Support to breastfeeding women

INGRID BLIXT
Abstract

Breastfeeding has important health benefits for mothers and infants in high- and low-income countries. For that reason, the World Health Organization (WHO) recommends exclusive breastfeeding for six months and partial breastfeeding for two years or longer. During pregnancy, a majority of women state that they intend to breastfeed, but they often stop earlier than they want because they face many barriers. Thus, it is important that women get the opportunity to breastfeed as long as they want.

The overall aim of this thesis was to explore women’s perceptions of what assisted them in breastfeeding and their advice to healthcare professionals regarding breastfeeding support. An additional aim was to evaluate a breastfeeding support programme based on the Ten Steps to Successful Breastfeeding and the WHO’s recommendations on breastfeeding.

In Paper I, an exploratory qualitative design was used based on the critical incident technique. The main finding was that supporting women to continue breastfeeding is both complex and multifaceted.

In Paper II, an exploratory qualitative design illuminated that Swedish women advised healthcare professionals to provide up-to-date and evidence-based breastfeeding support in a sensitive and individualised manner to help the mothers to reach their breastfeeding goals.

In Paper III, a breastfeeding training programme was evaluated using a pre-post design. The programme improved midwives’ and child healthcare nurses’ self-efficacy to provide evidence-based support in line with the Ten Steps to Successful Breastfeeding and the WHO’s recommendations on breastfeeding.

Paper IV used an exploratory, longitudinal and qualitative design. Specifically, the study showed that partners who participated in the breastfeeding support programme and received structured support felt that both parents were important. They felt involved and that the family cooperated in the breastfeeding process.

In conclusion, it is crucial to understand families’ perceptions and experiences of breastfeeding when supporting women to breastfeed. Midwives and child healthcare nurses have important roles to play by providing structured breastfeeding support during the breastfeeding process. The whole family must be targeted to decrease the partner’s feelings of being excluded. Both parents must be involved in a reflective dialogue, where healthcare professionals explain how breastfeeding works and how the partner can be involved without bottle-feeding the infant.

Keywords: Breast Feeding, Counselling, Education, Family Support, Health Personnel, Implementation Science, Infant, Interpersonal Relations, Self-Efficacy, Social Support, Parent-Child Relations, Quality of Health Care, Qualitative Research

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To Olivia, Wilma, Albin and Thea,
for everything you have taught me about life
List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.


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Abbreviations

CG        Control group
BSCS      Breastfeeding Support Confidence Scale
HCPs      Healthcare professionals
IG        Intervention group
Ten Steps Ten Steps to Successful Breastfeeding
WHO       World Health Organisation
### Definitions

<table>
<thead>
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<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>Attachment</td>
<td>Attachment is a deep emotional bond that connects the infant to his or her parents. The infant searches for security and support from the parents and uses attachment behaviours, such as rooting, suckling, crying and smiling to promote contact and inform the parents about his or her support needs. When the infant understands who responds to his or her cues, he or she will attach to this person.</td>
</tr>
<tr>
<td>Attitude</td>
<td>An individual’s views on a subject, on a favourable to unfavourable continuum.</td>
</tr>
<tr>
<td>Bonding</td>
<td>The parent’s establishment of a deep relationship with the infant based on warm feelings and a willingness to respond to signals, provide care, closeness, stability and emotional support.</td>
</tr>
<tr>
<td>Child</td>
<td>0–17 years.</td>
</tr>
<tr>
<td>Critical incident</td>
<td>Describes a significant experience followed by a human behaviour that is important for the outcome of the described incident.</td>
</tr>
<tr>
<td>Co-parenting</td>
<td>The ways in which parents or other parental figures collaborate in their parental roles.</td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>The infant receives only breastmilk, with addition of vitamins or medication if needed.</td>
</tr>
<tr>
<td>Infant</td>
<td>From birth to two years of age.</td>
</tr>
<tr>
<td>International Code of Marketing of Breast-milk Substitutes</td>
<td>International code that gives recommendations to regulate the marketing of breastmilk substitutes, feeding bottles and teats.</td>
</tr>
<tr>
<td>Mother</td>
<td>In this thesis, we use mother for the woman who gave birth to the child.</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>An individual’s perceived beliefs in his or her capabilities to succeed in specific situations or accomplish a task.</td>
</tr>
<tr>
<td>Partner</td>
<td>The parent who did not give birth to the child.</td>
</tr>
<tr>
<td>Parental groups</td>
<td>Parents receive, together with other parents, information about childbirth and breastfeeding.</td>
</tr>
<tr>
<td>Peer counsellors</td>
<td>Mothers who have successfully breastfed and have been trained to give breastfeeding information and support to other mothers.</td>
</tr>
<tr>
<td>Tiny tastings</td>
<td>Small portion of solid food (1 mL).</td>
</tr>
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</table>
Introduction

Breastfeeding has both short- and long-term health benefits for both women and infants in low, middle and high-income countries (1). However, globally, fewer than 50% of the women breastfeed according to the World Health Organisation’s (WHO’s) recommendation, which promotes exclusive breastfeeding for six months (1, 2). Fewer women from high-income countries continue to breastfeed exclusively for six months compared to women from low-income countries (1). Many women stop breastfeeding earlier than they want (3) because of the many barriers they face (4, 5). Approximately 113,000 women give birth each year in Sweden (6), and the majority of these women initiate breastfeeding (7), but there has been a significant decline in exclusive breastfeeding over the last decades (7). Breastfeeding women often report that they do not receive the support they need from the healthcare system (8). In light of this, it is important to obtain knowledge about women’s own perceptions of factors that can help them to continue breastfeeding. The creation of a breastfeeding-friendly healthcare system is crucial for women to be able to breastfeed according to their wishes.

Benefits of breastfeeding and recommendations

Breastfeeding is the best choice for human infants (9) because it has important health benefits for infants and mothers in high- and low-income countries (1). Globally, breastfeeding could prevent 823,000 child deaths per year (1). Breastmilk contains antimicrobial, anti-inflammatory, and immunoregulatory agents and living leukocytes, which develop the infant’s immune system (9). We know that breastfed infants have reduced risks of infections (1, 10) and, exclusive breastfeeding for six months protects infants against lower respiratory tract infections, severe diarrhoea and otitis media (10). Breastfeeding also reduces the risk of sudden infant death (1, 10), childhood obesity (1, 10) and childhood leukaemia (1, 10). In later life, breastfeeding protects against Crohn’s disease, ulcerative colitis (10), type 2 diabetes (1, 10), overweight and obesity (11). A small gain in IQ is another advantage (1). However, breastfeeding takes place in a complex system where the mother and the infants are two parts. This system, partly biological, is not fully understood yet.
Exclusively breastfeeding is associated with lactational amenorrhea for women and reduces the risk of abortion (12). Continued breastfeeding protects women against ovarian and endometrial cancer, breast cancer, hypertension and diabetes type 2 (1, 10). A higher breastfeeding incidence could prevent 20,000 deaths from ovarian cancer annually (1). Breastfeeding can also influence women’s well-being by reducing their levels of stress, anxiety and aggression. It may also facilitate the interaction between the mother and the infant by increasing maternal sensitivity and social interaction (13). Not breastfeeding has shown to increase the risk of child neglect (14). Finally, breast milk substitutes are associated with environmental costs as well as financial costs for the family. Breast milk substitutes create waste and require fuel for transports (4).

The WHO and national health authorities, including those in Sweden, Australia and Ireland recommend exclusive breastfeeding until the infant has reached an age of six months (2, 15-17). On the other hand, the National Food Agency in Sweden informs that parents can introduce tiny tastings of solid food from four months of age (17, 18). Breastfeeding provides important energy and nutrients in infants between six months and two years (2), and the WHO and Ireland recommend continued breastfeeding for two years or longer, along with appropriate complementary foods (2, 15). Sweden and Australia recommend partial breastfeeding until at least 12 months of age or as long as the mother and infant want (16, 18).

The WHO changed its recommendation on exclusive breastfeeding from four months to six months in 2001 (19). In Sweden, and in other high-income countries, there has since been a sometimes emotionally coloured debate about the evidence regarding breastfeeding and what advice should be given (20-23). However, Pérez-Escamilla et al. claim that evidence supports the WHO’s recommendation of exclusive breastfeeding to six months (19), but at the same time, they highlight that the recommendation is not optimal for some groups, such as infants born with low iron stores and infants with high risk of developing food allergies (19). The American Academy of Pediatrics promotes exclusive breastfeeding for six months and continued breastfeeding for two years or beyond (10).

**Breastfeeding prevalence**

The breastfeeding prevalence varies between countries included in this thesis (Figure 1). Globally, most women initiate breastfeeding after birth (1). This holds true for 93% of the women in Sweden (7) and 92% in Australia (1). In other countries, fewer women (46–55% in Ireland) start to breastfeed (1, 24). During pregnancy, a majority of women state that they intend to breastfeed (25), but they often stop earlier than they want (3, 25, 26). Globally, rather few women breastfeed exclusively for six months (37%). Fewer women from
high-income countries continue to breastfeed exclusively according to the WHO’s recommendations, compared to women from low-income countries (1). The prevalence of ‘any breastfeeding’ at six months is 55% in Sweden (7) and 56% in Australia (1). In Ireland, limited data are available, but around 26% of women breastfeed for six months (27). Moreover, the prevalence of exclusive breastfeeding varies between countries (Figure 1). Specifically, it ranges from 60% two months after birth in Sweden (7) to 48% in Australia (28). Exclusive breastfeeding for two months after birth has decreased in Sweden, from 80% in 2000 to 60% in 2020. There are also large regional differences in breastfeeding in Sweden (7). Moreover, exclusive breastfeeding for six months is low in many high-income countries. In Sweden, the largest decrease in exclusive breastfeeding is between four and six months after birth. Approximately 10% of women satisfy the WHO’s recommendation to breastfeed exclusively for six months (7). In Australia, fewer than 15% of women follow the WHO’s recommendation (28), and in Ireland, approximately 7% (27). Globally, many women breastfeed until the infant is two years old or longer (1). The prevalence of any breastfeeding has increased in some high-income countries. In Sweden (7) and in Australia (1), one-third of the women are still breastfeeding until the infant is one year of age (Figure 1).

![Figure 1](image-url)  
*Figure 1. Overview of the breastfeeding prevalence in Sweden, Australia and Ireland. Blue=ever breastfeed, light blue=exclusive breastfeeding at 2 months, red=any breastfeeding at 6 months, green=exclusive breastfeeding at 6 months and natural coloured=breastfeeding at 12 months*
History of breastfeeding

Breastfeeding is the evolved human infant feeding norm, and women have breastfed historically and across cultures (29). The biologically expected length of breastfeeding is until the child is around two and a half to seven years old (20).

Between the 18th and beginning of the 20th centuries, many Swedish women breastfed until the child was between two and four years old (30); however, since then, the prevalence and duration of breastfeeding has decreased dramatically. In many high-income countries, formula feeding has become the infant feeding norm, and formula has been associated with modernity and high social status (20, 31). Historically, paediatricians have played a key role in undermining breastfeeding and promoting formula (20). During the 1920s, paediatricians in Sweden started to advise mothers about regulating breastfeeding. They wanted to liberate the female workforce in the emerging modern society, claiming that the infant should not be breastfed more often than every four hours with a longer break during the night. They suggested that infants should also learn to hold back their needs, and the mothers were warned about letting the infant's needs rule and even to be emotionally close to their infants (32). Some paediatricians recommended that the infant should stop breastfeeding at eight to nine months of age (30). The fathers were not included in the advice given; it was the paediatrician who decided on the infant’s eating and sleeping routines. This strict approach to breastfeeding led to the near-ceasing of breastfeeding in the western world (32). In Sweden, only 30% of the infants were exclusively breastfed for two months during the 1970s (33). Breastfeeding started to increase when mothers with higher education became aware of the benefits of breastfeeding. They started a new breastfeeding trend and founded Amningshjälpen (Swedish peer counsellors). The Swedish government also introduced paid parental leave for nine months during the 1970s. Breastfeeding continued to increase further when the International Code of Marketing of Breast-milk Substitutes were adopted in the 1980s and when the Ten Steps to Successful Breastfeeding (Ten Steps) were adopted at the maternity wards in the 1990s (34, 35). In 1998, 81% of the mothers in Sweden breastfed exclusively for two months. The breastfeeding incidence was at its highest during the late 1990s, and has since then decreased again in Sweden (7, 33).

Factors that influence breastfeeding

Influencing factors affecting breastfeeding have been described as structural such as political, economic and market factors, as well as social-cultural factors related to the setting and family related (4, 5, 36, 37).
Political, economic and market factors

Political, economic and market factors can influence if women continue breastfeeding. Breastfeeding is time consuming and takes time away from income-earning activities (37). When women need to return to work within six weeks after birth, an increase of early cessation has been reported (4). The International Labour Organization’s Maternity Protection Convention recommends 18 weeks of paid maternity leave. In addition, it is recommended that women should have breastfeeding breaks and breastfeeding rooms when they return to work (37). In Australia, women have paid maternity leave for 18 weeks and in Ireland 26 weeks (24). In Sweden, parents have a generous paid parental leave for 480 days. Ninety of these days are reserved for each parent (38). Swedish women use most of the parental leave during the first year after birth. Longer parental leave is positively associated with exclusive breastfeeding (36) and breastfeeding duration (39). A factor that might influence breastfeeding negatively is negative attitudes towards breastfeeding from employers (4). Further, women often do most of the unpaid work at home, such as cleaning and cooking, which can increase their stress levels (37) and thus negatively influence decisions to stop breastfeeding. Finally, marketing of breast milk substitutes or complementary foods can influence parents’ attitudes and women’s decisions to stop breastfeeding (4, 37, 40).

Socio-cultural

If women feel comfortable breastfeeding in public, it might influence their choice of continuing to breastfeed. Further, social trends, and partners and other significant family members’ attitudes towards breastfeeding can influence women’s breastfeeding (4). Results from intervention studies to support breastfeeding show that extra support from well-trained healthcare professionals (HCPs) or peers (41), or if the partner is involved (42, 43), can influence breastfeeding positively. In contrast, other studies reported that involvement from the family, including the partner, can have a negative effect on breastfeeding (44-47). Finally, there is a lack of knowledge about how HCPs can help women to breastfeed for longer periods (41), and about the most effective way to involve partners in breastfeeding interventions (42). Implementation research studies are needed to understand the effect of complex breastfeeding interventions (48).

Family

Women in high-income countries with a higher level of education (1, 36, 49), income (1) and age (36, 50) are more likely to continue breastfeeding. They are also more prone to continue breastfeeding if their partner has a higher education (36, 51, 52). Women with stronger intentions to breastfeed and higher
breastfeeding self-efficacy continue to breastfeed more often (43, 53). In contrast, women’s perception of daily stress (54) or anxiety (44) may lead to early cessation of breastfeeding. Women need a calm environment during breastfeeding because stress can negatively influence the milk-ejection reflex (13). Early introduction of formula and cessation of breastfeeding are often associated with woman-infant factors. Such factors are perceived insufficient milk supply, poor infant growth, and difficulties for the infant to latch on the breast (3, 5, 44, 55, 56).

In summary, it is important to support women to continue breastfeeding as long as they want. Today, there is a paucity of knowledge concerning effective interventions to support women in continuing to breastfeed for six months or longer. In addition, qualitative evaluations of intervention studies are necessary (41).

Quality of care
The healthcare services should offer evidence-based care to the individuals who need it, avoid harming them, and also meet their needs and values. Therefore, HCPs should provide timely care and not discriminate patients on the basis of, for example, gender, ethnicity or socioeconomic status (57).

