
REPORT



SOCIAL RETURN ON INVESTMENT

PHN-facilitated breastfeeding groups in Ireland

Authors:
Sinead Hanafin, Kieran O'Dwyer,
Mary Creedon, Catherine Clune Mulvaney



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Acknowledgements

This study was part-funded by the Institute of Community Health Nursing (ICHN). The Research Team are grateful to the ICHN and particularly to Ms Anne Lynott, President of the ICHN who facilitated our engagement with Public Health Nurses (PHNs) and who enabled ethics approval for this study.

The Research Team gratefully acknowledge the help, insights and cooperation of the PHNs who made this study possible and who facilitated the research team to take account of the views of a wide range of stakeholders. We are especially thankful to them given their very busy workload and appreciate that they accommodated us in implementing this study.

A special thanks to all the breastfeeding mothers and their family members and friends who took part in this research. We express our appreciation to them for their time and willingness to share their experiences.

“If breastfeeding did not already exist, someone who invented it today would deserve a dual Nobel Prize in medicine and economics”
(Keith Hansen, The World Bank, The Lancet 2016).

Context

This section of the report presents a context for breastfeeding groups based on peer review and grey literature. Key issues relating to breastfeeding policy, benefits of breastfeeding, including economic benefits, breastfeeding initiation and continuation rates, breastfeeding challenges and supports and breastfeeding supports groups are considered.

Breastfeeding policy

The importance of breastfeeding is acknowledged in both international (World Health Organisation and UNICEF, 2009) and Irish national policy. Since 1994, there has been an explicit policy commitment to supporting breastfeeding in Ireland (Department of Health, 1994), more recently updated in 2005 (National Committee on Breastfeeding, 2005) and 2016 (Health Services Executive, 2016). Specific commitments have been made to improving breastfeeding rates in the recently published Breastfeeding Action Plan (Health Service Executive, 2016) as well as in the broader Irish health policy context (Department of Children and Youth Affairs, 2014; Department of Health, 2016; Health Service Executive, 2016)

While significant achievements have been identified in the implementation of breastfeeding policy, many deficits have also been highlighted (Figure 1) (McAvoy, et al., 2014).

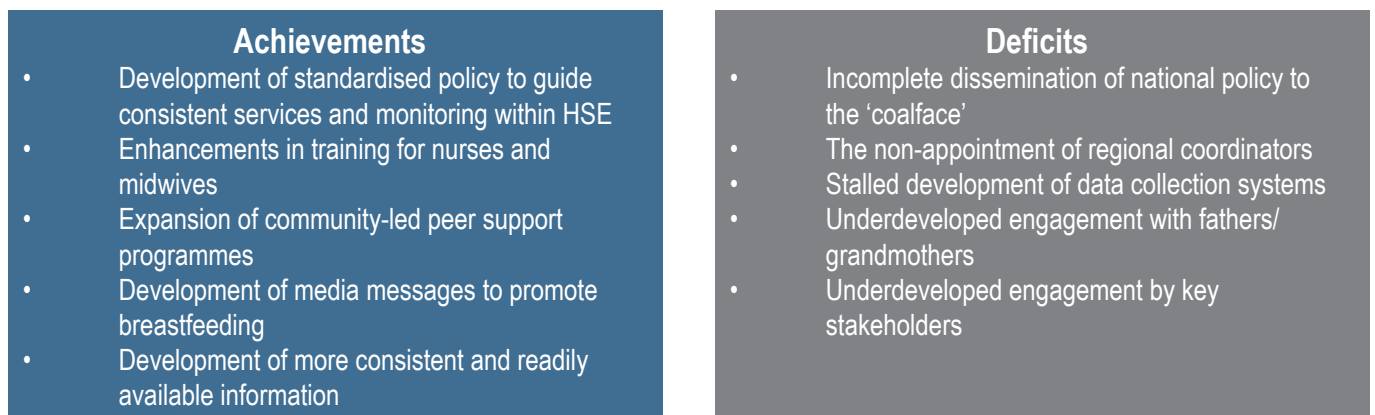


Figure 1: Significant achievements and deficits in the implementation of breastfeeding policy

Normalising breastfeeding has been a core aim of breastfeeding feeding policy in Ireland for several years and this aim has recently been restated in the Breastfeeding Action Plan 2016 – 2021 (Health Service Executive, 2016), which sets out a vision for Ireland as follows:

“A society where breastfeeding is the norm for individuals, families and communities in Ireland resulting in improved child and maternal health outcomes, where all women receive the support that they need them to enable them to breastfeed for longer” (p.9).

The overarching aim of the Breastfeeding Action Plan 2016 – 2021 is to increase breastfeeding initiation and duration rates by supporting and enabling more mothers to breastfeed. Ways in which this is expected to be achieved are through:

- improved governance and health service structures;
- breastfeeding training and skills development;
- health service policies and practices;
- support at all stages of the breastfeeding continuum (from ante-natal to beyond 6 months); and
- research, monitoring and evaluation.

Benefits of breastfeeding

There is universal agreement that breastfeeding is the best source of nutrients for infants in their early life and it has been suggested that breastmilk makes the world healthier, smarter and more equal (The Lancet, 2016). Over the last number of years, there has been a substantial increase in the level of scientific evidence highlighting benefits from breastfeeding. A recent synthesis of findings from 28 systematic reviews and meta-analyses has identified a range of positive outcomes of breastfeeding (Victora, et al., 2016) and a summary of these are presented in Figure 2.

Children

Children who are breastfed for longer periods have lower infectious morbidity and mortality, fewer dental malocclusions, and higher intelligence than those who are breastfed for shorter periods of time or who are not breastfed. Growing evidence also suggests that breastfeeding might protect against being overweight and having diabetes later in life.

Mothers

Breastfeeding benefits mothers by preventing breast cancer, improving birth spacing and may potentially reduce a woman's risk of diabetes and ovarian cancer.

Impact on mortality

It is estimated that scaling up breastfeeding can prevent an estimated 823,000 child deaths and 20,000 breast cancer deaths every year

Figure 2: Key messages from the Lancet Breastfeeding Series Group (Victora, et al., 2016)

Economic benefits of breastfeeding

While there is a substantial amount of literature on the physical benefits of breastfeeding, the economic benefits of breastfeeding have been subject to less review. A synthesis of the literature compiled by the United States Breastfeeding Committee enumerated specific costs as follows: medical costs, costs associated with formula feeding and other intangible costs (United States Breastfeeding Committee, 2002).

