complicated. Other studies have also highlighted this particular problem (Zanardo et al., 2010). The mother remains in the recovery room for so long that often the opportunity for the first rooting and sucking behaviour is missed if the infant is not brought to the recovery room. We have to try to improve hospital routines, cooperation and educate staff who work in the recovery room on how to best ensure that infants have ample opportunity for initial breastfeeding and skin-to-skin contact there as well. Many studies support benefits of early skin-to-skin contact and initial breastfeeding after caesarean section and possibilities to change routines using good co-operation and adding the knowledge (Brady et al. 2014, Beake et al. 2016, Stevens et al. 2016). So often the prematurity of infants and low Apgar scores tell us of an emergency with an infant which requires the staff to guarantee the infant's safety first and hence delay initial breastfeeding.

The duration of initial breastfeeding was, on average, 51 minutes. According to the results, multiparous mothers breastfed longer than primiparous mothers. Interruptions of initial breastfeeding occurred with 23% of births. Uninterrupted skin-to-skin contact would help infants' instinctive behaviour (WHO, 2009; Moore et al., 2012; Brimdyr et al., 2015). It is alarming that often interruptions occurred because the ward was overly busy or due to a break for care routines. Again, midwives who were between 51 and 60 years of age had greater success in getting infants to suck without interruption. Also, the work shift also impacted infants' ability to relax and feed. The morning shifts often have more staff, and so nurses can devote more time to helping mothers. More effort is needed to limit interruptions. Most mothers found the experience of initial breastfeeding to be really positive, but half of primiparous mothers had a less positive experience. Infant birthweight was crucial with respect to the mother's experience. Infants at a normal weight were more successful at initial breastfeeding

and a low birthweight resulted in problems with the breastfeeding experience (Hasselberg et al. 2016, Tully et al. 2017). The use of mild pain relief medications during labour also didn't enhance better experience of mothers to the initial breastfeeding. Mothers want to give birth without pain nowadays and they ask the epidural or spinal anesthesia to themselves.

One clear target group for development is primiparous mothers. They did not manage well with initial breastfeeding. In this study, primiparous mothers breastfed within one hour more often than in a previous study done in Finland (Koskinen et al., 2014), which is a change in the right direction. Their initial breastfeeding started later than for other mothers, which supports the findings of another study (Hackman et al., 2015). Perhaps one reason for this is the fact that often they have more perineal tears (Mietola-Koivisto 2016), and stitching takes time, thus moving infants' sucking time later, if there is no other midwife present in the birth room. Midwives must change their style of care after birth in such situations. It is time to reconsider the correct order in which midwives carry out their duties and first make sure that the infant is placed in skin-to-skin contact before stitching. Another possible reason that primiparous mothers are less successful at breastfeeding shortly after birth has to do with the use of epidurals. They used epidurals more often than other mothers, and the option of using pain relief medication significantly impacted breastfeeding later on. Another study reported the same findings (Brimdyr et al., 2015). Primiparous mothers naturally need the most counselling for breastfeeding. They start to breastfeed for the first time in their life and may need a great deal counselling. Most of them reported positive experiences after receiving such counselling. Other studies also demonstrate the important role played by midwives in providing counselling on breastfeeding (Swerts et al., 2016). In general, the study shows that midwives have to invest more time in helping primiparous mothers. Other studies have also presented similar results regarding the fact that primiparous mothers in general face more challenges with breastfeeding (Hackman et al., 2015; Vieira et al., 2015), but so do mothers after a long labour or mothers who have endured excessive stress during labour (Dimitraki et al., 2016).

The connection between skin-to-skin contact and initial breastfeeding is clear. The earlier skin-to-skin contact begins, the earlier initial breastfeeding will also occur. Skin-to-skin contact and initial breastfeeding together increase later the success of exclusive breastfeeding (Ahluwalia et al., 2012; Aghdas et al., 2014; Hannula et al., 2014; Koskinen et al., 2014) and individually

and in combination can influence mothers' (Koskinen et al., 2014, Saxton et al., 2015) and infants' (Moore et al., 2012, WHO, 2015, Edwards et al., 2015) welfare greatly. According to this study can be recommended that both early skin-to-skin contact and initial breastfeeding, although they are good level generally, need to observe critical in Finnish maternity wards and after improving these things is possible to get better start to later exclusive breastfeeding at hospitalization, discharge and later at home. We can take advantage of other educational programmes that hospitals can participate in to improve their compliance with the first step of the BFHI (Vasquez and Berg, 2012; Martinez-Galiano and Delgado-Rodriguez, 2014).