Evidence-based care
The WHO recommends HCPs to protect, promote and support breastfeeding (58), stating that women and their families need breastfeeding support from the healthcare services (2). Professionals should provide evidence-based information to prepare expectant parents, support breastfeeding families and protect them from market interests (58). In 1991, the WHO and UNICEF introduced the Baby-friendly Hospital Initiative (BFHI) to support healthcare services in implementing the Ten Steps globally. During 2018, the WHO revised the Ten Steps (Table 1) (58).

Step 3 in the Ten Steps recommends that HCPs involve women and their families in dialogues about breastfeeding (58). Implementation of step 10 ensures that mothers and their families receive ongoing support to continue breastfeeding (59). A systematic review including 58 studies on the impact of BFHI on breastfeeding found a dose response effect regarding how many of the steps were implemented and protection against early cessation of breastfeeding (60). In contrast, there is limited evidence regarding whether the Ten Steps has an impact on breastfeeding for at least six months or longer in high-income countries (60-62).

In Sweden, the Ten Steps was successfully adopted at the maternity wards and neonatal wards from 1992 to 2004. However, since then, it has not been applied systematically in Sweden (18).
Table 1. The WHO/UNICEF’s Ten Steps to successful breastfeeding

<table>
<thead>
<tr>
<th>Critical management procedures:</th>
</tr>
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<tbody>
<tr>
<td>1a. Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions</td>
</tr>
<tr>
<td>1b. Have a written infant feeding policy that is routinely communicated to staff and parents</td>
</tr>
<tr>
<td>1c. Establish ongoing monitoring and data-management systems</td>
</tr>
<tr>
<td>2. Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding</td>
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<table>
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<tr>
<th>Key clinical practices:</th>
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<tbody>
<tr>
<td>3. Discuss the importance and management of breastfeeding with pregnant women and their families</td>
</tr>
<tr>
<td>4. Facilitate immediate and uninterrupted skin-to-skin contact and support mothers in initiating breastfeeding as soon as possible after birth</td>
</tr>
<tr>
<td>5. Support mothers to initiate and maintain breastfeeding and manage common difficulties</td>
</tr>
<tr>
<td>6. Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated</td>
</tr>
<tr>
<td>7. Enable mothers and their infants to remain together and to practise rooming-in 24 hours a day</td>
</tr>
<tr>
<td>8. Support mothers to recognise and respond to their infants’ cues for feeding</td>
</tr>
<tr>
<td>9. Counsel mothers on the use and risks of feeding bottles, teats and pacifiers</td>
</tr>
<tr>
<td>10. Coordinate discharge so that parents and their infants have timely access to ongoing support and care</td>
</tr>
</tbody>
</table>

Source: World Health Organisation

Support

Support from family, friends or significant others can help individuals to cope with stressful circumstances (63). It has also been expressed that perceptions of available support are more important than actual support (63). Support can be described as an interactive process between the parties who provide and receive it. Perceptions of support are affected by the quality of the relationship (63, 64). Support can involve emotional support (trust, empathy and feeling of safety), self-efficacy support (encouragement of skills and competence), informative support (information to solve problems and opportunities to discuss and get response to questions) and practical support (practical help) (41, 64). Support from HCPs can also include education (41). The WHO states that HCPs need to provide structured ongoing support to women and their infants to develop the quality of care (57).

Women’s experiences of support from healthcare professionals

Women's perceptions and experiences of breastfeeding support from HCPs have been explored in previous research (65-68), and in the pregnancy survey
in Sweden (8), which shows that women in Sweden and other high-income countries often are dissatisfied with the support they receive during the first weeks after birth. They perceive that midwives at the antenatal care provided idealistic information about breastfeeding, describing it as natural, easy and enjoyable (56). In contrast, many women feel unprepared for the frequency of infant feedings and early breastfeeding problems (56). They perceive that HCPs lack adequate time to spend with them and that they provide intrusive and rough practical breastfeeding support. Moreover, women often receive conflicting advice and standard informal support (65). Research has shown that women are satisfied when professionals use a learner-centred approach by creating a trustful dialogue, providing realistic information and offering practical support. Women prefer HCPs who have an empathetic and responsive approach (65).

Women who want to breastfeed, but stop earlier than desired, express feelings of stress (69) shame, guilt (70) and depression (71, 72). Postpartum depression is negatively associated with growth and development of the infant as well as bonding (73). In addition, negative experiences of breastfeeding may have lasting consequences for women’s well-being and can lead to breastfeeding fear (74, 75). Thus, there is a need to improve the transfer of women’s views on breastfeeding to HCPs.

Breastfeeding training of healthcare professionals

Step 2 in the Ten Steps highlights that breastfeeding training is essential to support families (58). The implementation guide of the Ten Steps states that well-trained HCPs provide the best support. It also states that HCPs cannot be expected to give support without being trained (59). The WHO describes that HCPs need skills to be able to improve the quality of care. The implementation guide recommends that HCPs who meet families should be offered breastfeeding training on a regular basis. It also states that HCPs should be protected from market interests that can affect their attitudes towards breastfeeding (59).

HCPs often perceive that they have an important role in breastfeeding support (76-78), but they express a need for training to be able to fulfil their mission (76, 77). They often perceive that lack of knowledge and practical skills hinder them from giving breastfeeding support (76, 79). Parents often seek support from HCPs because they have questions about unsettled infant behaviours, such as crying, fussiness, and short night-time sleep duration (5). However, HCPs often lack or have conflicting knowledge about normal infant behaviour (5). They also often have low self-efficacy in their ability to help women with breastfeeding problems (79, 80). Nonetheless, the Ten Steps programme states that HCPs should support women in managing common breastfeeding problems (Step 5) (58).
In addition, HCPs often lack knowledge and have negative attitudes towards the WHO’s breastfeeding recommendations (76, 79). They often provide support based on their own personal breastfeeding experiences (76, 79). In addition, aggressive marketing from the commercial milk formula and food industry targets HCPs, for example, by offering financial support for their research (31). In Sweden, the professionals at the child health centres have a long tradition of having meetings with the commercial food industry, which provide lunches and sale of their products (81). Negative or neutral breastfeeding attitudes from HCPs can influence women to abstain from breastfeeding or finish exclusive breastfeeding (80, 82). More studies are needed that describe and evaluate breastfeeding training programmes for HCPs (83).

Partner’s experiences of breastfeeding

Partners’ perceptions of their parental role are influenced by the cultural context (84). In high-income countries, such as Sweden, partners often want to be an equal parent and create an early and close bond with their infant (84). Breastfeeding can then be seen as a barrier to creating a close bond with the infant (84, 85). Partners may be unsure of their role in decisions about breastfeeding (86), expressing that women can prevent them from being involved in caring for the infant (84). It has been described that women control the amount of access partners have to the infant (87). Partners express that the mother hints that they should do more household work instead of caring for the infant (84). Partners care for the infant by changing diapers and by bottle-feeding the infant with expressed breastmilk or formula and describe that they care for the mother and older siblings (85). They report a lack of support from HCPs, which makes them feel unimportant (84). They want to receive information about how to support a breastfeeding mother, breastfeeding problems, how and when the infant should stop breastfeeding and how to manage their own feelings of jealousy (85). However, little is known about partners’ perceptions and experiences of breastfeeding interventions (42).

Families’ support needs

Human infants are dependent on their parents’ security and support in the first years after birth (88). Bowlby and Ainsworth developed the Attachment Theory, which describes how the infant bonds, e.g. search for security and support, closeness, stability and emotional support from their primary caregivers, most often the parents (89, 90). The infant uses attachment behaviours, such as rooting, suckling, crying and smiling, to promote contact and inform about their support needs (90, 91). It takes time for parents to learn to breastfeed (59), and the Ten Steps states that HCPs need to support families to recognise and respond to their infants’ early cues for feeding (58). When the infant understands who responds to his or her cues, he or she will attach to this person.
If the infant experiences that the parents are sensitive and have an appropriate responsiveness to his or her needs, a secure attachment is created (90, 91). Three attachment styles have been described when the infant experiences stressful events, such as being separated from the parent: the secure, ambivalent or avoidant style (90, 91).

The attachment style often remains stable over time, even into adulthood, which can affect the parent’s need for support. Parents with secure attachment often have a positive view of themselves and others (91). As a consequence, when they experience breastfeeding problems, they seek support from family and significant others (91, 92). Further, when the mother has a secure attachment to her partner, it positively affects breastfeeding, and she becomes more sensitive to her infant (91, 92).

Parents with ambivalent attachment are more often unsure about whether they will receive emotional support. Therefore, they can become intrusive or persistent when they seek support and experience more pain, stress, anxiety, depression and feelings of loneliness during the childbearing period. Moreover, they often have lower self-efficacy. However, if they perceive high-quality support from their partner during pregnancy, they express higher satisfaction with their relationship after birth. Parents with avoidant attachment may not seek support from others, even if their well-being is affected (91). Awareness of the different attachment styles is important when designing breastfeeding support for families.

**Quality improvement**

The implementation guide of the Ten Steps describes four steps of quality improvement in breastfeeding: 1) When a change is planned, active participation of HCPs is important. This includes a review of their own practices, healthcare systems and decision processes. 2) Leadership is necessary, with people who understand the importance of protection, promotion and support of breastfeeding. They need to encourage HCPs to implement the new practices and support the changes. Facility managers have an important role in the implementation processes. 3) The team must be put to work. It has to identify problems and implement solutions. 4) The last step provide that the team should analyse the situation after the changes and decide if the changes are to be maintained or if further actions are needed to improve practices (59).

**Co-parenting**

A couple’s relationship becomes more complex after the birth of an infant (93). Parenthood changes the roles, relationships, routines and responsibilities in the family and can cause stress. It can also strengthen the parents’ relationship (88). Co-parenting refers to the ways parents or other parental persons
collaborate in their parental roles (93, 94). Individual characteristics such as attitudes, reactions to stress and depression can affect cooperation and the infant’s temperament. A difficult infant can create parental stress and induce a sense of failure in the parental role and cooperation (94). The partner is often the individual who provides security and support to the breastfeeding woman (91), but the concept of co-parenting can also involve, for example, grandparents (93).

The concept is modifiable and contains four components: *Childrearing Agreement* refers to the degree of agreement among the parents concerning factors related to the infant, such as emotional needs. *Division of Labour* refers to tasks and responsibilities in daily life and involves care of the infant, household chores and infant-related economical and medical issues (93). Both parents often perceive that household chores are tiring (95), and women often report that they do most of the household chores and infant care, which may trigger conflicts (93). *Support – Undermining* refers to how parents support each other, including affirmation of the other parent’s competence as well as respect for the other parent’s decisions. Parents can undermine each other through disparagement and blame (93). Mothers seem to be more dissatisfied with support from the other parent (95). *Joint Family Management* refers to the interactions within the family, including responsibility for communication with the other parent. Parents’ attitudes and behaviours can involve or omit the other parent. Parents can also work as a team and share joy from their experiences of the infant (93). It is recommended that support to parents to enhance the co-parenting relationship should start during pregnancy or early after birth (94); however, more knowledge is needed (96).

**Self-efficacy**

Bandura, who constructed the Social Cognitive Theory, defined self-efficacy as individuals’ perceived beliefs in their capabilities in specific situations (97). According to Bandura’s theory, an individual’s self-efficacy is modifiable and developed by four factors: *Mastery experience* implies that individuals’ beliefs in their capabilities in specific situations increase when they learn to solve problems and succeed. When individuals fail in a specific situation, their self-efficacy is instead undermined. *Vicarious experience* can influence an individual’s self-efficacy by having role models. When they observe others who succeed, belief in their own capabilities can increase. *Verbal persuasion* means that significant others encourage individuals when they struggle with difficulties. However, if unrealistic beliefs are expressed concerning the individual’s skills, self-efficacy can be undermined. *Psychological and affective states*, such as fatigue, pain or anxiety can negatively influence an individual’s self-efficacy. On the other hand, self-efficacy can be positively influenced by
reducing stress and anxiety levels and correct misreading of physical and emotional states (97, 98). Individuals with high self-efficacy set higher goals for themselves, work harder to reach them and reach them more often. Individuals with low self-efficacy often give up when problems arise (99).
Breastfeeding is important for public health due to the many health benefits for infants and mothers. Breastfeeding is also beneficial for the family’s economy and is environmentally friendly. However, few women from high-income countries, such as Sweden, Australia and Ireland, continue to breastfeed exclusively according to the WHO’s recommendations. Women often stop breastfeeding earlier than planned, which can influence their well-being. Thus, it is important that women get the opportunity to breastfeed as long as they want. Further understanding of women’s own perceptions of factors that can help to continue breastfeeding is needed.

The WHO recommends that healthcare systems should offer evidence-based care to individuals who need it, avoid harming them and also respond to their needs and values. The Ten Steps include evidence-based support that can positively influence breastfeeding. However, there is limited evidence as to whether the Ten Steps have any impact on exclusive breastfeeding for six months or longer in high-income countries. Support can help individuals to cope with stressful circumstances, and their perceptions of available support are important. Previous studies show that women in high income countries are often dissatisfied with the breastfeeding support from HCPs during the first months after birth. Thus, there is a need to transfer women’s views on breastfeeding support. HCPs often report that they need training to protect, promote and support breastfeeding, and breastfeeding training programmes need to be evaluated. There is also a lack of knowledge about the most effective way to involve the partner in breastfeeding. A qualitative evaluation can provide insight and knowledge about partners’ experiences concerning breastfeeding support and thus contribute to the design of forthcoming breastfeeding support policies.
Research aims

The overall aim was to explore women’s perceptions of what assisted them in breastfeeding and their advice to HCPs regarding breastfeeding support for at least six months. An additional aim was to evaluate a breastfeeding programme based on the Ten Steps and the WHO’s recommendations on breastfeeding. The aim of each paper included in the thesis is listed below:

Paper I: Explore Australian, Irish and Swedish women’s perceptions of what assisted them in continuing to breastfeed for six months.

Paper II: Explore women’s advice to HCPs regarding support to continue breastfeeding for at least six months.

Paper III: Describe HCPs perceived self-efficacy in their ability to provide support before and after a breastfeeding training programme.