Medical costs

The overall costs to the health services are calculated at a minimum of \$3.6 billion paid annually to treat diseases and conditions preventable by breastfeeding. These include:

- Excess use of health care services attributable to formula feeding costing between \$331 and \$475 per never-breastfed infant for lower respiratory illness, otitis media and gastrointestinal illness.
- Hospitalisation from lower-respiratory infections among never-breastfed babies range from 26,585 to 30,750 more than exclusively-breastfed babies.
- \$200,000 spent for each case of necrotising enterocolitis which is almost 10 times more prevalent (10.1%) in formula-fed babies compared with breastfed babies (1.2%).
- Additional healthcare costs for respiratory syncytial virus due to not breastfeeding are \$225 million.
- Additional health care costs for insulin-dependent diabetes are estimated to be a minimum of \$1,185,900,000, but may potentially be much higher.

Costs from using artificial formula

- \$2 billion per year spent by families on breast milk substitutes.
- Costs to support mothers in the special supplemental nutrition programme for Women, Infants and Children (WIC) which are 55% higher for those formula feeding compared with those who are breastfeeding.
- Employment costs if a parent misses three hours of work for the excess illness attributable to formula feeding – the equivalent of one year of employment per 1000 never-breastfed infants.
- 110 Billion BTUs of energy (\$2 million each year for processing, packing and transporting formula).

Other costs of not breastfeeding

- Intangible costs such as illness and death from bacteria associated with feeding powdered infant formulas, which is not sterile.
- 3 to 11 point IQ deficit in formula-fed infants.
- Lower educational achievement for formula-fed infants.
- Longer hospital stays and slower brainstem maturation (IQs 8-15 points lower) in premature infants who do not receive human milk.
- Better vision, fewer cavities in teeth and less malocclusion requiring braces in children who have been breastfed.
- 550 million formula cans with 86,000 tons of metal and 800,000 pounds of paper packaging, added to landfills each year.

The health related findings identified above have been restated in the conclusions of a more recent study on outcomes and costs by Bartick et al. in 2017. They found that suboptimal breastfeeding among non-Hispanic blacks and Hispanic populations is associated with a greater burden of disease among these groups including:

- 1.7 times the number of excess cases of acute otitis media;
- 3.3. times the number of excess cases of necrotising enterocolitis; and
- 2.2 times the number of excess child deaths.

A SROI conducted to determine the prioritisation, implementation and scaling-up of nutrition-specific interventions including breastfeeding supports in Kenya reported a social return on investment of \$71 for every \$1 invested (Kimani-Murage, et al., 2016).

Informed by the findings from the research on benefits of breastfeeding, the Global Breastfeeding Collective have recently published a report detailing the investment case for breastfeeding (Global Breastfeeding Collective, 2017). As with the National Breastfeeding Committee, they argue there are economic benefits in investing in breastfeeding and economic consequences to not doing so. Shekar et al. (2017) set out an investment framework for improved nutrition and calculated that for every \$1 invested in enabling a mother to breastfeed, \$35 are generated in economic returns. They Global Breastfeeding Collective note that if this investment was reached, over 520,000 children's lives would be saved over the next 10 years and the United states alone could save at least \$13 billion per year. The authors estimate that the current level of investment in breastfeeding is abysmally low at only \$335 million in middle and low-income countries. They call for financial investment to:

- fully implement the international code of marketing of breastmilk substitutes and subsequent relevant resolutions;
- improve breastfeeding practices in maternity facilities;
- improve access to skilled breastfeeding counselling; and
- implement national breastfeeding promotion campaigns.

Despite almost 30 years of explicit policy support and commitments to breastfeeding, however, initiation and continuation rates in Ireland continue to lag well behind those of its international counterparts. Consideration is now given to the data on breastfeeding rates.

Breastfeeding rates in Ireland

Breastfeeding rates in Ireland are low, although they have increased over the last 10 years (Purdy, McAvoy, & Cotter, 2017). The 2016 State of the Nation's Children Report presents national data on breastfeeding rates in Ireland on discharge from maternity hospitals (Department of Children and Youth Affairs, 2016). The findings show that in 2015:

- 58% of infants were breastfed on discharge from hospital;
- 47.7% who were exclusively breastfed; and
- 10.3% who were fed using a combination of bottle and breastfeeding.

While these data represent an increase in the overall rates over a five-year period from 2011 (where 46.4% of mothers exclusively breastfed and 8.6% were using combined breastfeeding), Brick and Nolan (2013) suggest this is mainly due to increasing maternal age and an increase in the number of mothers from Eastern Europe resident in Ireland. The data also highlights extensive differences according to social class (77% of higher professionals breastfed on discharge from hospital compared with 36% of mothers who were unemployed) and by age (just over one third (36.8%) of young people aged 20 – 25 years breastfeeding compared with between 51% (25-29 years) and 64% (35-39 years) of older mothers).

Across Europe, breastfeeding initiation rates are considerably higher than those in Ireland with countries such as Portugal (98.6%) Latvia (96.9%), Slovenia (97%) and Luxemburg (88%) all reporting substantially higher initiation rates of breastfeeding in the European Perinatal Health Report (Euro-Peristat Project, SCPE Eurocat and Euroneostat, 2013). These differences are also reflected in the Irish perinatal data where non-Irish national mothers, particularly from Europe and America, are much more likely to be recorded as breastfeeding at birth. Almost 80% of mothers from the EU 15 countries (excluding Ireland and the UK) and more than 70% of mothers who give their nationality as American are recorded as breastfeeding on discharge from hospital in Ireland. It appears from the data that the low levels of breastfeeding in Ireland impacts on non-Irish national mothers and the perinatal statistics report that while for Irish women, there was an increase of 4.1 per cent in the proportion of women recording exclusive breastfeeding over the decade, mothers from the UK, EU, Asia and Africa all record a decrease in the proportion of women recording exclusive breastfeeding over the same period.

Breastfeeding continuation rates

The World Health Organisation recommends exclusive breastfeeding for the first six months of the infant's life (World Health Organisation, 2001). Breastfeeding continuation rates have been reported by McAvoy et al. (2014) in an analysis of data from the Growing up in Ireland study, the national longitudinal study of children and youth in Ireland. The findings show that of those women who initiated breastfeeding:

- only half were still breastfeeding at three months;
- only a quarter were still breastfeeding at six months; and
- there is a sharp drop-off at the six-month point.

Mothers who adopted combined feeding soon after birth were much more likely to cease breastfeeding in the first three months.