CONCLUSION

Based on the findings, the following conclusions can be posited regarding the successful implementation of initial breastfeeding in maternity wards and the connection between skin-to-skin contact and initial breastfeeding. The study shows that the sooner skin-to-skin contact starts, the earlier the first breastfeeding begins. Midwives should help infants to attain skin-to-skin contact as soon as possible after birth and help mothers to start breastfeeding at once when an infant wants suck. Hospitals have to also check their resources and routines to ensure that infants have the opportunity to suck in peace. After a caesarean section, hospitals should increase the attention devoted to initial breastfeeding. Attention should paid to the counselling of the importance of breastfeeding, signs of sucking reflex, duration and density of breastfeeding during hospital stay at once after birth in labourroom and later at ward. Interruption of initial breastfeeding occurred often because the ward was busy or there was a break in routines. Midwives have to remember the benefits of skin-to-skin contact to both the mother and the infant and work according to this.

Limitation

This study has focused on only one country with a limited number of participants. This can influence some of the results.

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Table 1 WHO's Ten steps to successful breastfeeding (2009)

TEN STEPS TO SUCCESSFUL BREASTFEEDING

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
 2. Train all health care staff in skills necessary to implement this policy.
 3. Inform all pregnant women about the benefits and management of breastfeeding.
 4. Help mothers initiate breastfeeding within a half-hour of birth.
 5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
 6. Give newborn infants no food or drink other than breastmilk unless medically indicated.
 7. Practice rooming in - allow mothers and infants to remain together - 24 hours a day.
 8. Encourage breastfeeding on demand.
 9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.
-

Figure 1. Mothers pain reliefs (%)

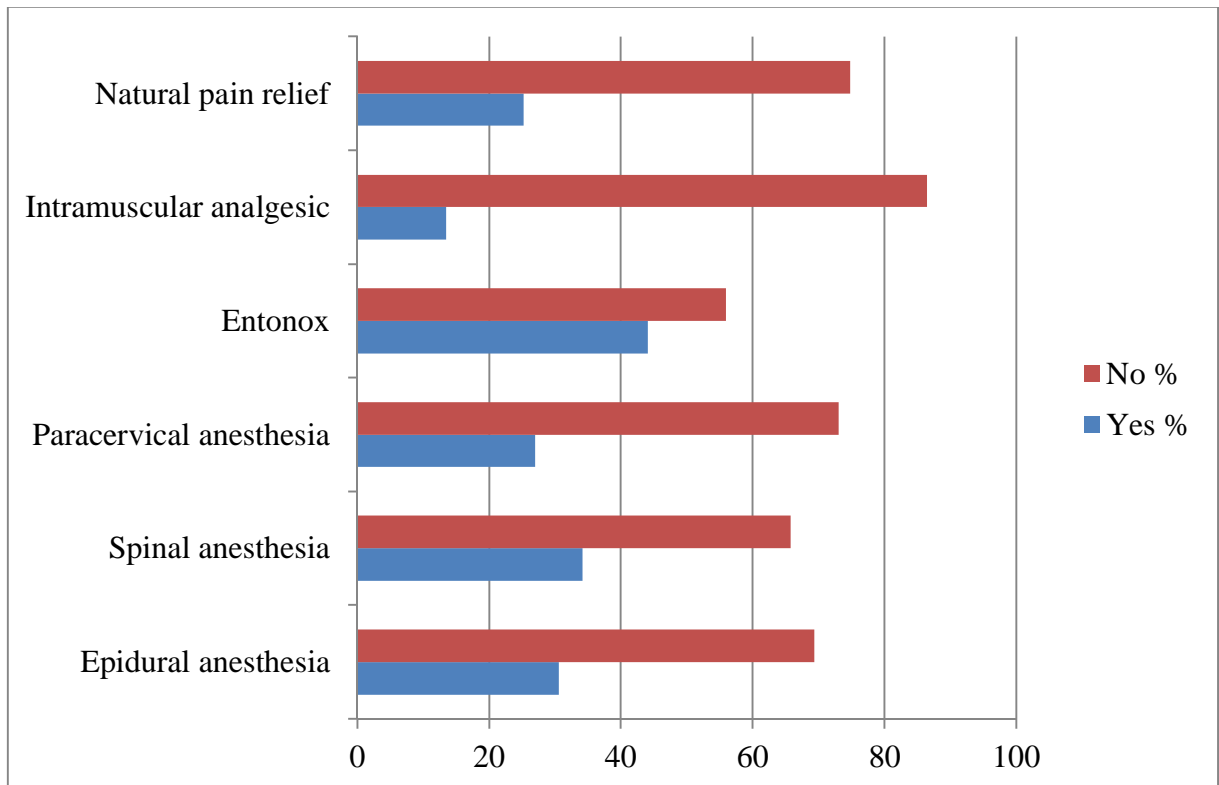


Table 2. Background information on midwives (n=272)