Paper IV: Explore partners’ experiences regarding breastfeeding.
Materials and methods

Overview of the included studies

This thesis includes four papers (I–IV). Paper I involved women in Australia, Ireland and Sweden. Specifically, the women provided their perceptions of the factors that assisted them in continuing to breastfeed for six months. In Paper II, the same women from Sweden provided their advice to HCPs regarding support for breastfeeding for at least six months. For Papers III and IV, an intervention study was conducted, which is a part of The Breastfeeding Study (100) (see Table 2). This study used a quasi-experimental design with baseline measurement, and the intervention builds on the Ten Steps (58) and the WHO’s recommendations on breastfeeding (2). The aim was to develop and implement a complex intervention with evidence-based support strategies to help mothers reach their breastfeeding goals. An overview of my contribution in Papers I–IV is presented in Table 3.
<table>
<thead>
<tr>
<th>Paper</th>
<th>Design</th>
<th>Participants/sample</th>
<th>Data source</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Exploratory design using critical incident techniques</td>
<td>Women from Australia (n=153), Ireland (n=64) and Sweden (n=139)</td>
<td>Telephone interviews</td>
<td>Qualitative content analysis and descriptive statistics</td>
</tr>
<tr>
<td>II</td>
<td>Exploratory qualitative design</td>
<td>Women from Sweden (n=139)</td>
<td>Telephone interviews</td>
<td>Qualitative content analysis and descriptive statistics</td>
</tr>
<tr>
<td>III</td>
<td>Pre-post design, with the addition of a control group</td>
<td>Healthcare professionals from Sweden. Intervention group (n=34), Control group (n=39)</td>
<td>Questionnaires</td>
<td>Descriptive statistics and nonparametric tests</td>
</tr>
<tr>
<td>IV</td>
<td>Exploratory, longitudinal and qualitative design</td>
<td>Partners from Sweden Control group (n=8), Intervention group (n=8)</td>
<td>Diaries and telephone interviews</td>
<td>Qualitative content analysis and descriptive statistics</td>
</tr>
</tbody>
</table>

**Table 3. My contribution regarding the different aspects of Papers I–IV**

<table>
<thead>
<tr>
<th>Paper</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept, design</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Acquisition of data</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data processing, analysis, interpretation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Drafting manuscript</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Revising manuscript</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Papers I and II

Study design
Knowledge and understanding of what women perceive as being helpful to continue breastfeeding for at least six months is limited. An explorative qualitative design was considered appropriate for Paper I (101). The critical incident technique can be described as a procedure for gathering important facts concerning individuals’ behaviour to solve practical problems in a defined situation (102, 103). It focuses on obtaining data from participants by in-depth exploration of specific incidents and behaviours related to the topic (104). The term critical incident describes a significant experience followed by human behaviour which is important for the outcome of the described incident (103). In Paper I, critical incidents with a positive contribution to breastfeeding for at least six months are described (102). The critical incident should be clear with a beginning and an end, and a detailed account of what actually happened should be obtained. The incident is the basic unit of analysis (102). The critical incident analysed in Paper I was the continuation of breastfeeding for at least six months. The research team in each country planned to recruit 100 participants, as this is the recommended number of participants (104).

For Paper II, an explorative design was chosen because there is limited knowledge about what advice women would like to give HCPs regarding breastfeeding support. An explorative design can provide rich descriptions of a complex, unexplored phenomena (101).

Settings
In Papers I and II, we recruited women through local newspapers and on social media platforms in Australia, Ireland and Sweden. The study in Paper II was conducted in Sweden, where almost all pregnant women visit the antenatal clinic and give birth at hospital, and it is common that both parents visit the child health centres. If the mother experiences any difficulties with breastfeeding, she can contact the breastfeeding outpatient clinic offered by some hospitals or child health centres. Antenatal clinics and child health centres often offer parental support by individual visits and also parental groups.

Participants
To be included in Papers I and II, the women should have breastfed for six months or longer and understand English or Swedish. To avoid recall bias, women should still breastfeed or had stopped within the previous 12 months (105). Women were purposively selected, based on parity and age, in order to provide variation in experiences of breastfeeding (104).
Data collection and instruments

The research team in Australia, Ireland and Sweden developed a semi-structured interview guide for Paper I (104); see Appendix I. It included the open-ended question “What has assisted you in continuing to breastfeed for at least six months”. The interviewer took field notes during the interviews and made a verbal summary of the factors that participants perceived to have been of help in continuing to breastfeed. Participants had the opportunity to reflect and add factors. The participants were also asked to prioritise the three factors they perceived as most important (Paper I). The interview guide in Sweden included the open-ended question: “Do you have any advice you would like to give HCPs regarding breastfeeding support?” (Paper II). It also included questions about sociodemographic information to describe the participants. Prior to the interviews, the guide was pilot tested for face validity in Australia (n=4), Ireland (n=4) and Sweden (n=5) (104). Only minor wording changes were made to capture the context.

Women in Australia, Ireland and Sweden were purposively recruited through local newspapers and on social media platforms (104). One of the researchers from Australia (a female midwife and Professor) recruited women through advertisements in Community Newspapers or in Parents Paper, both freely available to consumers in Australia, between March and April 2014 (Paper I). In Ireland, one researcher (a female midwife PhD) recruited women through Facebook pages about breastfeeding and a popular parenting forum during the autumn of 2015 (Paper I). In Sweden, one researcher (Ingrid Blixt, a female midwife PhD-student) recruited women for both Papers I and II through four different social media platforms, between October 2015 and January 2016. Women in Sweden, interested in participating, followed a digital link to receive information about the study. Women confirmed their interest through email or telephone. Responding to advertisements and contacting the research team was considered ‘implied consent’. The interviewer in each country made three attempts to contact women who were interested in participating.

The telephone interviews started by providing information about the purpose of the study and obtaining consent to record the interview. To recruit women by snowball sampling, the interviewer encouraged them to share information about the study with other women who may meet the inclusion criteria (104). A total of 153 women from Australia (Paper I), 64 from Ireland (Paper I) and 139 from Sweden (Papers I and II) consented to participate. The Swedish interviews in Papers I and II ranged from 10 to 56 minutes, with an average of 23 minutes. The Australian interviews in Paper I ranged from 6 to 21 minutes (average of 12 minutes). The Irish interviews in Paper I ranged from 12 to 36 minutes, with an average of 18 minutes. No one dropped out.
Analysis

Qualitative content analysis was used to determine categories that women perceived had assisted them to continue breastfeeding for at least six months (Paper I) (106, 107). Each interview was listened to and transcribed verbatim. The interviews were read several times to get an impression of the content. Thereafter, statements made by the women describing their perceptions of what had assisted them to continue breastfeeding were selected and assigned codes. The codes were classified into preliminary categories. The researchers discussed the categories until a consensus was reached. For an example of the Swedish analysis process, see Table 4.
### Table 4. Example of the Swedish analysis process

<table>
<thead>
<tr>
<th>Quotations</th>
<th>Codes</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘My mother, who did not manage to breastfeed me or my brother, encouraged me not to give up; after a few days, it worked out really good. She was so proud of me’.</td>
<td>My mother encouraged me to not give up</td>
<td>Informal face-to-face support</td>
</tr>
<tr>
<td>‘My sister-in-law supported me...after two days, my nipples cracked.... she helped me to hold the baby correctly, with the right latch; she was such a big help for me’.</td>
<td>My sister-in-law supported me</td>
<td></td>
</tr>
<tr>
<td>‘Talking with other mothers and friends and sisters and just being able to talk about it because I think that I want to breastfeed. I’ve always wanted to breastfeed, but it still feels nice to be able to talk about how it’s actually quite difficult at times’.</td>
<td>Talking with other mothers, friends and sisters; it’s actually quite difficult at times</td>
<td></td>
</tr>
</tbody>
</table>

The analyses resulted in 10 final categories (Table 8). Quotes were selected to illustrate the categories. Descriptive statistics were used to describe the codes with critical incidents, which women ranked in the first, second or third place (Table 9). Statistical Package for the Social Sciences (SPSS version 22) was used to describe the sociodemographic characteristics of the women.

In Paper II, an inductive approach (data driven) was chosen to analyse the interviews (107, 108). The interviews were analysed using content analysis, as described by Graneheim and Lundman (109), to explore women’s advice to HCPs regarding support to continue to breastfeed for at least six months. After listening to each interview repeatedly, it was transcribed verbatim by one researcher (Ingrid Blixt). The text was read several times to gain a sense of the general picture. Statements relating to the aim of the study were identified (meaning units). The meaning units were condensed, abstracted, and then given codes. The codes from all interviews were managed in Excel and compared and grouped into sub-categories, initially by Ingrid Blixt, and thereafter, together with the research team. The sub-categories were compared and grouped into categories. The categories described the content on a manifest level and had a low degree of interpretation (110). Thereafter, the research team had reflective discussions on the underlying meanings of the categories,
which resulted in one theme that refers to the latent and interpretative content of the interviews (Table 10) (109). The research team discussed all codes, sub-categories, categories and the theme in an analytic process until an understanding of the data was achieved. A professional translator translated the quotes from Swedish into English (Papers I and II). For details of the last step, where the number of women who gave advice was counted, see Table 10 (111).

Paper III

Study design

As knowledge about HCP’s self-efficacy to provide breastfeeding support is limited, we chose a pre-post intervention study design, with an addition of a control group (CG) in Paper III (112). At baseline, both the intervention and CG group answered the Breastfeeding Support Confidence Scale (BSCS). The intervention group (IG) also answered the BSCS instrument directly after the breastfeeding training programme. Paper III focuses on HCPs who work within antenatal care or child health centres. These professionals meet women and their partners during the whole breastfeeding period.

Setting

Papers III and IV included studies performed in a region in central Sweden. The region has many mothers with a low level of education (59%), under 25 years (13%) and many mothers are foreign-born (35%). During 2019, most infants (92%) initiated breastfeeding, and the prevalence of exclusive breastfeeding was 55% at two months and 8% at six months. At one year, 25% of the infants were still breastfeeding (7).

The healthcare system in the region provided care for about 3300 infants in year 2020. The healthcare system includes antenatal clinics (n=15), hospitals with breastfeeding outpatient clinics (n=2) and child health centres (n=26). HCPs working at the antenatal care include midwives and assistant nurses. Child healthcare nurses and physicians work at the child health centres. Pregnant women and their partners meet the midwife at the antenatal care approximately 8–10 times during pregnancy. They are also followed-up by telephone 7–10 days postpartum and through a visit 8–12 weeks postpartum. The child healthcare nurses meet the parents 1–2 weeks after birth and the infant 12–13 times during the first year. The infants are also seen by a physician at 3 visits during the first year.

In the region, 32% of first-time mothers and fewer partners participated in prenatal parental groups at antenatal care in 2018 (113). Fewer parents (15%) participated in parental groups after birth at the child health centres in 2018 (114).
Developing the intervention

The overall aim of the intervention was to implement evidence-based breastfeeding support in line with the Ten Steps (58) and the WHO recommendations (2), with the intention of helping women to reach their breastfeeding goals. When developing the breastfeeding support material, the attachment theory (89) and the theory of self-efficacy (115) were taken into account.

All 15 antenatal clinics in the region had participated in a project aiming to provide safe and equal care, individually adapted to the family’s postpartum needs, with input from mothers regarding the design of care and evaluation of the project. The intervention was developed based on the results of this project. The expert group, HCPs and women involved in developing and reviewing the breastfeeding training programme are described in Table 5.

The Ten Steps implementation guide (59) was chosen to support the implementation process. The Head of the antenatal clinics and child health centres and HCPs at each clinic in the IG chose an experienced colleague as the facilitator at their clinic. The facilitator served as the contact person between the clinic and the research team. The head of antenatal clinics and child health centres and the facilitators were involved in the planning and development of the intervention and reviewed the breastfeeding training material. We also involved women with different breastfeeding experiences from a Facebook group to give their views on the intervention material.
Table 5. The expert group involved in the development and review of the breastfeeding training programme

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Expert group Name</th>
<th>Expert group Title and profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online lectures and three questions before the training day</td>
<td>Eva-Lotta Funkquist</td>
<td>Child healthcare nurse and midwife, Associate Professor</td>
</tr>
<tr>
<td></td>
<td>Paola Oras</td>
<td>Midwife, PhD student</td>
</tr>
<tr>
<td></td>
<td>Emma Gerhardsson</td>
<td>Child healthcare nurse, PhD student</td>
</tr>
<tr>
<td></td>
<td>Karin Cato</td>
<td>Midwife, PhD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 2</th>
<th>Expert group Name</th>
<th>Expert group Title and profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>The inter-professional training day face-to-face</td>
<td>Ingrid Blixt</td>
<td>Midwife, PhD student</td>
</tr>
<tr>
<td></td>
<td>Eva-Lotta Funkquist</td>
<td>Child healthcare nurse and midwife, Associate Professor</td>
</tr>
<tr>
<td>The evidence-based picture and conversation material to healthcare professionals</td>
<td>Ingrid Blixt</td>
<td>Midwife, PhD student</td>
</tr>
<tr>
<td></td>
<td>Eva-Lotta Funkquist</td>
<td>Child healthcare nurse and midwife, Associate Professor</td>
</tr>
<tr>
<td></td>
<td>Ove Axelsson</td>
<td>Obstetrician, Professor</td>
</tr>
<tr>
<td></td>
<td>Birgitta Bergman</td>
<td>Educator/trainer in motivational interviewing (MI)</td>
</tr>
<tr>
<td></td>
<td>Elisabeth Ubbe (photos)</td>
<td>Midwife, photographer</td>
</tr>
<tr>
<td>The breastfeeding plan with QR-codes to 4 short online breastfeeding lectures for parents</td>
<td>Eva-Lotta Funkquist</td>
<td>Child healthcare nurse and midwife, Associate Professor</td>
</tr>
<tr>
<td></td>
<td>Paola Oras</td>
<td>Midwife, PhD student</td>
</tr>
</tbody>
</table>

Participants

All antenatal clinics (n=15) in the region were invited to participate in the implementation project. First six antenatal clinics were selected non-randomly to constitute the IG for practical reasons, while the remaining nine clinics served as the CG. The IG, as well as the CG, cared for about 1,650 women/year. After being informed about the breastfeeding project and the possibility to participate, all 15 antenatal clinics agreed to take part in the project.

Thereafter, all child health centres (n=26) in the region were invited to participate. The child health centres (n=11) with regular contact with the antenatal clinics in the IG were invited to participate. The child health centres (n=15)
with regular contact with the antenatal clinics in the CG were invited to participate. Eight of the 11 child health centres in the IG group and 9 of the 15 child health centres in the CG group agreed to participate in the project.

Instrument

The research team, including midwives, child healthcare nurse and physician constructed the BSCS instrument, which intends to capture HCPs’ self-efficacy regarding breastfeeding support. The team had extensive experience with breastfeeding support and research. The instrument includes 11 questions and was developed based on earlier research (115-119), including Papers I and II, the Ten Steps (58, 59) and the WHO recommendations on breastfeeding (2). The questions are answered using a 4-point scale: 1 = “is not correct at all”, 2 = “is not correct”, 3 = “fits pretty well”, and 4 = “fits just right” and are summarised to give an overall index, ranging from 11 to 44 points, with higher scores indicating a higher degree of self-efficacy. During the process, the team discussed and refined the questions several times; moreover, the questions were discussed with professionals with long clinical experience of breastfeeding support. The questionnaire included demographic questions: age, gender, country of birth, profession and years in profession.

The questions were pilot tested on midwives (n=10) working at antenatal care and maternity ward and on child healthcare nurses (n=3) from another region, with the aim of establishing content validity about the relevance, coverage and understandability of the questions (104). Another aim was to find out if any questions were perceived as sensitive and ensure that the length of the questionnaire was appropriate. The test subjects filled in the questionnaire and gave written comments. They pointed out that the infant’s age should be clarified in some questions; thus, after the pilot test, minor modifications were made. The BSCS instrument (see Appendix II) and demographic questions took approximately 20 minutes to complete.

Intervention

The training programme for HCPs in IG involved two phases and is presented in Table 6, and described in detail in Appendix III.
Table 6. The training programme for healthcare professionals in the intervention group

<table>
<thead>
<tr>
<th>Phase one</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants’ reflections on three questions before the training day (1.0 hours)</td>
<td>1) Personal experiences of and attitudes towards breastfeeding. 2) Evidence-based professional breastfeeding support. 3) What changes you would like to introduce at your workplace to make it easier for mothers to breastfeed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase two</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>An inter-professional training day (8.5 hours, face-to-face)</td>
<td>- Healthcare professionals worked with their personal experiences and attitudes towards breastfeeding. - Healthcare professionals trained to offer and provide evidence-based support guided by the pictures and conversation material and the breastfeeding plan for parents in the intervention group. The material included photos of breastfeeding infants after two years of age. - Small group discussions were held on breastfeeding case scenarios</td>
</tr>
<tr>
<td></td>
<td>The material, the breastfeeding plan, and discussions of case scenarios aimed to strengthen healthcare professionals’ self-efficacy about breastfeeding, in line with the Ten Steps and the WHO recommendations</td>
</tr>
</tbody>
</table>

Standard education to healthcare professionals in the region
All HCPs working in the region are normally invited to participate in a voluntary breastfeeding education course (3 hours) every year, with various themes. During 2020-2021, no education was given due to the Covid-19 pandemic. Meetings in large groups (50–60 people) were not allowed.