Breastfeeding challenges and supports

While breastfeeding is acknowledged as a biological and sociocultural practice and breastmilk is the physiological norm for infant nutrition, many women do not achieve their own goal of initiating and/or continuing to breastfeed. Determinants of breastfeeding initiation include a wide range of socio-demographic influences (e.g. social class, age, ethnicity), infant characteristics (e.g. gestational age, birthweight, jaundice), as well as maternal support networks, attitudes to breastfeeding and confidence in ability to breastfeed (Alberdi, et al., 2017). Intention to breastfeed, however, is generally determined by mothers before conception and/or during pregnancy and it has been shown that prenatal breastfeeding education can help improve breastfeeding rates (Sriraman & Kellams, 2016).

Early discharge from hospital following the birth of an infant is now a common phenomenon and in Ireland, a mother's average length of stay in hospital was recorded at 3.4 days in 2014 (Healthcare Pricing Office & Health Service Executive, 2017). While early discharge has been identified as improving maternal satisfaction by ensuring greater autonomy and facilitating family support in a comfortable home environment (James, Sweet, & Donnellan-Fernandez, 2017), it is clear that milk production is not established at this stage. Consequently, the opportunities for direct and immediate access to professional support in the hospital environment are limited. The National Infant Feeding Survey examined mothers' reasons for stopping breastfeeding and reported the most commonly cited reasons as follows (Begley, et al., 2008):

- 'busy lifestyle/other children' (25%);
- 'perceived insufficient milk supply/ hungry baby' (20.3%);
- 'lack of facilities or uncomfortable feeding in public' (17.2%); and
- 'felt it was time to stop/breastfed as long or longer than intended' (13.0%).

Other reasons included problems with breastfeeding, returning to work and lack of support for breastfeeding/wanted partner to share feeding (Begley, et al., 2008). In a critical appraisal of what women value in terms of breastfeeding initiation and support, James et al. (2017) identified seven values. These were:

1. trust and security;
2. consistent advice;
3. practical breastfeeding support;
4. breastfeeding education;
5. comfortable environment;
6. positive attitudes and emotional support; and
7. individualised care.

The literature shows that women report the early weeks of breastfeeding as being particularly difficult (Burns & Schmied, 2017) and physical problems such as mastitis or thrush, improper latch, nipple pain and concerns about milk supply as well as tiredness have been cited as reasons for discontinuing breastfeeding (Anstey, et al., 2017). A qualitative study with 16 women reported that cultural attitudes in Ireland, as well as inadequate or inconsistent advice from health professionals, posed the biggest challenges mothers had to overcome in order to achieve exclusive breastfeeding at six-months (Desmond & Meaney, 2016). Others have highlighted the importance of: providing practical and emotional support in a way that promotes breastfeeding as normal; providing access to a “knowledgeable” friend and responsive support; and respecting maternal agency, acknowledging a woman’s right to choose what works best for her (Burns & Schmied, 2017).

A Cochrane review of the literature on breastfeeding supports included 73 trials from 29 countries involving 83,246 women (McFadden, et al., 2017). The authors concluded that when breastfeeding support is offered to women, the duration and exclusivity of breastfeeding is increased. Characteristics of effective support identified by the authors are outlined in Figure 3.



Figure 3: Characteristics of effective support for breastfeeding

A recent study on the provision of breastfeeding support by trained professionals found that mother's perceptions of the support provided was influenced by whether the women: adopted a position of consult experts versus one of deferring to feeding authorities; experienced difficulty interpreting their own and their baby's bodies; and experienced the expertise of health workers as empowering or disempowering (Leeming, et al., 2015).

Various types of breastfeeding support are available and examples from the UK identified by Fox, McMullen, and Newburn (2015) include: one-to-one support from midwives, nurses, and qualified breastfeeding counsellors; breastfeeding support groups; telephone helplines; and the Baby Café network of community-based breastfeeding support services, which includes expert one-to-one support from skilled professionals combined with group support from volunteers, peer supports and other breastfeeding mothers.

Breastfeeding support groups

Group support for breastfeeding has been promoted as an important component of breastfeeding support and a variety of different models for such groups exist (World Health Organisation, 2003). The evidence in respect of the effectiveness of these in increasing breastfeeding continuation rates is mixed.

A Scottish randomised controlled study on the implementation of a policy to provide community breastfeeding groups by professionals reported a decline in breastfeeding rates in three of the seven sites included in the study (Hoddinott, Brittin, & Pill, 2010). The authors suggested that in the localities where breastfeeding rates declined, the focus was on solving problems such as unsuitable premises, geographical barriers to inter-professional communication, high workload and low morale. This compared with areas where the rates did not decline and it was noted that they did not have many of the negative aspects of place (including deprivation) and could focus on providing leadership, multi-disciplinary policy implementation and reflective action cycles. A more recent Irish study on the implementation of a feasibility multi-dimensional breastfeeding-support intervention in Ireland included a postnatal breastfeeding support group where one-to-one consultation with a lactation consultant was provided (Alberdi, et al., 2017). This study reported positive findings including high breastfeeding continuation rates and maternal satisfaction. Other elements of the intervention included an antenatal class, a one-to-one breastfeeding consultation with a lactation consultant after birth, access to a breastfeeding helpline and online resources. Positive findings were also identified from a qualitative study of seven mothers attending a PHN-facilitated breastfeeding group in Ireland where it was concluded that overall mothers reported very positive experiences of the group (Creedon, 2013).

Findings are also mixed in terms of peer support. A systematic review of the effectiveness of peer support for breastfeeding continuation by Jolly et al. (2012) reported that while peer support can be effective in low or middle-income countries, this is not the case in high income countries. The authors also found that peer support of low intensity is not effective. A different finding was identified in a systematic review and meta-analysis undertaken by Shakya et al. (2017) where, in addition to increases in exclusive breastfeeding at three months in low and middle-income countries, peer support was also identified as increasing exclusive breastfeeding at three months in high income countries. In a mixed methods evaluation of peer support in one area of the UK, Ingram (2013) reported a small but non-significant increase in breastfeeding rates (particularly exclusive breastfeeding). The findings also showed that mothers felt the peer support increased their confidence to breastfeed while the peer supporters found the contacts rewarding, enjoyable and important for mothers

A combination of peer support with expert professional support has been evaluated in a study by Fox et al. (2015), with positive findings reported. The study was conducted with mothers (n=51) attending eight Baby Café breastfeeding support groups across the UK. They found that mothers valued the combination of expert professional and peer support provided and emphasised the value of social support from other mothers in enabling them to continue feeding. Similar type findings were recorded by Baño-Piñero et al. (2017) who collected survey data from 430 breastfeeding mothers (response rate 86%). Their findings suggested that mothers who clarified their doubts and discussed their problems with health professionals and/or breastfeeding support networks were more likely to breastfeed for a longer duration compared with those who did not.