Background	n	%	range
Age			
20–30	55	20	23–63
31–40	77	29	
41–50	62	23	
51–60	65	24	
over 60	12	4	
Years working as midwives			
0–10	132	49	0–37
11–20	69	25	
21–30	56	21	
31–40	15	5	
Shift			
morning	87	32	
evening	77	29	
night	95	35	
double (morning + evening)	12	4	
Midwives with WHO 20h breastfeeding counselling training			
Yes	253	96	
No	10	4	

Table 3. Background information on births and infants (n=272) according to midwives (n=272)

Mothers' parity			
I-parturient	125	46	1–16
II-parturient	96	35.3	
III-parturient	28	10.3	
IV-parturient	12	4.4	
V-parturient or more	11	4	
Mode of childbirth			
normal vaginal	204	75.6	
assisted vaginal	28	10.4	
caesarean section	38	14	
Pregnancy weeks at the time of birth			
36 or less	14	5.2	30–42
37–38	55	20.3	
39–40	143	52.7	
41–42	59	21.8	
Apgar scores at 1 minute of age			
6 or under	10	3.7	2–10
7	15	5.5	
8	26	9.6	
9	184	67.6	
10	37	13.6	
Apgar scores at 5 minutes of age			
6	2	0.7	6–10
7	5	1.8	
8	15	5.5	
9	143	52.6	
10	107	39.4	
Apgar scores at 15 minutes of age			
6	1	0.4	6–10
7	2	0.7	
8	12	4.4	
9	110	40.6	
10	146	53.9	

Table 4. Actualization of Step 4 according to mothers (n=111) (ns=p>0.05)

	Mother's age	Mothers' parity	Mode of childbirth	Infant's weight	Breastfeeding counselling	Pain relief
Success of initial breastfeeding	ns	p=0.031	ns	ns	ns	ns
Starting age of initial breastfeeding	ns	ns	p=0.006	ns	ns	Epidural anesthesia p= 0.018
Interruption of initial breastfeeding	ns	ns	ns	ns	ns	ns
Need for counselling for initial breastfeeding	ns	ns	ns	ns	p=0.001	Entonox p= 0.030
Mothers' experiences of initial breastfeeding	ns	ns	ns	p=0.001	ns	Natural pain relief p=0.009 Intramuscular painkiller p=0.018

Table 5. Actualization of Step 4 according to midwives (n=272) (ns=p>0.05)

	Midwife's ages	Midwife's years of work experience	Midwife's shift	Breastfeeding counselling	Mothers' parity	Mode of childbirth	Apgar scores	Pregnancy weeks	Type of hospital	BFHI certification
Success of initial breastfeeding	ns	ns	ns	ns	p< 0.000	p<0.000	(5min) p=0.023 (15min) p<0.001	p<0.001	ns	ns
Starting age of initial breastfeeding	p=0.003	ns	ns	ns	p<0.000	p<0.000	ns	ns	ns	ns
Duration of initial breastfeeding	ns	ns	ns	ns	p=0.008	ns	ns	ns	ns	ns
Interruption of initial breastfeeding	p=0.034	ns	p=0.003	ns	ns	ns	(15min) p=0.001	p= 0.001	ns	ns
Need for counselling for initial breastfeeding	ns	ns	ns	ns	p<0.001	p=0.001	ns	ns	ns	ns

Table 6. Connection between skin-to-skin contact and initial breastfeeding

		Start time of initial breastfeeding (min)				
		2–30	31–40	41–50	51–240	Total
Start time of skin-to-skin contact (min)	0–2	90	20	16	26	152
		59.2%	13.2%	10.5%	17.1%	100%
	3–5	28	7	4	8	47
		59.6%	14.9%	8.5%	17.0%	100%
	6–10	2	2	1	3	8
		25%	25%	12.5%	37.5%	100%
	11–20	4	0	2	6	12
		33.3%	0%	16.7%	50%	100%
	21–30	0	0	1	3	4
		0%	0%	25%	75%	100%
	31–60	0	1	1	6	8
		0%	12.5%	12.5%	75%	100%
	over 60	0	0	0	2	2
		0%	0%	0%	100%	100%
	Total	124	30	25	54	

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