Data collection
All HCPs working at the antenatal clinics and child health centres were invited to complete a questionnaire between July 2020 and September 2020. The research team e-mailed an online questionnaire with written information about the study to the HCPs. They were informed about the aim of the study, that it was voluntary to participate, that they could terminate their participation at
any time and that submitting the online questionnaire (the pre-test) was considered as implied consent to participate in the study. Most of the HCPs filled in the questionnaire 1–3 weeks before their training day. Thereafter, the researchers mailed the material for Phase 1 to each clinic. HCPs received the web-link 5–14 days before Phase 2 (the inter-professional training day). HCPs answered the questionnaire (post-test) at the end of the inter-professional training day. No reminders were sent out.

Analysis
Categorical variables are presented as frequencies and percentages, n (%), while ordinal and continuous variables are given as means with accompanying standard deviations (SDs). Tests of differences between independent groups were performed using Fisher’s exact test for categorical data, the Wilcoxon rank sum test with continuity correction for ordinal data, and Welch’s two-sample t-test for continuous data. Tests of differences between dependent data were performed using the Wilcoxon signed rank test with continuity correction for ordinal data. All statistical analyses were performed in R ≥ 4.0 (R Foundation for Statistical Computing, Vienna, Austria), with two-sided p-values < 0.05 considered statistically significant. The pilot study was not included in the analyses.

Paper IV
Study design
This study has an exploratory, longitudinal and qualitative design and reports data from interviews and diary entries collected at two time points: during pregnancy and two months after the infant’s birth. Data were analysed by content analysis, as described by Elo and Kyngäs (2008) (120). Paper IV follows the Consolidated Criteria for Reporting Qualitative Research (COREQ) for interviews and focus groups (121).

Developing the intervention
See the description under Paper III.

Instrument
The research team developed the semi-structured interview guides and diary questions. The questions were based on a literature review and experiences within the research group (104). It includes questions about partners’ experiences of breastfeeding, with questions such as ‘Could you please explain if
you have experienced any advantages of breastfeeding’. ‘Could you please explain if you have experienced any disadvantages of breastfeeding’. Prior to the interviews, the guide was pilot tested by one pilot interview in the IG and CG (104). No changes were made.

Participants
All participating partners, in the IG and CG, were partners of women in the breastfeeding intervention study. The women were recruited using maximum variation purposive sampling based on education, age and parity (104). The inclusion criteria stated that all women were healthy and, at pregnancy week 24, planned to initiate breastfeeding after birth. Partners should be able to communicate in Swedish. Characteristics of the partners are displayed in Table 12. There were no dropouts.

Intervention
The breastfeeding support programme for parents in the IG is presented in Table 7 and described in detail in the Appendix III. The material, the breastfeeding plan, and discussions of case scenarios aimed to strengthen parents’ self-efficacy about breastfeeding, in line with the Ten Steps (58) and the WHO recommendations (2).
Table 7. The breastfeeding support programme for participants in the intervention group in Paper IV

<table>
<thead>
<tr>
<th>Antepartum</th>
<th>Postpartum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnant women received structured breastfeeding counselling during scheduled visits at pregnancy weeks 28, 32 and 38 (5–10 min)</td>
<td>The midwife at the antenatal care followed up on the breastfeeding plan during the normal visit 8–12 weeks postpartum</td>
</tr>
<tr>
<td>An individual breastfeeding plan was established in cooperation with the parents-to-be</td>
<td>Parents received structured breastfeeding counselling during the scheduled visits at two and six weeks, as well as three and five months postpartum (5–10 min)</td>
</tr>
<tr>
<td>The plan included:</td>
<td>The child healthcare nurse at the child health centre followed up on the breastfeeding plan at each visit</td>
</tr>
<tr>
<td>1) Self-studies during pregnancy,</td>
<td></td>
</tr>
<tr>
<td>2) QR-codes for four short online breastfeeding lectures, and</td>
<td></td>
</tr>
<tr>
<td>3) QR-codes for two leaflets</td>
<td></td>
</tr>
</tbody>
</table>

Standard care to families in the CG

The midwife at the antenatal care informed about breastfeeding, and women received a leaflet during the visit in pregnancy week 28. Partners were not allowed to attend the visits at the antenatal care due to the pandemic. During the study period, no parental groups for parents were held at the antenatal care clinics or child health centres due to the Covid-19 pandemic.

Data collection

Partners in Paper IV were recruited from March to December 2021. Due to the Covid-19 pandemic, recruitment at the antenatal care clinics was impossible. Therefore, partners were contacted by one researcher (Ingrid Blixt) by telephone and invited to participate. They received information about the aim of the study, were given an opportunity to ask questions, were informed about the voluntary nature of participation and that they could terminate their participation at any time. They could choose whether they wanted to be contacted for an initial telephone interview or to complete diary entries with the same questions via mail. Submission of an online diary was considered as consent to participate.

The telephone interviews started by providing information about the purpose of the study and obtaining consent to record the interview, and the partners had an opportunity to ask questions. The interviewer (Ingrid Blixt) tried to create a comfortable atmosphere during the telephone interviews. At the end of the interview, the interviewer made a short verbal summary of the in-
terview to confirm that the interviewer had understood the participants correctly. The interviews had a mean duration of 26 minutes, and after each interview, field notes were taken. Data collection is displayed in Table 12.

Analysis

We used content analysis with an inductive approach to determine partners’ experiences regarding breastfeeding, as described by Elo and Kyngäs (120). The analyses involved different steps. In the first step, interviews were transcribed verbatim. Written texts from interviews and diaries were read several times to become familiar and get a sense of whole. Thereafter, two authors (Ingrid Blixt and Eva-Lotta Funkquist, a female child healthcare nurse, midwife and associate Professor) coded the data separately. Written texts related to the aim were highlighted. The contents of the units related to the aim were described using initial codes. In the next step, the research group discussed the coding until an agreement was reached. Thereafter, the codes were merged into preliminary sub-categories and the sub-categories into generic categories. The generic categories were merged into combined sub-categories based on similarities and differences in the content. In the last step, the research group participated in the abstract process that resulted in one main category: Striving to be part of the family and important that the family’s everyday life was well-functioning (Figure 3).

Summary content analysis was used to quantify the number of codes in the combined sub-categories in the IG and CG to provide insights on similarities and differences (111) (Figure 3). Quotations were presented to illustrate the sub-categories.

Reflexivity

In qualitative research, critical self-reflection about the researchers’ own preconceptions, preferences and biases is important (104). I (Ingrid Blixt) am a nurse and midwife. I have worked at an antenatal clinic, a delivery ward, a maternity ward and at a breastfeeding outpatient clinic. During the data collection, I worked as a developer at the antenatal clinics. I am a mother of three children and have personal positive experiences with breastfeeding. During the planning, data collection and analysis, I strived to gain an insight into my preconceptions, preferences and biases and these subjects were discussed within the research group and research seminars with individuals having different professions.
Ethics

The studies included in this thesis are performed in line with the Helsinki Declaration (123). All research that includes children need watchful ethical considerations, since children are not able to consent to participation. To consider potential benefits and risks is an important part of the research procedure. One potential benefit for infants and parents in our studies is the higher likelihood of breastfeeding. Parents have the right to make an informed choice regarding feeding methods. Breastfeeding is a complex topic and a personal matter. All our studies include questions of personal and sensitive information. Before inclusion, all participants were informed that participation was voluntary and that they could withdraw from participation without giving a reason.

The research team in Australia, Ireland and Sweden started data collection after approval from the ethical committees in the different countries (Papers I and II). Breastfeeding has many health benefits for infants and mothers, but few continue to breastfeed according to the WHO’s recommendations. Many mothers stop earlier than planned, which can influence their well-being. Therefore, it is important that women get the opportunity to breastfeed as long as they want. However, if women should be able to breastfeed according to the WHO’s recommendations, professionals need knowledge about what women perceive as important support (Paper I). In order to be able to provide such support, HCPs need knowledge of women’s advice to HCPs (Paper II).

The research team started data collection after approval from the ethical committee (Papers III and IV). HCPs often report that they need training to protect, promote and support breastfeeding. Thus, evaluation of breastfeeding training programmes for HCPs is needed (Paper III). HCPs who participated in Paper III provided their email address, but not their personal identity number. There is a risk that HCPs in the CG felt disappointed because they did not have the opportunity to take part in the breastfeeding training programme. Therefore, they were informed that they will receive the same training programme when the study is completed. HCPs in the IG were informed that they could participate in the training programme without participating in Paper III.

There is a lack of knowledge about the most effective way to involve the partner in breastfeeding. A qualitative evaluation can provide insight and knowledge about partners’ experiences of a breastfeeding support intervention and thus contribute to the design of forthcoming breastfeeding support policies (Paper IV). In Paper IV, parents-to-be received written information about the purpose of the study and the opportunity to participate. Partners were informed that declining to participate would not have any negative effect on their care. Thereafter, at the visit in pregnancy week 24, the pregnant woman provided the partner’s name, email address and phone number if they thought the partner wanted to participate in study IV. Women provided their written
consent, and thereafter baseline data were collected. Parents are a vulnerable patient group, and it is possible that they feel disturbed in their new parental role if they are contacted early after the birth. Therefore, they have not been contacted earlier than two months after birth.
Results

Papers I and II

The study populations in Papers I and II

In total, 356 women, 153 from Australia (Paper I), 64 from Ireland (Paper I) and 139 from Sweden (Papers I and II) were included. All women had breastfed for at least six months and most of them were still breastfeeding. They had a mean age of 33.5 (Australian and Swedish women) and 34.9 (Irish women) years (Paper I) and 33.5 (Swedish women) years (Paper II), respectively, and most commonly one to two children. A majority had university undergraduate or postgraduate exams.

Results from Paper I

The aim was to explore Australian, Irish and Swedish women’s perceptions of what factors assisted them in continuing to breastfeed for six months. Ten categories were identified (Table 8).

Table 8. International Categories: factors that assisted women in continuing to breastfeed for six months

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal self-determination</td>
</tr>
<tr>
<td>Maternal knowledge of health benefits</td>
</tr>
<tr>
<td>Maternal awareness of psychological benefits</td>
</tr>
<tr>
<td>Partner support</td>
</tr>
<tr>
<td>Breastfeeding was going well</td>
</tr>
<tr>
<td>Informal face-to-face support</td>
</tr>
<tr>
<td>Informal online support</td>
</tr>
<tr>
<td>Health professional support</td>
</tr>
<tr>
<td>Work environment</td>
</tr>
<tr>
<td>Cultural norm</td>
</tr>
</tbody>
</table>
Maternal self-determination
Women experienced that they were persistent and determined to breastfeed. Women reported that their decision to breastfeed strengthened their determination. Previous breastfeeding experiences could both positively and negatively influence their determination to breastfeed.

Maternal knowledge of health benefits
Women reported that their knowledge of the health benefits of breastfeeding for the infant influenced their decisions. Some women also pointed out the benefits for their own health.

Maternal awareness of psychological benefits
Women experienced that breastfeeding could facilitate bonding and feeling close to the infant. Women were expected to facilitate to be close to their infant and reported that this expectation was met. They enjoyed being close to their infant. Women with a history of bottle feeding stated that breastfeeding offered them special closeness with the infant.

Partner support
Women in all countries perceived that the partner influenced their breastfeeding decisions. It was important that the partner did not pressure the women to give formula to the infant so that he could feed the infant. Women valued when the partner provided practical support, for example, serving drinks and food to the women and sharing housework. Women perceived that partner support was important in continuing to breastfeed, especially when the family had negative attitudes.

Breastfeeding was going well
When women experienced that breastfeeding was going well, it influenced their decisions, for example, when breastfeeding was easy and convenient. Women perceived that breastfeeding was going well when the infant was thriving and enjoying breastfeeding, their milk supply was ‘good’ and they were able to express milk when they needed to.

Informal face-to-face support
Women experienced that face-to-face support from peer counsellors, sisters, friends, cousins, grandmothers and mothers was important. Practical advice and the feeling of not being alone by having contact with their mother, other mothers, friends and sisters were experienced as important. It was important to be able to share experiences when breastfeeding was difficult. This kind of support could make them continue breastfeeding. Women’s own families were not always supportive. Therefore, women selectively turned to supportive individuals.
Informal online support
Women used social media [Facebook] and the Internet [chatrooms] to receive support. Informal online support was important when support from family and friends was missing. This kind of support created a safe environment for women who otherwise felt lonely. They valued informal online support, because it was always available. Women received practical advice and emotional support from other mothers who helped them to continue breastfeeding. Others used social media to prepare for breastfeeding.

Health professional support
Women reported that support from midwives, child healthcare nurses, community nurses, lactation consultants, paediatric or neonatal nurses, nutritionists, and physicians was important. They reported that meeting the right person who gave the right advice at the right time was important. Support during the first months after birth was essential to maintain breastfeeding.

Work environment
Women in Australia and Ireland experienced that it was important to be able to stay at home and be financially supported by maternity leave to continue breastfeeding. Women in Sweden reported that it was important with a supportive and flexible work environment.

Cultural norm
Women commented that breastfeeding was the natural choice and that most individuals around them breastfed. Many women had a strong family history of breastfeeding, and role models were important for their decisions on breastfeeding. If the woman’s mother had breastfed her and her siblings, it further affected her determination. Women reported that their family expected everyone in the family to breastfeed. Some stated that the norm around them was to breastfeed longer than the cultural norm.

Ranking of categories by country
The combined total categories ranked as first, second or third by Australian, Irish and Swedish women showed similarities and differences between countries (Table 9). The categories that women in Australia, Ireland and Sweden ranked as the five most important were ‘Informal face-to-face support’, ‘Maternal determination’, ‘Maternal knowledge of health benefits’ and ‘Breastfeeding was going well’. Women from Ireland ranked ‘Informal online support’ higher than women in Australia and Sweden. Women in Australia and Sweden ranked ‘Health professional support’ higher than women from Ireland. Women in Sweden and Ireland ranked ‘Partner support’ higher than women from Ireland.
Table 9. Ranking of the combined total categories by Australian, Irish and Swedish women

<table>
<thead>
<tr>
<th>Category</th>
<th>Australia</th>
<th>Ireland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding was going well</td>
<td>100 (22.3)</td>
<td>41 (21.4)</td>
<td>55 (14.4)</td>
</tr>
<tr>
<td>Maternal knowledge of health benefits</td>
<td>89 (19.8)</td>
<td>30 (15.6)</td>
<td>47 (12.3)</td>
</tr>
<tr>
<td>Health professional support</td>
<td>66 (14.7)</td>
<td>26 (13.5)</td>
<td>47 (12.3)</td>
</tr>
<tr>
<td>Informal face-to-face support</td>
<td>49 (10.9)</td>
<td>25 (13.0)</td>
<td>44 (11.5)</td>
</tr>
<tr>
<td>Maternal self-determination</td>
<td>42 (9.3)</td>
<td>21 (11.0)</td>
<td>41 (10.7)</td>
</tr>
<tr>
<td>Partner support</td>
<td>39 (8.7)</td>
<td>18 (9.4)</td>
<td>41 (10.7)</td>
</tr>
<tr>
<td>Maternal awareness of psychological benefits</td>
<td>25 (5.6)</td>
<td>11 (5.7)</td>
<td>40 (10.5)</td>
</tr>
<tr>
<td>Cultural norm</td>
<td>17 (3.8)</td>
<td>9 (4.7)</td>
<td>36 (9.4)</td>
</tr>
<tr>
<td>Work environment</td>
<td>14 (3.1)</td>
<td>9 (4.7)</td>
<td>28 (7.3)</td>
</tr>
<tr>
<td>Informal online support</td>
<td>8 (1.8)</td>
<td>2 (1.0)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Total</td>
<td>449 (100)</td>
<td>192 (100)</td>
<td>382 (100)</td>
</tr>
</tbody>
</table>
Results from Paper II

The aim was to explore women’s advice to HCPs regarding support to breastfeed for at least six months. The categories and theme: Professionals need to offer women sensitive, individualised breastfeeding support to promote a positive breastfeeding experience, are summarised in Table 10.