PHN-facilitated support groups

The present study focuses solely on PHN-facilitated breastfeeding groups, although a range of other types of groups are available in Ireland, including internet breastfeeding forums and peer-led support such as those provided by the La Leche League⁵ and Cuidiú⁶. Many PHNs are midwives since this was a requirement of entry to the Public Health Nursing course prior to 2006 (Hanafin, Healy, & Pye, 2014). In addition, all PHNs must have undertaken the 20-hour breastfeeding education course for hospital and community health professionals approved by WHO and UNICEF (Nursing and Midwifery Board of Ireland, 2015). All PHNs are also required to update their knowledge on a regular basis and ongoing courses are provided through the HSE Centres for Nurse and Midwifery Education (Centre for Nurse and Midwifery Education HSE West, 2017). Breastfeeding groups facilitated by PHNs have been in place for several years, although little is known about the extent to which these take place or of their impact. This research, part-funded through the Institute of Community Health Nursing, focuses on breastfeeding groups facilitated by PHNs and specifically on their impact on mothers.

While breastfeeding support groups facilitated by PHNs have been in place for many years, little is known about the extent to which they are available. A study undertaken by Leahy-Warren, Mulcahy, and Phelan (2009) on PHN support services for breastfeeding in Ireland reported that:

*“Two-thirds of PHN respondents indicated that they facilitate breastfeeding support groups to varying degrees”
(Leahy-Warren, et al., 2009, p.82).*

These findings, however, are based on a convenience sample of 204 PHNs and, consequently, may not be fully representative of all PHNs. A study by Creedon (2013) provides insight into the mechanisms through which breastfeeding can be normalised through group support. These include socialising, sharing knowledge, seeking information, practical support, overcoming embarrassment and confidence building) and is helpful in providing a better understanding of the benefits of the group. Nolan et al. (2017) undertook a quantitative survey of 96 mothers attending nine randomly selected PHN-facilitated breastfeeding support groups in one area of the country. Findings from this study suggested that mothers valued support from the PHN at the early stages of breastfeeding but preferred peer support as breastfeeding progressed. The timing of the group, atmosphere and availability of refreshments were also identified as important.

Summary

In summary, there is a general consensus that breastfeeding is a biological and sociocultural practice and that breastfeeding is the physiological norm for infant nutrition, with abundant support for this reflected in both national and international policy. The economic benefits of breastfeeding, while subject to limited review, include reductions in medical costs, such as costs of using artificial formula, and other more intangible costs, such as reduction in illness and death, and an increase in cognitive functioning. While some important achievements have been identified and breastfeeding initiation and continuation rates in Ireland are improving, nevertheless these rates remain considerably low compared with rates in other EU countries. In 2015, for example, only 58% of infants were breastfed on discharge from hospital and in a longitudinal study analysis published in 2014, only half of those who initiated breastfeeding were still doing so at three months.

A Cochrane review on breastfeeding identified a number of characteristics of effective support. Effective support is offered as standard by trained personnel and includes ongoing scheduled contact, which is tailored to the setting and the needs of the group. Support may be offered by professional or lay/peer supporters or both and face-to-face support is better for women exclusively breastfeeding. Support is also more effective in settings with high initiation rates. Previous research findings focused on improvements in breastfeeding continuation rates relating to both peer- and professional-led group support have reported mixed results. Studies in Ireland examining the experiences of mothers in breastfeeding groups facilitated by professionals, including PHNs, have reported positive findings. This study focuses on breastfeeding groups facilitated by PHNs, taking account of outcomes and experiences of key stakeholders, as well as the social return on investment.

5 <https://www.lalecheleagueireland.com/groups/>

6 https://www.cuidiu-ict.ie/whycuidiu_WhatWeDo

Methodology

A need to find better ways to understand the social, economic and environmental value of services provided has led to the development of more qualitative approaches to taking account of measures that are relevant to stakeholders. Social Return on Investment (SROI) provides a framework for measuring and accounting for the broad concept of value by measuring changes in ways that are relevant to the people or organisations that experience or contribute to it. It is about value and it enables a ratio of benefits to costs to be calculated so that, for example, a ratio of 3:1 indicates that an investment of €1 delivers €3 of social value. SROI is based on seven principles and these underpinned the approach to this study (Figure 4).



Figure 4: Principles of Social Return on Investment (Nicholls, et al., 2012)

Aim and objectives

The overall aim of this project is to estimate the value of PHN-facilitated breastfeeding support groups. The objectives are threefold and these are:

- to describe the structures, processes and activities of breastfeeding support groups;
- to assess the impact and outcomes of the support on key stakeholders; and
- to undertake a SROI analysis.

Theory of change underpinning the study

The theory of change is a specific and measurable description of a social change initiative which represents the belief about causal relationships between certain actions and desired outcomes (Anton & Temple, 2007). In this study, the expected theory of change was developed through an examination of the literature, discussion within the research team and confirmed with stakeholders throughout the process.

The PHN-facilitated breastfeeding groups aimed to provide support, knowledge and advice to breastfeeding mothers and through that to improve maternal confidence and capacity to breastfeed. As a result, mothers may choose to breastfeed for longer and both mothers and infants would be healthier; thus, resulting in decreases in medical costs and reduced formula feeding costs. Mothers would also have opportunities to meet other mothers and through that develop social networks. In addition, through the facilitation process, PHNs would be more knowledgeable, have higher levels of job satisfaction and provide a higher quality service.

Processes involved in the implementation of the study

A multi-stage approach was adopted to the implementation of the study and the research team were assisted by the Institute of Community Health Nursing Child and Family Group who nominated a PHN with expertise in both research and practice of facilitating breastfeeding groups. The process adopted followed the steps required in a SROI as follows.

Step 1: Stakeholder mapping

A mapping exercise, based on preliminary interviews with PHNs and mothers, took place in respect of key issues of relevance to the project and a stakeholder map was developed. At each of the following interviews that took place, groups and individuals were asked to identify if anyone else was affected by the breastfeeding group and three additional groups were identified, including partners, other family and friends, and PHNs who do not facilitate a breastfeeding group but who have mothers in their care who attend.

Step 2: Scoping review of literature

Based on initial interviews, a scoping review of literature was conducted. Areas in the review included: breastfeeding policy; benefits of breastfeeding, including economic benefits; breastfeeding rates; challenges and supports, including breastfeeding support groups; and PHN involvement.