Table 10. Overview of the categories and the theme and the number of women who gave advice in each category

<table>
<thead>
<tr>
<th>Categories</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing evidence-based care (n = 73)</td>
<td>Professionals need to offer women sensitive, individualised breastfeeding support to promote a positive breastfeeding experience</td>
</tr>
<tr>
<td>Offering individual solutions for breastfeeding problems (n = 55)</td>
<td></td>
</tr>
<tr>
<td>Preparing expectant parents-to-be during pregnancy (n = 54)</td>
<td></td>
</tr>
<tr>
<td>Creating a respectful and mutual dialogue (n = 49)</td>
<td></td>
</tr>
<tr>
<td>Offering practical support (n = 34)</td>
<td></td>
</tr>
</tbody>
</table>

Providing evidence-based care

Women advised HCPs to provide up-to-date breastfeeding support. They stated that HCPs in healthcare services had varying levels of knowledge regarding breastfeeding. Women reported that they were not satisfied with support at the child health centres after being discharged from the maternity facility after birth. HCPs should be more knowledgeable about breastfeeding and improve their practical skills. Women were dissatisfied when breastfeeding recommendations were not consistent across the healthcare system or with the national and international guidelines. They did not trust HCPs who did not provide evidence-based support. Such mistrust implied that the women did not listen to the advice and abstained from asking questions. HCPs should be positive and encouraging and support breastfeeding as long as the women wanted to continue. HCPs were advised not to pressure women to stop breastfeeding at night, introduce solid food before six months or cease breastfeeding after a certain time. Women became discouraged, sad and disappointed when HCPs advised them to stop earlier than they wanted. Women questioned advice from the dental care staff about the cessation of night-time breastfeeding or breastfeeding after one year.

Offering individual solutions for breastfeeding problems

Women wanted to be supported individually when they experienced breastfeeding problems. They reported many problems, for example, difficulties with latching on, infant weight loss, painful breastfeeding and mastitis. Women needed a calm, low-stress environment in the early months after birth.
HCPs should follow up and provide continuous support because women reported that they did not always seek support when problems arose. Women with breastfeeding problems did not want general advice, such as “Just continue breastfeeding”. Such advice could put pressure on women. They need more individual support to be able to solve their problems, and they prefer that professionals encourage, confirm, reassure them and trust their ability to breastfeed. If it was not medically indicated, women would like alternatives to using formula when they experienced problems.

**Preparing expectant couples during pregnancy**

Women gave advice that they wanted more information at check-ups and during parental classes, both orally, as well as written in leaflets or on websites. HCPs should involve the partner. Parents-to-be should be informed about available breastfeeding options so that they can make individual decisions. Women stated that information about the advantages of breastfeeding, such as convenience, bonding possibilities and health benefits, was important. They wanted realistic and practical information about how time-consuming the initiation of breastfeeding can be, how often the infant needs to be breastfed, the infant’s behaviour, the physiology of breastfeeding, signs indicating insufficient milk supply and how to increase milk production.

**Creating a respectful and mutual dialogue**

Women described the importance of creating a sensitive and respectful dialogue with couples. HCPs should have a respectful and non-judgemental approach when providing breastfeeding support. Such an approach was especially important when women experienced insufficient milk supply or when they were unable to breastfeed exclusively. HCPs should not give too much advice or conflicting advice. They should listen more and ask more questions about previous and current breastfeeding experiences, intentions, breastfeeding goals, expectations and what kind of breastfeeding support the family wanted.

**Offering practical support**

Women preferred when HCPs were calm, gentle and took the time needed to sit down and to observe how the infant was latching. HCPs should use a respectful approach to the woman’s and the infant’s bodies when providing practical support. Women wanted to take the initiative to breastfeed, and they reported that they learnt better when they themselves put the infant to the breast.
Paper III

Study population

Of the 34 HCPs in the CG, 21 (61.8%) were midwives, and 13 (38.2%) were child healthcare nurses. Of the 39 HCPs in the IG, 20 (51.3%) were midwives, and 18 (46.2%) were child healthcare nurses. In total, 20 (76.9%) of the 26 midwives and 18 (69.2%) of the 26 child healthcare nurses completed both the pre- and post-tests (completers) (Figure 2). Of HCPs who completed the tests, 35 (89.7%) had watched the web lectures before the training day, and all had participated in the inter-professional training day.

*Figure 2. The recruitment process. *Unstated profession can be a midwife or child health nurse.
Characteristics of the participating HCPs are given in Table 11. Age differed significantly between the two groups. HCPs in the CG were, on average, 5.4 years older.

**Table 11.** Characteristics of the healthcare professionals

<table>
<thead>
<tr>
<th></th>
<th>Control n = 34</th>
<th>Intervention n = 39</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, n (%)</td>
<td>33 (97.1)</td>
<td>39 (100.0)</td>
<td>0.466a</td>
</tr>
<tr>
<td>Age, mean (SD)</td>
<td>46.5 (9.6)</td>
<td>41.1 (10.2)</td>
<td>0.022b</td>
</tr>
<tr>
<td>College/University education &gt; 3 years, n (%)</td>
<td>30 (88.2)</td>
<td>34 (87.2)</td>
<td>1.000a</td>
</tr>
<tr>
<td>Born in Sweden, n (%)</td>
<td>32 (94.1)</td>
<td>38 (97.4)</td>
<td>0.595a</td>
</tr>
<tr>
<td>Profession, n (%)c</td>
<td></td>
<td></td>
<td>0.481a</td>
</tr>
<tr>
<td>- Midwife</td>
<td>21 (61.8)</td>
<td>20 (52.6)</td>
<td></td>
</tr>
<tr>
<td>- Child healthcare nurse</td>
<td>13 (38.2)</td>
<td>18 (47.4)</td>
<td></td>
</tr>
</tbody>
</table>

Note: SD, standard deviation. Significant p-values are given in bold. P-values from aFisher’s exact test and b from Welch’s two-sample t-test. c One of the individuals in the intervention group did not state her profession.

**Results**

The aim was to describe HCPs’ perceived self-efficacy in their ability to provide support before and after a breastfeeding training programme.

**Changes in the BSCS scores from baseline to follow-up**

At baseline, the overall mean index score was 36.87 points in the IG and 37.58 in the CG; see Appendix IV. The lowest score was recorded for the question “I’m sure that I can help mothers continue to breastfeed when the breastfeeding is painful”, with a mean score of 2.97 points in both groups. The only question that differed significantly between the two groups at baseline was “I’m sure that I can inform mothers about how milk production works”, where the CG had a mean score of 3.64 compared to 3.33 in the IG (p = 0.048). The
difference in the overall index score between the two groups was small and non-significant, and 10 of the 11 BSCS items did not differ significantly between the groups, thus implying that the two groups had essentially the same level of self-efficacy at baseline.

In general, HCPs in IG increased their self-efficacy from baseline to follow-up. On average, the overall index increased with 2.68 points, from 36.87 to 39.56 (p = 0.001). The index score in the IG group at follow-up was significantly higher than the mean score of 37.58 in the CG at baseline (p = 0.025). IG had higher mean scores at follow-up compared to baseline for all 11 questions. The largest increase of 0.38 points (p = 0.001) was observed for the question “I’m sure that I can help mothers continue to breastfeed when the breastfeeding is painful” and the second largest increase of 0.36 points (p = 0.001) was noted for the question “I’m sure that I can inform mothers about how milk production works”.

HCPs in IG had higher mean scores at follow-up compared to the CG at baseline for all 11 questions. The difference was significant for three questions: “I’m sure that I can give mothers the emotional help they need to decide for themselves how long they want to breastfeed” (p = 0.048), “I’m sure that I can help mothers continue to breastfeed even if the infant doesn’t follow the growth curve” (p = 0.026), and “I’m sure that I can help mothers continue to breastfeed when the breastfeeding is painful” (p = 0.048).

**Paper IV**

**Study population**

In total, 8 partners were included from the IG and 8 from the CG. Characteristics of the participants are presented in Table 12.
Table 12. Characteristics of the participants in the intervention and control group

<table>
<thead>
<tr>
<th>Partners</th>
<th>Intervention group (IG) n = 8*</th>
<th>Control group (CG) n = 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (range)*</td>
<td>35 (29–36)</td>
<td>32 (29–45)</td>
</tr>
<tr>
<td>University education, n (%)*</td>
<td>2 (25.0)</td>
<td>4 (50.0)</td>
</tr>
<tr>
<td>Household income &gt;40,000 SEK/4000 EUR per month n (%)*</td>
<td>6 (85.7)</td>
<td>5 (62.5)</td>
</tr>
<tr>
<td>Male sex</td>
<td>8 (100.0)</td>
<td>7 (87.5)</td>
</tr>
<tr>
<td>Interviews during pregnancy, n (%)</td>
<td>4 (50.0)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>Diaries during pregnancy, n (%)</td>
<td>0 (0)</td>
<td>1 (12.5)</td>
</tr>
<tr>
<td>Interviews 2 months post-partum, n (%)</td>
<td>5 (62.5)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>Diaries 2 months postpartum, n (%)</td>
<td>1 (12.5)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>Mothers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous experience of breastfeeding n (%)</td>
<td>4 (50.0)</td>
<td>4 (50.0)</td>
</tr>
<tr>
<td>Plan at gestational week 24 for duration of exclusive breastfeeding*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No plan</td>
<td>2 (25.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Four to five months</td>
<td>1 (12.5)</td>
<td>5 (62.5)</td>
</tr>
<tr>
<td>Six months</td>
<td>4 (50.0)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>* Data from one mother is missing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results

The aim was to explore partners’ experiences regarding breastfeeding. The main category, ‘Striving to be part of the family and important that the family’s everyday life was well-functioning’, shows that partners in both groups felt it was important to be part of the family and that the family’s everyday life was well-functioning. The main category is described through the combined sub-categories. Each sub-category describes a process with opposite poles of partners’ experiences regarding breastfeeding (Figure 3). In summary, IG partners experienced that both parents were involved and cooperated in the breastfeeding process. Guidance from HCPs helped them to feel secure, and sharing the feedings with breastmilk made everyday life easier for the family. CG partners felt excluded and did not feel that they received support from HCPs. To share the feedings with formula made everyday life easier for the family. Both groups experienced benefits of breastfeeding. Their experience was influenced by the cultural norm.
**Figure 3.** The main category and the combined sub-categories

<table>
<thead>
<tr>
<th>Main category: “Striving to be a part of the family and that the family functions well in everyday life”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Combined sub-categories</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-category</th>
<th>IG n=59, CG n=3</th>
<th>Feeling excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are a family, and everyone is involved</td>
<td>IG n=11, CG n=22</td>
<td></td>
</tr>
<tr>
<td>It is safe to receive guidance from healthcare</td>
<td>IG n=40, CG n=1</td>
<td></td>
</tr>
<tr>
<td>We did not receive support</td>
<td>IG n=10, CG n=26</td>
<td></td>
</tr>
<tr>
<td>Breastfeeding made everyday life easier for the family</td>
<td>IG n=22, CG n=2</td>
<td></td>
</tr>
<tr>
<td>Formula made everyday life easier for the family</td>
<td>IG n=13, CG n=29</td>
<td></td>
</tr>
<tr>
<td>Breastfeeding has benefits</td>
<td>IG n=30, CG n=19</td>
<td></td>
</tr>
<tr>
<td>Babies who are not breastfed feel well</td>
<td>IG n=1, CG n=2</td>
<td></td>
</tr>
<tr>
<td>Breastfeeding works, the baby grows</td>
<td>IG n=14, CG n=11</td>
<td></td>
</tr>
<tr>
<td>It is not easy for all infants to breastfeed</td>
<td>IG n=10, CG n=13</td>
<td></td>
</tr>
<tr>
<td>The cultural norm is that the mother should breastfeed</td>
<td>IG n=24, CG n=16</td>
<td></td>
</tr>
<tr>
<td>It is uncomfortable to see someone breastfeeding</td>
<td>IG n=6, CG n=8</td>
<td></td>
</tr>
</tbody>
</table>

* n= The number of codes in the combined sub-categories
Discussion

The overall aim of this thesis was to explore what assisted mothers in breastfeeding and also mothers’ advice to HCPs about breastfeeding support. The main finding was that support to assist women in continuing to breastfeed is both complex and multifaceted. Factors related to the individual (woman), inner social (partner and infant), outer social (informal support either face-to-face or online) and social support (health professionals, work environment and breastfeeding being regarded as the cultural norm) could all assist the woman in breastfeeding for at least six months (Paper I). Women advised HCPs that they wanted evidence-based support in a sensitive and individualised manner to enable them to reach their own breastfeeding goals (Paper II). The thesis also describes HCP’s self-efficacy in providing support and partners’ experiences regarding breastfeeding. HCPs who received a breastfeeding training programme improved their self-efficacy to provide evidence-based support (Paper III). Partners in the IG as well as the CG reported that they strived to be part of the family and felt it was important that the family’s everyday life was well-functioning. Partners who received structured evidence-based breastfeeding support felt that both parents were important, they felt involved and the family cooperated in the breastfeeding process. Both groups’ experience was influenced by the cultural norm (Paper IV).

The breastfeeding family

Breastfeeding was going well

Australian, Irish and Swedish women perceived that when breastfeeding was going well, it was an important factor to continue breastfeeding for at least six months (Paper I). Swedish women valued when HCPs were calm and gentle and had time to sit down and observe how the infant was latching (Paper II). Successful breastfeeding can improve mothers’ self-efficacy and also help mothers to overcome breastfeeding problems (116). A Danish study found that mothers with high self-efficacy to reach their breastfeeding goal breastfed exclusively for a longer period (53). This thesis shows that the breastfeeding training programme increased HCPs’ self-efficacy to support mothers’ ability to attach their infant to the breast and to have a good position for the infant (Paper III). The findings from Paper IV show that partners in both the IG and
CG wished that the family’s everyday life would be well-functioning. If it was not, partners would question if breastfeeding is worth the effort. A consequence could be that partners undermined women’s decisions to continue (93) when the mother experienced breastfeeding problems.