Step 3: Collection of information from primary and secondary stakeholders

This step involved the researchers' attendance at breastfeeding groups, undertaking interviews and collecting surveys. Attendance at six randomly selected breastfeeding groups facilitated by a PHN(s) formed the basis for much of the data collection and a snowball sampling approach was adopted. Each PHN facilitator and mothers attending the breastfeeding group who consented to take part were interviewed and asked to identify other stakeholders who benefited from the group. These individuals were then interviewed. In addition, PHNs who had agreed to take part in the study but who were not selected through the random sample were asked to complete a questionnaire. Two managers were also interviewed along with one PHN attending a group that had ceased. Partners of mothers attending a breastfeeding group and other family members took part in a questionnaire survey (Table 1 and 2).

Interviews

In total, 75 individual, joint, and focus group interviews were held with participants (Table 1). With the exception of three interviews, all interviews took place on a face-to-face basis. The first interviews with PHNs and mothers were used as a basis to develop the preliminary logic model for each of the various stakeholder groups and to understand how attendance at the group resulted in positive or negative changes for them. This allowed for the development of specific questions and a short questionnaire to be created. All interviews were audio-taped and transcribed.

Table 1: Number and type of interviews by stakeholder group

Stakeholder	Method of interview	Number of interviews	Number of participants
PHNs who facilitate a breastfeeding group	Individual interview	3	3
PHNs who facilitate a breastfeeding group	Joint interviews ³	3	6
Mothers attending a breastfeeding group	Focus group interview	10	61
PHNs who do not facilitate a breastfeeding group but have mothers in their care who attend	Individual interview	3	3
PHN management	Individual interview	2	2
TOTAL		20	75

Questionnaire surveys

Questionnaire surveys with relevant stakeholders (n=139) were undertaken and these questionnaires focused on the quantification of material issues arising according to stakeholder group (Table 2). Nearly all 75 participants who took part in the interviews completed a questionnaire at the end of the interaction.

³ Joint interviewing involves one researcher talking to two people together for the purposes of collecting information about how the pair perceive the same event. <http://sru.soc.surrey.ac.uk/SRU15.html>

Table 2: Number of stakeholders and type of quantitative survey

Stakeholder	Method of data collection	Number of participants
Mothers attending a breastfeeding group	Face-to-face and online survey	104
Partners of mothers attending a breastfeeding group	Online survey	11
Other family members and friends of mothers attending the breastfeeding group	Online survey	5
PHNs who facilitate a breastfeeding group	Online survey	11
PHNs who do not facilitate a breastfeeding group but have mothers in their care who attend	Online survey	8
TOTAL		139

Step 4: Analysis, synthesis and integration of data

Quantitative data were analysed using descriptive statistics and qualitative data analysed using a thematic approach. The data were integrated using a process of method and stakeholder triangulation. The main focus of the analysis was on:

- inputs, activities, outputs arising from the breastfeeding group and
- impact on self and others.

Step 5: SROI analysis

SROI analysis is a form of cost-benefit analysis where the emphasis is on the value rather than money. This means that in order to assess whether a project is good value for money, all the costs of a programme are reviewed against the value of the outcomes that occurred as a result of the programme. This aspect of the process analysed the outcomes of the field research, which included quantitative and qualitative data, as well as undertaking further desk-based research to support the identification of relevant proxy valuations and discounts. In addition to taking these findings into account, the SROI analysis also focused on:

- displacement, or anything that does not take place because of the group;
- drop-off, any decrease in benefits over time; and
- deadweight, the extent to which the outcomes would have happened anyway.

The elements of this SROI are further explained in the introduction to the chapter on SROI in this report.

Ethical approval

Ethical approval for the study was sought and received through the ICHN Research Ethics Committee. The conduct of the study paid particular attention to issues of data protection, confidentiality and anonymity, and providing resources for sensitive issues arising.

Limitations

This research has followed best practices in SROI and the protocol outlined in the ethics submission. The absence of comprehensive information about the availability of PHN-facilitated breastfeeding support groups, however, means that it is not possible to determine whether those randomly selected for inclusion were similar to all breastfeeding support groups in Ireland. Nevertheless, a review of the limited literature available on Irish PHN-facilitated breastfeeding groups and the discussion with managers identified many common elements in those that were, and were not, included. In addition, information was not available about, or collected from, mothers who had stopped coming to the breastfeeding support groups. While there are many reasons mothers may stop attending (e.g. stopped breastfeeding, gone back to work, does not have time to attend), dissatisfaction with the group may also be a factor.

Summary

In summary, the methodological approach to this study was guided by the principles of Social Return on Investment (SROI) which ensures a focus on: involving stakeholders; understanding changes; valuing the things that matter; only including what is material; not over-claiming; being transparent; and verifying the result. Both qualitative (n=75 participants in one-to-one, joint and focus group interviews) and quantitative approaches (n=139 surveys) were adopted to collect data. In total, 104 different mothers attending breastfeeding groups, 11 partners and five other family members took part. In addition, 11 PHNs who facilitate a breastfeeding group and 8 PHNs who do not facilitate a breastfeeding group but who have mothers in their care who attend also took part. A further two PHN managers also participated.

Ethical approval was sought and received for the study and issues relating to anonymity, data protection and confidentiality were of paramount importance throughout the study. The process adopted was coherent with the SROI methodology and this was strengthened by the inclusion of multiple stakeholders. The absence of a national database of breastfeeding groups and the inability to include mothers who had left the breastfeeding groups are limitations to this study.

Findings: Overall stakeholder views

This section considers the overall views of key stakeholders and takes account of interview data as well as information emerging from the open-ended questions on questionnaires. All stakeholders were generally positive about attending the breastfeeding group and described it as “brilliant”, “really helpful”, “great”, “a good way of getting support” and “a fantastic way for new mothers to meet each other”. One mother noted that:

“It is a brilliant support. It’s great that it’s provided free of charge because I think especially new mums, they need to...I think that you need some sort of support to know that you’re not doing everything wrong, that other people are making the same mistakes” (Mother, Group 2).

Another mother noted that it made a very big difference to her mental health expressing how: *“Literally. It saved my mental health”.*

It was noted that it was beneficial to have a breastfeeding group because a lot of people can be “negative” or “doubtful” about breastfeeding and were not supportive of breastfeeding in general. Being involved in the group gave them the confidence to persevere despite other’s opinions. Other stakeholders referred more generally about people being negative about breastfeeding and highlighted the importance of having a safe space where mothers can breastfeed.

PHNs not directly involved in the group also reported that the group is highly valued by mothers, their families and themselves. In response to a question of whether any positive impacts from the breastfeeding group had been experienced, one grandmother noted:

*“Glad to know my daughter is well advised and supported - breastfeeding can be a lonely business; very glad to learn of huge improvement in support, care and information for breastfeeding mothers since my own babies in 1970s; I didn’t feel the need to overload my daughter with advice or warnings when she was so well advised already. In fact, felt supported too, with my grandmotherly anxieties”
(Family/friend survey).*

Only a small number of negative comments relating to overall breastfeeding support group were identified. In focus group interviews, two mothers noted that their friends who did not breastfeed felt excluded and in an interview with one mother she spoke of not being comfortable sharing with her peers that she had stopped breastfeeding exclusively. She had, however, indicated it to the PHN. Only one family member reported negative views of the breastfeeding group with writing that:

*“My partner compares herself and her struggles to others in the group and feels insecure and inferior to them as she struggles with depression and anxiety”
(Family/friend survey).*

In summary, the overall views of stakeholders in respect of the breastfeeding group were very positive and while a small number of negative comments were made, these were rare.

Findings: Structure and inputs

This section considers the issues arising in respect of the structure and inputs emerging and identifies the facilities, costs, time and people involved in the breastfeeding groups.

Alternatives to the PHN-facilitated breastfeeding group

Some consideration was given to alternative sources of support in the event the breastfeeding group was not available. A range of other options were identified by PHNs and mothers throughout this research and these included:

- Peer-led breastfeeding groups, such as Cuidiú, although it was noted that they were often held in people's houses where it might be difficult for people to just arrive without a specific invitation.
- PHN weighing and child health clinic which are generally available in areas. However, there is not a support group approach to these clinics and mothers do not generally engage or interact with each other.
- In a small number of cases, it was noted that the local maternity hospital had clinics and these could be accessed until the infant was a certain age, usually six weeks.

This research focuses only on those breastfeeding groups facilitated by PHNs, some of whom were lactation consultants.

Facilities

In this study, a range of different locations for holding PHN-facilitated breastfeeding support groups were identified, including a purpose-built meeting room in a primary care centre, a church hall, a library, and a community centre. The use of purpose-built rooms was helpful and this was especially the case where the surroundings were warm and comfortable and where there was sufficient room for all the mothers and babies. However, challenges were also identified in respect of some venues where rooms were described as too "overcrowded", with mothers and babies "squashed", and where the venue was "too hot" or "too cold". One mother noted, and others in the group agreed:

"I suppose this is a small room, and some days we've been here and it's really busy, and you kind of nearly, I remember it was a couple of weeks ago I came out and went 'Oh my god, it's packed' you know, like it was just, it gets very warm"
(Mother, Group 8).

At another group a mother noted:

"The room itself is not great. I mean, I know it's the best that they have, but I'd like a room where we have things - maybe coffee served even if you have to pay for it. It would be nice. We're kind of crammed in there and...It's not conducive to a conversation"
(Mother, Group 9).

At a different breastfeeding group, it was noted that the group had moved to a smaller venue because at the original one was "very cold" and "could be freezing". A lack of changing mats was identified by mothers in one group as a problem.

A number of mothers highlighted the location of the group noting they were able to walk to the group and therefore did not incur any costs as a result. However, parking was an issue at some groups, however, and at one group, mothers noted that "parking is so bad" and "so difficult" that it was "off-putting".

In general, having a central location that was warm, comfortable, of the right size and with the right facilities that could be easily accessed by mothers was identified as positive and important.

Mothers attending group

Almost two-thirds of mothers attending the PHN-facilitated groups were first-time mothers (62%; n=64) and a further 6% were breastfeeding for the first time. The remaining mothers (33%; n=34) had breastfed before. The vast majority of mothers were aged 31 to 40 years (85%; n=87), while 13% (n=13) were aged between 21 to 30 years. Only 3% (n=3) were aged over 40 years. Almost all mothers had completed third level education (93%; n=96), while the highest level of education for 6% (n=6) was leaving certificate and 1% (n=1) junior certificate. Although most mothers were born in Ireland (84%; n=87), one in every six (15%) were born in a different country, mainly from the European Union.

About three quarters (72%; n=73) of mothers felt they “got enough help” from family and friends, while 17% (n=17) reported they did not get enough help. A further 8% (n = 8) reported they did not get any help at all, while 3% (n=3) reported they did not need any help.

Almost all mothers reported their health was excellent (44.5%; n 45), very good (43%; n=43) or good (12%; n=12). The findings were similar in terms of their baby’s current health where 80% (n=80) reported their baby was “very healthy, no problems” and 19% (n=19) reported their baby was “healthy, but (had) a few minor problems”.

PHNs involved in facilitating breastfeeding groups

This study focused only on breastfeeding groups facilitated by PHNs. Eleven PHNs who were directly involved in facilitating a breastfeeding group on a regular basis provided information about themselves. A majority (40%; n=4) had been facilitating a breastfeeding group for more than five years, 30% (n=3), had been facilitating for between one and five years, and 30% (n=3) had been involved for less than 1 year.

Qualifications in breastfeeding

Four PHNs who took part in the in-depth interviews for this study had undertaken the required training need to become a lactation consultant through the International Board Certified Lactation Examiners (IBCLE) and one additional PHN was in the process of completing the training. This qualification is globally recognised qualification of expertise in breastfeeding assistance. The preliminary training for this requires the PHN to :

- undertake a minimum of 90 hours lactation specific education within last 5 years;
- complete a minimum of 1000 lactation specific clinical hours within the last 5 years; and
- successfully complete an exam which is set by the IBCLE.

Lactation consultants must also undertake continuous professional development each year. Being a lactation consultant was valued by mothers, as well as other PHNs, and it was noted that they were able to operate as a resource to others. One PHN/lactation consultant noted that:

“I think it’s very important for any of the more complex cases. Definitely that knowledge, and you’re sharing it with your colleagues. Definitely for the more complex cases”
(PHN, Area 1, individual interview).

While the remaining PHNs were not qualified as lactation consultants, they had all completed a range of training and education in the area. These included:

- the 20-hour breastfeeding course facilitated through the HSE;
- attendance at breastfeeding study days; and
- six-hour breastfeeding update.

Some PHNs reported they were also registered midwives and had undertaken breastfeeding training during the course of their studies as both PHNs and midwives.