Knowledge about health benefits

Women’s knowledge of the health benefits of breastfeeding motivated them to continue breastfeeding (Paper I). The Swedish women who had experience of breastfeeding for at least six months advised HCPs to provide parents-to-be with knowledge about the benefits (Paper II). Other studies have reported that first-time mothers did not know what kind of knowledge they needed during pregnancy, and they had few questions about breastfeeding (124). The literature shows that partners often lack knowledge about the health benefits of breastfeeding (85). Moreover, midwives at the antenatal care often focus on preparing pregnant women for birth, and not on breastfeeding (125, 126). However, partners who participated in the IG reported that it was helpful to be guided with fact-based knowledge about breastfeeding during pregnancy. They also believed that it was important that the infant received breastmilk (Paper IV). Breastfeeding education is important, as previous research found that women who receive education were more likely to continue breastfeeding (49, 52). This highlights the importance of step 3 in the Ten Steps (58), stating that parents-to-be should be provided with knowledge about the benefits of breastfeeding. This is in line with the United Nations Convention on the Rights of the Child, which became Swedish law in 2020 (127). The breastfeeding training programme in Paper III increased midwives’ and child healthcare nurses’ self-efficacy to inform parents about the health benefits of breastfeeding for the mother.

Emotional closeness between the mother and infant

The women perceived that emotional closeness with the infant motivated them to continue breastfeeding (Paper I). These findings are in line with a previous report which shows that breastfeeding can influence women’s well-being (13). In addition, breastfeeding may facilitate the interaction between the mother and the infant by increasing maternal sensitivity and social interaction (13). It is important that parents are sensitive and have an appropriate responsiveness when the infant is rooting and suckling (90, 91). When the infant understands that the parents respond to his or her cues, he or she will attach to them (90). HCPs who participated in the breastfeeding support programme increased their self-efficacy in guiding parents to learn about the infant's early signals when he or she wants to breastfeed (Paper III). Partners in both the IG and CG believed that emotional closeness between the mother and infant was an ad-
vantage of breastfeeding (Paper IV). This highlights that the family’s experiences of benefits that motivate them to continue breastfeeding is a broader concept than the health benefits of breastfeeding.

**Partners should be positive and support women’s decisions**

According to the mothers, partners should show positive attitudes towards breastfeeding and not pressure them to give formula (Paper I). However, partners in the CG reported that they did not always respect the mother’s decisions about not providing formula (Paper IV). If one parent undermines the other parent’s decisions, stress levels can increase and influence breastfeeding duration negatively (128, 129). Conflicts between parents can cause the mother to be less sensitive and responsive to the infant’s needs (130). In addition, use of formula at any age of the infant is a well-known factor that is negatively associated with breastfeeding duration (60, 129, 131-133). Our results show that partners with older siblings in the CG felt that they did not have anyone to talk to when they experienced inadequacy in the face of all demands from housework, job, finances and housing (Paper IV). In contrast, partners who received the intervention were satisfied with parents’ communication and believed that they cooperated in the breastfeeding process. Midwives in the IG provided parents-to-be with a breastfeeding plan. It encouraged parents to talk to each other about their expectations, experiences and support needs (Paper IV). A previous report has shown that satisfactory communication between parents decreases the risk of separation between parents (134). This highlights that midwives at antenatal care have an important role in guiding parents to talk to each other during the breastfeeding process.

**Partners striving to be a part of the family**

In contrast to CG partners, IG partners felt happy when both parents were important and involved. IG partners reported that they had created their own relationship with the infant. For example, they had skin-to-skin contact with the infant between feeds or walked with the infant in the stroller without the participation of the mother (Paper IV). This indicates that the intervention increased partners’ interaction with their infant. The partners’ interaction with their infant has a positive association with social, behavioural, psychological and cognitive outcomes in the infants (135). IG partners were often present when the infant was breastfed and experienced that as enjoyable (Paper IV). Previous publications have shown that an improved co-parenting relationship can increase partners’ ability to create a closer bond with their infant and increase their parenting self-efficacy (136, 137).

The results in this thesis show that partners in the IG expressed gratitude when the mother shared housework, so that they could feed the infant with expressed breastmilk (Paper IV). However, if the partner is involved in the
feeding of the infant, it may have a negative effect on breastfeeding duration (47). The women perceived that if the partner shared housework and cared for her, it helped her to continue breastfeeding (Paper I). Mothers often experience housework as tiring (95, 134), and it is important to remember that they often do most of the unpaid housework (37). Pumping breastmilk may compete with breastfeeding (3). Breastfeeding is an unpaid work (37) that positively influences the health of both the mother and infant (1). In line with previous research, and debate in the Swedish media, partners in both groups believed that bottle-feeding enhances bonding with the infant (85, 138, 139). They believed that bottle-feeding facilitates the infant’s attachment to the bottle-feeding partner. However, attachment is considerably more complicated and the infant bonds when the parents are available, sensitive and have an appropriate response to the infant’s needs (90). It is also important to understand that when it comes to attachment and bonding, it is the infant, not the partner, who should feel valuable.

In fact, the co-parenting model does not imply that parents’ role is equal in all areas. Every family should define their degree of equality (93), and parents can set common goals for the breastfeeding (140). It is important that HCPs consider women’s advice about guiding partners on how to create a close bond with the infant (Paper II). Partners in both groups felt frustrated and worthless during the breastfeeding process (Paper IV), and such feelings can lead to low-self-efficacy as a parent (85).

Women’s perceptions of outer social support

Women perceived that sharing breastfeeding experiences with women in their family motivated them to continue breastfeeding when they faced problems (Paper I). It is important that grandparents respect and support women’s decisions (96). Encouragement from significant others can strengthen individuals’ self-efficacy when they are struggling with difficulties (97). It has been suggested that the healthcare system should involve grandparents to facilitate the co-parenting team between generations (96). A study from the US showed that if women perceived that they had support available from the family, it decreased their stress levels and increased exclusive breastfeeding to six months (54). Women from Ireland rated social media support high (Paper I). They appreciated practical advice, emotional and esteem support round-the-clock from other breastfeeding mothers. Individuals’ self-efficacy can increase through role models in social media (141), and such support may be essential for women who lack role models for breastfeeding in their network or in a bigger cultural context. HCPs need to guide parents to social media with evidence-based information and support that women can value and trust (141).
Family’s perceptions and experiences of societal support

Healthcare professionals should provide evidence-based support based on family’s needs

The importance of continuous support from the healthcare system

Women who had breastfed for at least six months perceived that meeting the right HCP, who gave the right advice at the right time, was important (Paper I). Women from Sweden preferred continuous support because they did not always seek support when they faced breastfeeding problems (Paper II). This finding is in line with a previous report which shows that some women may not seek support, even when their well-being is threatened (91). Pain and anxiety can negatively influence an individual’s self-efficacy (97). We know that women often stop to breastfeed early after birth if they experience problems, such as perceptions of insufficient milk supply or infant weight loss (55). A previous study from Sweden shows that continuous support from HCPs decreases women’s experiences of insufficient milk supply and positively influenced the duration of exclusive breastfeeding (26). Partners in the IG, who received structured ongoing support, reported that they felt safe because the child healthcare nurse followed-up on breastfeeding at every visit (Paper IV). This highlights the importance of the healthcare system, which should provide continuous support during the breastfeeding process, in order to provide quality care (57).

Provide individual solutions for breastfeeding problems

In Paper II, Swedish women advised HCPs to provide parents-to-be with knowledge about the normal infant’s behaviour and how they could increase their breast milk production (Paper II). Midwives may provide an idealistic information about breastfeeding to expectant parents, implying that they are unprepared for early breastfeeding problems (56, 138). Mothers and their families, as well as HCPs, often misinterpret unsettled infant behaviour as a sign of insufficient milk supply (5). Women did not perceive that HCPs helped them to solve problems, such as infant weight loss and painful breastfeeding (Paper II). This finding is in line with a previous report (8). CG partners, who received no or little breastfeeding information, were satisfied when the child healthcare nurse recommended the family to introduce formula (Paper IV). They may have believed that such advice was based on evidence. In fact, mothers often stop breastfeeding earlier than desired when HCPs thought that the infant did not gain enough weight (3). Women reported that the child healthcare nurses had a controlling attitude regarding the infant’s growth (Paper II). They recommended formula on loose grounds, instead of supporting mothers to make informed decisions about continued breastfeeding (Paper II).
After the breastfeeding training programme, the midwives and child healthcare nurses in the IG had higher self-efficacy to support mothers to solve breastfeeding problems, such as painful breastfeeding or when the infant did not follow the growth charts (Paper III). Their increased self-efficacy may reflect both increased knowledge and improved support skills. HCPs’ increased knowledge about milk production may have reduced their anxiety when the infant did not gain enough weight. HCPs tried to create a dialogue with families who perceived that their infant was unsettled after breastfeeding or when the mother thought that the milk supply was insufficient.

HCPs encouraged mothers to let the infant breastfeed frequently on demand, to hold the infant skin-to-skin and to carry the infant in a sling as an alternative to formula, if the infant was difficult to settle. On the training day, HCPs discussed case scenarios in which slow weight gain was normalised with help from the WHO’s growth charts for healthy breastfed infants (142). When individuals learn skills, increased self-efficacy will follow (97), and the well-being of the HCPs may increase when they believe that they have the competence to meet the families’ support needs. HCPs are key persons to support mothers during breastfeeding (58, 60). They must, however, have sufficient knowledge, competence and skills concerning breastfeeding problems.

Create a respectful and mutual dialogue with the family
Paper II showed that Swedish women valued when professionals used open-ended questions and listened to the mothers’ experiences, intentions and goals in relation to breastfeeding. The mothers did not want HCPs to have a judgemental approach when they experienced insufficient milk supply or when they were unable to breastfeed exclusively (Paper II). This is in line with a previous report, which highlights the importance of providing HCPs with communication skills, so they can create a respectful and mutual dialogue with parents (65). Furthermore, we found that HCPs who received breastfeeding training increased their communication skills to provide evidence-based care in a sensitive and individualised manner (Paper III). Partners in the IG reported that they were pleased because the child healthcare nurse involved both parents in the dialogue about breastfeeding (Paper IV).

Provide evidence-based care
Swedish mothers have stated that the HCPs at the child health centre need additional knowledge and practical skills to provide up-to-date evidence-based care. When women perceived that they did not receive up-to-date evidence-based care, this negatively influenced their confidence in HCP. As a consequence, they did not listen to the advice of the HCPs or ask questions (Paper II). Step 2 of the Ten Steps states that HCPs should have sufficient knowledge, competence and skills to support breastfeeding (58). Swedish women in Paper II had a high education level and were well informed about breastfeeding, including national and international guidelines. They sought
additional information on the internet, which made them realise that HCPs had deficits in their knowledge.

Women advised HCPs not to pressure mothers to stop breastfeeding at night or introduce solid food before six months. (Paper II). HCPs at the child health centres in Sweden often have negative attitudes towards exclusive breastfeeding for six months (143, 144). In Sweden, HCPs at the child health centres play a key role in guiding parents on when and how they should introduce complementary feeding (17). However, their advice may be influenced by the cultural norms and information from the commercial milk formula and food industry, as well as from their own personal breastfeeding experiences (31, 76, 79, 81). For example, HCPs at the child health centres often believe that night-time breastfeeding is tiring for the mothers (143). However, a recent Lancet series on breastfeeding claim that HCPs need to know that short night-time sleep duration is a normal behaviour for infants in order to prevent recommendations of unnecessary introduction of formula (5).

Further, HCPs often believe that the infant will not be willing to eat solid food if parents do not start with solid food at four months (143, 144). The Swedish National Food Agency introduced the term tiny tastings at four months of age in 2011, and many parents in Sweden follow this recommendation (7, 18). Such advice is, however, in conflict with the national and international recommendations about exclusive breastfeeding for six months (2, 17). One of the reasons for the introduction of tiny tastings at four months was that HCPs at the child health centres in Sweden often gave parents conflicting advice about exclusive breastfeeding for six months (144). However, introduction of tiny tastings before six months of age has a negative association with breastfeeding duration (145, 146). Thus, this non-evidence-based recommendation may have supported a cultural norm that exclusive breastfeeding should only last for four months.

Women advised HCPs to strengthen women’s confidence in breastfeeding so they could make their own choices and reach their breastfeeding goals. Women do not want HCPs to provide advice about stopping breastfeeding after a certain time. They became discouraged, sad and disappointed when HCPs advised them to stop earlier than they wanted (Paper II). In cases when women stopped breastfeeding earlier than they wanted, it can negatively influence their well-being (71-72). In Sweden, the cultural norm is to breastfeed up to ten months (7), but a cultural norm can be changed (147), and the breastfeeding training programme increased midwives’ and child healthcare nurse’s self-efficacy in providing evidence-based support (Paper III). Our breastfeeding programme trained HCPs to provide sensitive individual support in line with the WHO’s recommendations (2) (Paper III).
Breastfeeding being regarded as the cultural norm

Cultural norms affected parents’ perceptions and experiences of breastfeeding (Papers I and IV). Our findings show that if women perceived breastfeeding as the cultural norm, it will influence their breastfeeding for at least six months. Few women from Australia, Ireland and Sweden (Paper I) breastfeed according to the WHO’s recommendations (1, 2, 7). If these women had other breastfeeding women in their network, their continued breastfeeding will increase. Individuals can be influenced by observing and learning from others: “just like you” or role models, which is essential for increased self-efficacy (97, 98).

In Sweden, most women initiate breastfeeding (7), and partners from both the IG and CG believe that breastfeeding is the cultural norm, even if some express disapproval of the norm (Paper IV). An explanation may be that males often have more negative attitudes towards breastfeeding (148), and another that several partners had a low level of education (Paper IV). Women with a low education level, who live with a partner with low education, often breastfeed for shorter periods (1, 36, 49, 51, 52). Such families may have role models who prefer formula feeding in their social network, and they participate to a lesser extent in parental groups (149). If the woman wants to breastfeed and her own network had a negative attitude towards breastfeeding, she did not seek their support (Paper I). A consequence can be that the family does not receive the social support they need, and the woman may hide the fact that she is breastfeeding (150). In addition, parents do not always seek advice from HCPs (150). They often trust feeding advice from commercial sources of information, such as books written by authors regarded as experts (150). In Sweden, partners often want to be an equal parent (84), and both IG and CG partners reported that their positive attitudes towards shared feeding have been influenced by parenting books, and they had read that formula is almost equivalent to breastfeeding (Paper IV). Parents with low education often trust information from commercial milk formula and food industry (150). Thus, breastfeeding support policies must be developed to reach families with lower education as well.

Finally, both IG and CG partners were concerned that the mother would receive negative comments if they breastfeed in public (Paper IV). For families who do not have role models regarding breastfeeding, it is probably extra important that the wider society has positive attitudes and supports breastfeeding. For example, that women feel comfortable breastfeeding in public (4), so families see other breastfeeding women in the wider society.
Women’s perceptions of work environment

The result from this thesis shows that women from Australia and Ireland perceived that the short-paid maternity leave affected breastfeeding duration (Paper I). In Australia and Ireland, women have shorter parental leave than in Sweden. Breastfeeding should not be a lifestyle choice for women (37); however, it is costly to protect, support and promote breastfeeding (4, 37), and the country’s political decisions affect women’s economy and their ability to continue breastfeeding. The Swedish Social Insurance Agency encourages parents to share the parental leave equally (151). Mothers in Sweden take the most parental leave during the first six months (36), and the Swedish mothers in this thesis perceived that they could combine work and breastfeeding (Paper I). However, a systematic review showed that women need support from employers, partners and their families to be able to combine work and breastfeeding (152). It should be noted that many of the women in this thesis have a high education level, and this may influence their perceptions (Paper I). Women in more privileged working roles have higher rates of breastfeeding at six months after returning to work. These women might have flexibility at their work; they can work from their home and may not need to work so many hours (39).