Approaches to PHN attendance at breastfeeding groups

A number of different approaches were adopted to PHN staffing of the breastfeeding groups. These included:

- one PHN (generally a lactation consultant) who may or may not be joined by another PHN usually on a rota basis;
- two PHNs who remain constant over time; and
- a rota of PHNs who facilitate a group on a regular basis (four to eight weeks).

In some cases, one PHN had responsibility for facilitating the group on an ongoing basis and, where this happened, the PHN was a fully qualified lactation consultant. In other cases, the breastfeeding group was facilitated by two PHNs who also remained constant. These PHNs were very well known to mothers attending the group and were referred to by name and in very warm terms. One mother noted that: “everybody knows [name of PHN]” while another mother recalled:

“The hospital gave me the list of all of the groups in [name of county] and they actually did say that the one in [name of group] by [name of PHN] is the very best.” (Mother, Group 8).

There was not a consensus about this, however, and both PHNs and mothers suggested there were pros and cons of having the same person involved. In areas where the same nurse was involved, however, there were many references to the individual by name and many examples given of the type of assistance offered, giving the sense of strong relationship between mother and nurse. In cases where the same nurse was not involved on an ongoing basis, there was also positive commentary with one mother noting:

“.. one person can give you advice, you’ve tried this and then other person give you different advice and you try that. It’s nice” (Mother, Group 4).

Impact of breastfeeding group on PHN caseload

PHNs were asked how many hours of their time each week was spent on the breastfeeding group (preparing, being in attendance, following up). Over half (60%; n=6) reported that it took zero to two hours, while the remaining 40% (n=4) who answered this question reported it took three to four hours of their time. The final two PHNs indicated that as there was now on a rota, they only attended every two or three weeks.

Funding, prioritisation and availability of the service

In general, funding was not provided for the operation of the breastfeeding groups. In one case, a small amount of money (€200 per year) was provided under a local community scheme and a separate bank account for the breastfeeding group had been set up to facilitate the transfer of this money. This money was used to purchase baby mats and other equipment for the group. In another area, the PHNs themselves had developed a number of different resources including leaflets which had been distributed to local hospitals. A small amount funding had been provided by the local Nursing and Midwifery Professional Development Unit for a single print run but this was not available on an ongoing basis. One PHN noted:

“My friend is a graphic designer and she had her first baby at the time, so she helped us. So, it’s lovely now. We’ve dropped in the hospital and we’ve gotten requests to keep giving them more, but we can’t afford the printing because we’re on a limit...We did it on our own time after hours. We worked on it and kind of designed, but, we’re very happy with it” (PHN, Area 2; Joint interview).

In most cases, the service was provided on a weekly basis and this was welcomed by mothers attending as they knew the service would be available to them regularly. This is highlighted in the quote from one mother below:

“Also, the fact that it’s on a weekly basis, I think is great because so much can change in a day or two. So, I think if it was on every two weeks or every month, I’d probably be less inclined to use it” (Mother, Group 6).

There was general agreement that the service is prioritised and PHNs ensure they are available to attend. In one area

where a rota is in operation, one PHN stated that:

PHN 1: "They swap if they know they're going to be away, but everybody will commit to the day".

PHN 2: "Yeah. People prioritise it. It becomes a priority on the day that you're on".

PHN 1: "It does. When you know you're going to be on and that's it, we always kind of say on a (day of the week) who's on tomorrow for the breastfeeding so that..." (PHNs, Group 3)

In general, PHNs are attached to geographic areas and have responsibility only for families within that area. In respect of the breastfeeding group, however, mothers and babies from a number of different PHN geographic areas attend and, consequently, the PHN facilitating the breastfeeding group also engages with mothers from outside their own area. While this is an additional workload for the PHN, this was not considered a burden. The following iteration took place with two PHNs involved in facilitating a group:

Interviewer: "And do you ever feel like you're picking up work that's belonging to somebody else?"

PHN 1: "Not really. No. Not when it's with the –"

PHN 2: "No."

PHN 1: "- the breastfeeding, I suppose we're out to support them as much as we can" (PHNs, Area 2, Joint interview).

Many of the breastfeeding groups in this study also facilitated mothers from outside the health centre catchment area to attend the sessions and this was valued by both the PHNs and the mothers. One PHN who was also a lactation consultant explained that when PHNs from other areas call her and indicate they know of a breastfeeding mother requiring support, it was very difficult to turn them away. The following:

"I've on occasion seen someone individually because someone would ring me and it just sounds as if they're...they'd say the moms really upset and was really determined [to continue breastfeeding] and that. It could be a Friday and I'm doing paperwork here in an afternoon and I'd say, send them up at three and I'll see them. The best way is to come to the group because you can answer a lot of their questions and once they come to the group, they usually stay with the group" (PHN, Area 4, individual interview).

This was appreciated by the PHNs and one nurse expressed the following:

"The PHN lactation consultants are a great resource for staff to be able to contact if they have any questions. They will also do home visits to breastfeeding mothers which I have found very beneficial in the past" (PHN associate questionnaire).

Mothers' views of PHN involvement

Some mothers highlighted the involvement of the PHN noting that you would be "more reassured" and "confident" in the information provided by them because of their professional background and their experience with seeing babies so frequently. One mother noted:

"That's a huge thing. ...a Public Health Nurse sees so many different types of babies, they know what's the range of normal and abnormal. And to have that confidence in their assessment" (Mother, Group 7).

Others noted that the availability of the PHN at the group meant that they could "ask questions" or "get advice" that they might otherwise need to seek from their General Practitioner (GP). It was also suggested that because of their work with breastfeeding mothers and babies, the PHNs were in a better position to provide support compared with GPs. One mother explained:

"I mean these guys [PHNs] are working with lots of babies all the time and have their eye out for that kind of stuff. Anything related to breastfeeding, they're going to be the guys who knows. Not the GP. I mean, do you know what I mean?" (Mother, Group 9)

There was some agreement that the involvement of the PHN in the breastfeeding group was important and there was a level of confidence and trust in the PHN because they:

- had “medical” training and could therefore provide expert advice;
- were meeting many mothers with similar type problems and they were, therefore, able to differentiate normal from abnormal; and
- were enthusiastic about breastfeeding while not being judgemental.

It was also noted that some PHNs facilitating groups had breastfed themselves and this was highlighted by mothers as a positive feature in understanding the challenges involved.

Costs associated with facilitating the group

In addition to PHN time for facilitating the group, a number of other potential costs associated with running the group were identified (Figure 5). The following responses were provided by PHNs who completed the questionnaire (n=10).