Methodological Considerations

Trustworthiness in qualitative studies (Papers I–II and IV)

Credibility

Credibility relates to the confidence in the truth of the data and its interpretations (153). Pilot interviews were conducted to test the technique, the interview guide and data collection method (Papers I–II and IV). The pilot interviews resulted in minor linguistic changes (Papers I–II) and were included in the data analysis.

Papers I–II purposely recruited women from different social media platforms and local newspapers to include women with various experiences of breastfeeding for at least six months to explore the research questions from different aspects (109). Partners who participated in Paper IV were recruited by using maximum variation purposive sampling by mothers to the partners in this study based on education, age and parity (104, 122). This may have affected the results because several partners had a low level of education. It is also possible that partners in Paper IV did not want to share all their experiences because the interviewer was female. Therefore, partners could choose if they preferred to participate in a telephone interview or keep a diary.

In Paper IV, the researchers combined data from the semi-structured interviews and diaries during pregnancy and after birth (104, 154), which gave access to partners’ experiences of breastfeeding over time.
Another aspect of credibility refers to selecting the most suitable meaning units (110, 122), and Papers I, II and IV include examples of the analysis process. To improve credibility during the analysis process, the research team discussed the coding until agreement was reached (109, 122).

**Dependability**
Dependability refers to the stability of data over time (153); thus, to improve dependability, Papers I, II and IV used semi-structured interview guides based on the aim (104, 122). This helps to pose similar questions to all participants.

**Confirmability**
Confirmability refers to objectivity (153). In Papers I–II and IV, we described the research teams who have different professions as well as experiences of breastfeeding. The research teams also had varying levels of experiences in working with breastfeeding support. In Papers I–II and IV, the research teams were reflective during the data collection and analysis according to their prior understanding and own experience of breastfeeding. The research group had frequent discussions.

In Papers I–II and IV, we conducted telephone interviews, which might have limited the depth of the study (155). Telephone interviews and diaries have disadvantages because body language, and other non-verbal signals, cannot be observed (155). However, participants may feel more relaxed about sharing their experiences in a telephone interview (Papers I–II and IV), and in Paper IV, participants could choose to keep a diary. Furthermore, an advantage of telephone interviews and diaries is that participants do not need to travel (155). In Paper IV, only the partner was present, not the mother, during the telephone interview.

To reduce bias in Paper IV, two researchers coded data separately, and an expert in content analysis, who had no prior knowledge about the intervention, took part in the analysis. Papers I–II and IV provided translated quotes from Sweden and quotes from Australia (Paper I) and Ireland (Paper I) (108, 121, 122).

**Transferability**
Transferability deals with if findings can be transferred to other groups, settings or contexts (153). In Papers I–II and IV, the researchers made a thorough description of the participants and the context to help the readers make their own decisions on transferability. A limitation of Papers I and II was that Australian, Irish and Swedish women were self-selected to participate in response to the recruitment strategies. Women had a high level of education and continued to breastfeed for at least six months. They are not representative of all breastfeeding women in Australia, Ireland and Sweden. Papers I and II recruited women on social media platforms, and this may have influenced the result. A limitation of Paper IV was that the study was conducted in one region.
in Sweden. The result cannot be transferred across different international or cultural contexts. Finally, due to the Covid-19 pandemic, IG and CG partners were not allowed at the antenatal care clinics. This may have influenced our results.

Validity in quantitative research (Paper III)

External and internal validity
External validity refers to the degree to which the study results can be generalised to other individuals and settings (104). Our studies were conducted in a region with a lower socio-economic level than other regions in Sweden, which may have influenced the generalisability. No physicians participated in the breastfeeding training programme, which can be seen as a limitation. We received the following comments concerning reasons for non-participation from heads of the centres: ‘Physicians do not have time allocated for education’, ‘Child healthcare nurses are the breastfeeding experts’ and ‘Physicians do not provide breastfeeding advice’. Non-participation of physicians in breastfeeding training is in line with previous reports from Sweden (77).

Internal validity refers to the degree to which a change in the effect can be attributed to the experimental variable, rather than an uncontrolled confounder (104). It is important to use instruments validated for the group under study. We were not able to identify a valid instrument that measures HCPs’ self-efficacy to provide evidence-based breastfeeding support (Paper III). Thus, we constructed and pilot tested the BSCS instrument. It should also be mentioned that Paper III is a quasi-experimental, as opposed to a randomised, study (104).

Content validity
Content validity refers to the degree to which the questions in an instrument cover the aim and range of the information sought (104). To establish content validity, we first conducted a literature review. Thereafter, the questions were discussed with professionals with extensive clinical experience of breastfeeding support. The instrument was also pilot tested on midwives and child healthcare nurses working at antenatal care clinics and child health centres.

Reliability in quantitative research (Paper III)
Reliability refers to the consistency and dependability of an instrument to measure a variable (104). The relatively small sample size and the lack of reliability testing of the BSCS instrument can be regarded as a limitation (Paper III).
Conclusions and clinical implications

This thesis highlights that assisting women to continue breastfeeding is both complex and multifaceted. The knowledge obtained can help decision-makers to plan and develop breastfeeding support policies. Improvement of all kinds of support ought to be of high priority.

- It is crucial to understand families’ perceptions and experiences of breastfeeding when assisting women to breastfeed for at least six months. If breastfeeding worked well, it motivated and assisted women to continue breastfeeding.
- Mothers perceived that partners should have positive attitudes towards breastfeeding and not pressure women to give formula. HCPs ought to support mothers’ decisions about continued exclusive breastfeeding.
- Midwives and child healthcare nurses have important roles to play in providing structured breastfeeding support. The whole family must be targeted to decrease partners’ feelings of being excluded.
- HCPs need to be aware of partners’ needs to build a close relationship with the infant. Both parents must be involved in a reflective dialogue, where HCPs explain how breastfeeding works and how the partner can be involved without bottle-feeding the infant.
- The evidence-based material and the breastfeeding plan in this thesis can be used to provide women with equal breastfeeding support, since nearly all women attend the individual visits at the antenatal care clinics and the child health centres.
- The breastfeeding plan may be especially important for families where partners have difficulties attending the antenatal visits and parental groups.
- Women without a supporting network can be helped by participation from the extended family in the breastfeeding plan.
- Women advised HCPs to provide evidence-based breastfeeding support in a sensitive and individualised manner to help them to reach their breastfeeding goals. The breastfeeding training programme improved midwives’ and child healthcare nurses’ self-efficacy to provide evidence-based support. HCPs increased their self-efficacy to support mothers in continuing to breastfeed when
the mothers experienced problems with painful breastfeeding or when the infant did not follow the growth charts.

- A national breastfeeding-friendly healthcare system is crucial for women to be able to breastfeed according to their wishes. In Sweden, HCPs at the antenatal care clinics and at the child health centres have long-term relationships with families during the breastfeeding process. Families should be offered equal care regardless of where they live. Our breastfeeding programme can be used to implement individual support, in line with the Ten Steps and the WHO’s recommendations.

- Authorities in Sweden, such as the Swedish National Food Agency and the Swedish Social Insurance Agency, have a great impact on HCP’s advice to parents. They must employ new findings from researchers with deep knowledge in breastfeeding support when they update their recommendations.

- It is important that authorities review the baby food industry and follow up on violations of the WHO code and that health care managers ensure that the HCPs do not interact with the baby food industry.

- Cultural norms affected parents perceptions and experiences of breastfeeding. For families who do not have role models regarding breastfeeding, it is probably extra important that the wider society has positive attitudes and supports breastfeeding.
Future directions

Partners expressed a need to form a close relationship with the infant by sharing the feedings. In future studies, we will also elucidate mothers’ needs and experiences during the breastfeeding process.

Our breastfeeding training programme improved midwives’ and child healthcare nurses’ self-efficacy to provide evidence-based breastfeeding support. Forthcoming studies will evaluate their experiences of the programme and how it affected their attitudes in the short- and long-term. There is also a need to evaluate the programme in a variety of clinical settings.

We have limited knowledge about how foreign-born parents experience the breastfeeding process and how they are affected by the breastfeeding norm in Sweden. Our breastfeeding programme has to be evaluated in different groups of foreign-born parents.
Amning har viktiga hälsofördelar för mammor och spädbarn i hög- och låginkomstländer. Av den anledningen rekommenderar Världshälsoorganisationen (WHO) exklusiv amning i sex månader och delvis amning i två år eller längre. Under graviditeten uppger en majoritet av kvinnorna att de planerar att amma, men de slutar ofta tidigare än de vill eftersom de möter många hinder. Därför är det viktigt att kvinnor ges möjlighet att amma så länge de vill.

Det övergripande syftet med denna avhandling var att utforska kvinnors uppfattningar om vad som hjälper dem att amma och också deras råd till sjukvårdspersonal angående vilket amningsstöd de vill ha. Vidare var syftet att utvärdera ett program för amningsstöd baserat på de tio stegen till framgångsrik amning och WHO:s rekommendationer om amning.

I artikel I användes en utforskande kvalitativ design baserad på kritisk incident-teknik. Huvudfyndet var att det är både komplext och mångfacetterat att stödja kvinnor att fortsätta amma.

I artikel II belyste en utforskande kvalitativ design svenska kvinnors råd till sjukvårdspersonalen om amningsstöd. Mammorna ville att vårdpersonalen skulle ge ett uppdaterat och evidensbaserat stöd på ett lyhört och individpassat sätt för att hjälpa den ammande att nå sina mål.

I artikel III utvärderades ett amningsstödprogram med en före och efter design. Programmet förbättrade barnmorskors och barnhälsovårdsbanker somförmåga att ge ett evidensbaserat stöd in linje med de tio stegen till framgångsrik amning och WHO:s rekommendationer om amning.

Artikel IV använde en utforskande, longitudinal och kvalitativ design. Studien visade att partners som deltog i amningsstödprogrammet och fick strukturerat stöd upplevde att båda föräldrarna var viktiga. De kände sig delaktiga och att familjen samarbetade i amningsprocessen.

Sammanfattningsvis visar avhandlingen att det är avgörande att förstå föräldrars uppfattningar och upplevelser av amning när man stödjer kvinnor att amma. Barnmorskors och barnhälsovårdsbanker har viktiga roller att fylla genom att ge strukturerat amningsstöd under hela amningen. Båda föräldrarna måste inkluderas i syfte att minska partners känsla av att vara utestånga. Amningsstödet bör ske i en involverande och reflekterande dialog, där sjukvårdspersonalen förklarar hur amning fungerar och hur partnern kan vara delaktiv utan att mata barnet med nappflaska.
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Appendix I. Interview guide for Paper I

Factors which enable women to continue breastfeeding for six months

Date                   Code Number

We are seeking women who are currently breastfeeding or have stopped breastfeeding within the past 12 months but managed to breastfeed for at least 6 months. This study is part of an international study comparing the experiences of Australian mothers to Swedish and Irish mothers. Aim. Inform that participation was voluntary and that they could withdraw participation without giving a reason. Questions. NOTES during interview.

Sociodemographic data

**PERMISSION obtained to turn digital recorder on**

QUESTION: What has assisted you in continuing to breastfeed for at least six months?

1. Provide a brief verbal summary of the factors she has discussed
2. Allow the woman the opportunity to add anything that she may feel she missed
3. Ask to rank the top three factors that she perceived were most important in assisting her to continue breastfeeding for six months

(Snowball recruitment) ENCOURAGE THE WOMAN to make her friends aware of this project if they qualify and to feel free to contact us.

QUESTION: Do you have any advice you would like to give healthcare professionals regarding breastfeeding support?

4. Provide a brief verbal summary. Allow the woman the opportunity to add anything that she may feel she missed.
**Appendix II. The BSCS instrument**


1 = Stämmer inte alls  
2 = Stämmer inte särskilt bra  
3 = Stämmer ganska bra  
4 = Stämmer precis

<table>
<thead>
<tr>
<th>Jag är säker att jag kan informera föräldrar om hälsofördelar med amning för barnet</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jag är säker att jag kan ge mammor den känslomässiga hjälp de behöver för att själva fatta beslut om hur länge de vill amma</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan informera föräldrar om hälsofördelar med amning för mamman</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan om det nyfödda barnets tidiga signaler på att hon/han vill amma</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan informera föräldrar om hälsofördelar med amning för barnet</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan informera föräldrar om hälsofördelar med amning för mama</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan informera föräldrar om hälsofördelar med amning för barnets tidiga signaler på att hon/han vill amma</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan hjälpa mammor att fortsätta amma även om barnet inte följer viktkurvan</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan fortsätta amma när hon fått mjölkstockning</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan visa en ammande mamma hur hon kan mata med kopp, sked eller tillmatningsset när det nyfödda barnet behöver ersättning</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan hjälpa mammor att fortsätta amma när de har en smärtsam amning</td>
<td></td>
</tr>
<tr>
<td>Jag är säker att jag kan visa mammor en bra amningsställning</td>
<td></td>
</tr>
</tbody>
</table>
Appendix III. The training programme for healthcare professionals and breastfeeding support programme for parents in the intervention group

1a Training for midwives and child healthcare nurses - part one. Online breastfeeding education before the interprofessional training day (3 hours)

<table>
<thead>
<tr>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding and professional support</td>
</tr>
<tr>
<td>Breastfeeding and health</td>
</tr>
<tr>
<td>Breastfeeding and self-efficacy</td>
</tr>
<tr>
<td>The very first breastfeeding session</td>
</tr>
<tr>
<td>Breastfeeding, skin-to-skin contact and kangaroo mother care</td>
</tr>
<tr>
<td>Attachment, skin-to-skin contact and breastfeeding</td>
</tr>
<tr>
<td>Expressing milk by hand, pumping and supplementation</td>
</tr>
<tr>
<td>How to prevent breastfeeding problems</td>
</tr>
<tr>
<td>Breastfeeding recommendations and the WHO code</td>
</tr>
<tr>
<td>Breastfeeding and complementary feeding</td>
</tr>
<tr>
<td>Breastfeeding patterns</td>
</tr>
<tr>
<td>Breastfeeding and growth</td>
</tr>
<tr>
<td>Breastfeeding, sleep and infant crying</td>
</tr>
</tbody>
</table>
1b Healthcare professionals should reflect on three questions before the training day: (1 hours)

- Personal experiences and attitudes towards breastfeeding
- Evidence-based professional breastfeeding support
- What changes they would like to introduce at their workplace in order to make it easier for mothers to breastfeed
# 2 Training for midwives and child healthcare nurses - part two (8.5 hours)

### 8 am
Welcome, programme for the day, presentation of everyone, background and goal of the project: to provide the family with safe and equal care that is individually adapted to the family's needs in the region. Go through the evidence-based picture and conversation material, the breastfeeding plan and watch the short online breastfeeding lectures for parents.

### 09.30-10.30
In small groups, with midwives and child healthcare nurses in each group (3-5 persons), work on the tasks provided below:
- Personal experiences and attitudes towards breastfeeding
- Evidence-based professional breastfeeding support
- What changes they would like to introduce at their workplace in order to make it easier for mothers to breastfeed

### 10.30-11.30
Rejoin the large group to discuss and present the tasks from the small groups.

### 11.30-13.30
In small groups (2-3 persons), train to use the evidence-based picture and conversation material and the breastfeeding plan. Lunch together in the small groups.

### 13.30-14.45
Read three assigned fall scenarios and discuss in the small groups how you could provide good support to parents. Use the leaflets for parents, the evidence-based picture and conversation material and the breastfeeding plan and Stockholm's healthcare programme for breast complications.

### 14.45-16.10
Rejoin the large group to discuss all the scenarios from the small groups.

### 16.10-16.30
Review and summary. Complete the post-test questionnaire at the end of the training day.
**Fall scenarios**

Elvira is pregnant with her second child. Elvira is doubtful if she wants to breastfeed again. Breastfeeding the former child did not go very well. The last child lost more than 10% in weight and was fed with formula at the maternity ward. The infant needed large amounts and was fed with a bottle. Then the baby didn’t want to suck. When Elvira put the baby to her breast, it just screamed. The beginning of motherhood was not at all like what Elvira had imagined and is influencing the way she feels about her new baby and about breastfeeding.

- Listen to earlier experiences, feelings and thoughts about breastfeeding / feeding the baby.
- Address concerns, guilt, relief
- Does not have to be the same as before
- Ask if Elvira would like to learn more about the infant's behaviour
- Mothers already know a lot about breastfeeding
- Develop a breastfeeding plan together with Elvira/her partner
- Follow up early after delivery and plan for continuous support

Sonya has had her first child two days ago. She calls the antenatal clinic because she needs breastfeeding support. Sonya thinks the baby wants to suckle all the time, “She doesn’t leave me alone”. She says “As soon as I put her down, she starts crying. What should I do to get her full”?

- Listen to Sonya's experience of breastfeeding
- Ask if Sonya would like to learn more about the infant's behaviour
- Normalise the infant's behaviour
- Taking turns with the partner
- Positive mirror
- The size of the newborn’s stomach
- Laid back breastfeeding (rather than seeing breastfeeding as a performance)
- Create a plan for follow ups
You meet Anna (who is pregnant with her first child) and Mats at the visit during pregnancy week 28. They say that they intend to share the feeding of the infant equally after birth.

- Listen and create a reflective dialogue with Anna and Mats
- Involve the partner in other parts
- What is gender equality?
- Explain how breastfeeding works

Aya visits the child health centre with her six-week-old infant. The infant had low blood glucose at birth and was fed with formula. Aya struggles to make breastfeeding work, but the baby feeds almost entirely on formula.

- Listen to Aya’s breastfeeding intentions, experiences and ask what kind of breastfeeding support she wanted
- Breastfeeding plan
- Start over, let the infant go through the later of the nine phases
- Skin-to-skin contact
- Breastfeed on early feeding cues
- A plan for reduce formula?
- Get off the clock
- Supplemental Nursing System (a feeding tube device to provide babies supplementary feedings at the breast)?
Karin visits the child health centre. She has sore nipples. She is crying and has pain when the baby is breastfeeding. After breastfeeding, the nipples bleed.

- Listen, ask open-ended questions in the dialogue about her experiences of breastfeeding
- Breastfeeding history
- Offer breastfeeding observation
- Big latch, how to learn
- Right position for a mother and her baby
- Skin-to-skin contact
- Laid back breastfeeding
- Pain relief?
- Create a plan for follow ups

When Adam was born, he was small for the date; he was born in pregnancy week 36. Adam’s mother pumped out her breastmilk and fed Adam with a bottle. Adam didn’t want to suck. When Adam’s mother put Adam to the breast, he just screamed.

- Listen to the mother, ask open-ended questions in the dialogue about her experiences of breastfeeding and what kind of breastfeeding support she wanted
- Start over, let the infant go through the later of the nine phases
- Skin-to-skin contact
- Laid back breastfeeding
- Try in the morning
- Supplemental Nursing System (a feeding tube device to provide babies supplemental feedings at the breast)?
- Create a plan for follow ups
A mother calls you by telephone, her infant is three weeks. During breastfeeding, the mother has severe pain in the breasts.

- Listen to the mother, ask open-ended questions in the dialogue about her experiences of breastfeeding
- Ask how does the breast/nipples look, delivery/breastfeeding history, fever
- Offer a visit
- Read Stockholm's healthcare programme for breast complications before the visit
- Offer breastfeeding observation
- Big latch, how to learn
- Right position for a mother and her baby
- Skin-to-skin contact
- Laid back breastfeeding
- Pain relief?
- Fungus/other infection, Raynaud's syndrome, tongue-tie, other pain problems?
- Create a plan for follow ups

Aisha visits the child health centre, with her son, who is two months. Aishia is worried as the baby has started breastfeeding very often, both during the day and night in the last week. Especially in the evening, the baby breastfeeds all the time and does not seem satisfied after breastfeeding. She also experiences that the breasts feel empty.

- How do you know that the baby is getting enough milk?
- Normalise
- Skin-to-skin contact
- Encourage breastfeeding frequently on demand
- WHO's growth charts for healthy breastfed babies as the norm for growing
- Negative impact of formula on breastfeeding
Amanda visits the child health centre with her daughter, who is three years old. She has visited the dental care staff who have advised her to stop breastfeeding. The daughter has always been small in stature and is picky with the food.

- What causes cavities?
- Do not problematise breastfeeding
- Breastfeeding norm

Gustav visits the child health centre with his son, who is four months. When the boy was born, he was on the average curve for weight, but he has now slipped down one standard deviation. The boy is breastfeeding exclusively.

- Be observant without spreading anxiety
- How do you know if the child is getting milk?
- Normalise
- WHO's growth charts for healthy breastfed babies as the norm for growing
- If you are worried, talk to a more experienced colleague

Michelle visits the child health centre with her child, who is five months. Michelle says that her daughter has recently started breastfeeding all night and she feels that she is never allowed to sleep.

- Listen to Michelle’s experiences
- Normalise
- How to facilitate when the baby is breastfeeding at night
- Can the family relieve with household chores / siblings during the day
- Temporary phase
- What happens during the day?
- Avoid regulating breastfeeding
Emelie visits the child health centre. You feel that it is difficult to connect with her and notice that she lacks emotional expression. Emelie is a single parent and smokes 10 cigarettes/day. She breastfeeds partially.

- Listen to Emelie and create a dialogue about her breastfeeding experiences and how she is feeling
- Low self-efficacy can be mistaken for low motivation for breastfeeding
- Positive feedback
- Relive guilt regarding smoking
- Encourage breastfeeding
- Many risk factors for not breastfeeding, even more support
- Risk factors for SIDS
The evidence-based picture and conversation material included training in counselling skills: empathetic, reflective listening with open-ended questions, reflect and summarise. Healthcare professionals explore what the breastfeeding family already knows about breastfeeding, ask for permission to offer information and offer information.
At the visit at antenatal care during pregnancy week 28

- Health benefits for mother and baby
- Parents received the breastfeeding plan, and the midwife fills in where to get help with breastfeeding during the breastfeeding period

Parents’ self-studies

- The midwife encouraged parents to read and fill in the breastfeeding plan together and to watch the short online breastfeeding lectures for parents in the breastfeeding plan before the visit in pregnancy week 32
At the visit at antenatal care during pregnancy week 32

- Skin-to-skin contact and breastfeeding for the first time
- Go through the breastfeeding plan with parents:
  - Pregnant mothers’ intentions
  - Parents’ experiences
  - Parents’ expectations
  - What kind of breastfeeding support parents want from their family and healthcare professionals
At the visit at antenatal care during pregnancy week 38

❖ How to tell when your baby wants to feed, and that breastfeeding is working
Follow-up after birth, 2 and 8 weeks after birth

- Mothers' intentions, parents' experiences and expectations and what kind of breastfeeding support parents want from their family and healthcare professionals
- If mothers need more breastfeeding support, professionals should help them to contact the breastfeeding outpatient clinic
The evidence-based picture and conversation material included training in counselling skills: empathetic, reflective listening with open-ended questions, reflect and summarise. Healthcare professionals explore what the breastfeeding family already knows about breastfeeding, ask for permission to offer information and offer information.
Follow-up at every visit during the breastfeeding period

- Mothers' intentions, parents' experiences and expectations and what kind of breastfeeding support parents want from their family and healthcare professionals
- If mothers need more breastfeeding support, professionals should help them to contact the breastfeeding outpatient clinic
Two to four weeks after birth
  - Sleep-deprived

Six to eight weeks after birth
  - Development phases
Three months after birth

- Breastfeeding for the first 6 months

Five months after birth

- Breastfeeding when your baby starts tasting solid food
## Breastfeeding plan (in the following languages Swedish, English, Somali and Arabic)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where to get help with breastfeeding during the whole breastfeeding period</td>
<td></td>
</tr>
<tr>
<td>Advantages to learn about breastfeeding before the baby is born</td>
<td></td>
</tr>
<tr>
<td>Self-studies for parents during pregnancy weeks 28-32: Talk with the partner, family, friends and healthcare professionals about breastfeeding: thoughts, experiences and expectations about breastfeeding</td>
<td></td>
</tr>
<tr>
<td>Self-studies for parents during pregnancy weeks 28-32: Talk with the partner, family and healthcare professionals about what kind of support they need from each other, professionals and their family</td>
<td></td>
</tr>
<tr>
<td>Self-studies for parents during pregnancy weeks 28-32: Fill in the breastfeeding plan during pregnancy: mothers' intentions about breastfeeding, parents' experiences and expectations and what kind of breastfeeding support parents want from their family and healthcare professionals</td>
<td></td>
</tr>
<tr>
<td>Self-studies for parents during pregnancy weeks 32-38: Care routines that can make breastfeeding easier. For example, demand feeding</td>
<td></td>
</tr>
<tr>
<td>Self-studies for parents during pregnancy weeks 32-38: Mothers’ own breastfeeding plan about breastfeeding after birth</td>
<td></td>
</tr>
<tr>
<td>QR-codes to 4 short online breastfeeding lectures for parents in the following languages: Swedish, English, Somali and Arabic- Are there any benefits of breastfeeding?</td>
<td></td>
</tr>
<tr>
<td>How do you know if breastfeeding is working?</td>
<td></td>
</tr>
<tr>
<td>How can the mother experience breastfeeding?</td>
<td></td>
</tr>
<tr>
<td>How could the mother continue to breastfeed?</td>
<td></td>
</tr>
<tr>
<td>For parents who want to know more about breastfeeding: QR-codes to 2 leaflets, only in Swedish: Breastfeeding a good start</td>
<td></td>
</tr>
<tr>
<td>Breastfeeding and sleep well</td>
<td></td>
</tr>
<tr>
<td>Fill in the breastfeeding plan before visiting the child health centre during the breastfeeding period: mothers’ intentions about breastfeeding, parents’ experiences and expectations and what kind of breastfeeding support parents want from their family and healthcare professionals.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix IV. Results for the Breastfeeding Support Confidence Scale on self-efficacy regarding providing support during breastfeeding in the intervention and control groups

<table>
<thead>
<tr>
<th>Statement</th>
<th>Baseline Mean (SD)</th>
<th>Intervention Follow-up Mean (SD)</th>
<th>Change Mean (SD)</th>
<th>P-value</th>
<th>Control Mean (SD)</th>
<th>Compared with intervention at Baseline P-value</th>
<th>Follow-up P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m sure that I can…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Inform parents about the health benefits of breastfeeding for the infant</td>
<td>3.46 (0.55)</td>
<td>3.62 (0.75)</td>
<td>0.15 (0.78)</td>
<td>0.244</td>
<td>3.59 (0.50)</td>
<td>0.350</td>
<td>0.339</td>
</tr>
<tr>
<td>− Give mothers the emotional help they need to decide for themselves how long they want to breastfeed</td>
<td>3.23 (0.58)</td>
<td>3.36 (0.74)</td>
<td>0.13 (0.80)</td>
<td>0.362</td>
<td>3.09 (0.68)</td>
<td>0.433</td>
<td>0.048</td>
</tr>
<tr>
<td>− Inform parents about the health benefits of breastfeeding for the mother</td>
<td>3.41 (0.59)</td>
<td>3.74 (0.44)</td>
<td>0.33 (0.58)</td>
<td>0.002</td>
<td>3.55 (0.56)</td>
<td>0.327</td>
<td>0.121</td>
</tr>
<tr>
<td>− Inform parents about the infant's early signals that he/she wants to breastfeed</td>
<td>3.59 (0.55)</td>
<td>3.77 (0.48)</td>
<td>0.18 (0.45)</td>
<td>0.023</td>
<td>3.70 (0.47)</td>
<td>0.436</td>
<td>0.387</td>
</tr>
<tr>
<td>− Inform mothers about how milk production works</td>
<td>3.33 (0.70)</td>
<td>3.69 (0.61)</td>
<td>0.36 (0.58)</td>
<td>0.001</td>
<td>3.64 (0.55)</td>
<td>0.048</td>
<td>0.493</td>
</tr>
<tr>
<td>− Show mothers how they know that the infant has a big hold on her breast</td>
<td>3.49 (0.60)</td>
<td>3.69 (0.52)</td>
<td>0.21 (0.47)</td>
<td>0.013</td>
<td>3.58 (0.56)</td>
<td>0.541</td>
<td>0.332</td>
</tr>
<tr>
<td>− Help mothers continue to breastfeed even if the infant doesn’t follow the growth curve</td>
<td>3.21 (0.74)</td>
<td>3.49 (0.56)</td>
<td>0.29 (0.77)</td>
<td>0.029</td>
<td>3.12 (0.71)</td>
<td>0.628</td>
<td>0.026</td>
</tr>
<tr>
<td>− Help a mother continue breastfeeding when she's got milk congestion</td>
<td>3.41 (0.59)</td>
<td>3.59 (0.55)</td>
<td>0.18 (0.60)</td>
<td>0.076</td>
<td>3.39 (0.70)</td>
<td>0.904</td>
<td>0.242</td>
</tr>
<tr>
<td>− Show a nursing mother how she can feed with a cup, spoon or feeding set when the infant needs replacement</td>
<td>3.26 (0.79)</td>
<td>3.56 (0.68)</td>
<td>0.31 (0.69)</td>
<td>0.011</td>
<td>3.39 (0.79)</td>
<td>0.404</td>
<td>0.342</td>
</tr>
<tr>
<td>− Help mothers continue to breastfeed when the breastfeeding is painful</td>
<td>2.97 (0.87)</td>
<td>3.36 (0.74)</td>
<td>0.38 (0.63)</td>
<td>0.001</td>
<td>2.97 (0.87)</td>
<td>1.000</td>
<td>0.048</td>
</tr>
<tr>
<td>− Show mothers how to have a good breastfeeding position</td>
<td>3.41 (0.64)</td>
<td>3.69 (0.52)</td>
<td>0.28 (0.51)</td>
<td>0.003</td>
<td>3.52 (0.57)</td>
<td>0.528</td>
<td>0.143</td>
</tr>
<tr>
<td>Index</td>
<td>36.87 (5.91)</td>
<td>39.56 (4.82)</td>
<td>2.68 (4.39)</td>
<td>0.001</td>
<td>37.58 (4.50)</td>
<td>1.000</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Note: SD, standard deviation. Significant P-values are given in **bold**. P-values from a the Wilcoxon signed rank test with continuity correction for tests of no change in the intervention group between measures at baseline and follow-up, and the Wilcoxon rank sum test with continuity correction for tests of differences between intervention and control groups at baseline, and intervention group at follow-up and control group at baseline.
Acta Universitatis Upsaliensis

Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine 1988

Editor: The Dean of the Faculty of Medicine

A doctoral dissertation from the Faculty of Medicine, Uppsala University, is usually a summary of a number of papers. A few copies of the complete dissertation are kept at major Swedish research libraries, while the summary alone is distributed internationally through the series Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine. (Prior to January, 2005, the series was published under the title “Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine”.)