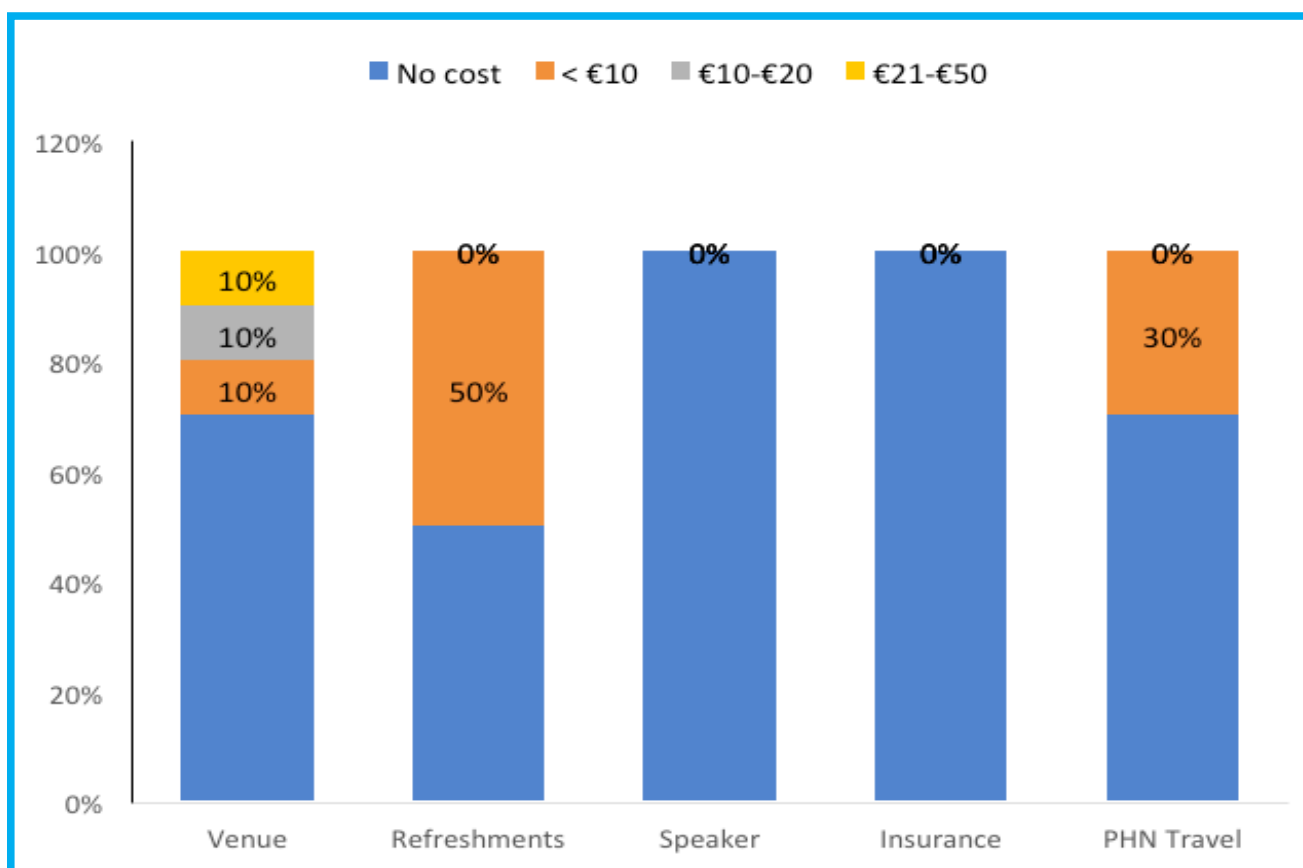


Figure 5: Costs associated with running a breastfeeding group

As highlighted in Figure 5, seven (70%) of the services reported they did not pay for the hire of the venue (in some cases, the venue was within a primary care centre). The remaining three reported it cost less than €10 (10%; n=1) or between €10 and €50 per week (20%; n=2). Half of the PHNs reported refreshments did not cost anything, although a number of PHNs reported they bought tea and biscuits themselves but did not seek to reclaim the money for these expenses. One person noted they did not provide any refreshments and the remaining four reported it cost less than €10 weekly. Costs associated with insurance were not identified by any of the nine PHNs who responded to this question. Seven PHNs reported there no costs associated with travel to the venue as it was either in the health centre or within walking distance of the health centre.

Costs for mothers attending the group

Mothers attending the group were also asked to identify the costs they incurred in attending the breastfeeding group. The findings show that travel and parking costs were the most common costs identified (Table 3).

Table 3: Costs for mothers in attending the group

	None	Less than €5	€5 - €10	€11- €20	More than €20
Childminding for other children	94%	0%	1%	0%	5%
Travel costs	53%	43%	3%	1%	0%
Costs associated with taking time off work	99%	1%	0%	0%	0%
Other	97%	0%	3%	0%	0%

Only 6% of mothers reported childminding costs for other children and some of this may be due to the high proportion of first time mothers attending the group (62%). Less than half of mothers (47%; n=47) reported travel costs but the vast majority of these reported it cost less than €5. Only one person reported costs associated with taking time off work. The “other” costs identified by 3% of the mothers were mainly identified as parking costs.

Management and policy supports for breastfeeding

While PHNs drew attention to the national policy for breastfeeding and the focus on reporting on breastfeeding for HSE Key Performance Indicators, this did not translate into specific supports for PHNs facilitating breastfeeding groups. One PHN facilitator noted:

“I would say to be fair, there’s good recognition in terms of verbal feedback from management, but there isn’t... They’re not going to give you extra clinical hours” (PHN, Area 4, individual interview).

However, it is also clear that at times, personnel in management positions were required to make a case for the continuation of breastfeeding groups. One manager gave an example of a primary care sector meeting where heads of discipline come together on an ongoing basis. The PHN manager used this opportunity to talk about the breastfeeding group although she noted, there was little support for it by other managers and the general manager had suggested that it be stopped because of competing demands from other clinical needs. Despite this, and despite the lack of any financial assistance, this manager noted that:

“No increase in staffing for it. But you just have to look at the benefits of breastfeeding and say, you know, they’re so enormous, realistically. And what is the point of being a Public Health Nurse and having our qualification if we can’t do something with breastfeeding for it” (Manager, individual interview).

Summary

This section has focused on the findings relating to the structure of breastfeeding groups and to the inputs of various stakeholders. It considered the facilities available for hosting the breastfeeding group and the findings show that these range from being unsuitable (including, for example, overcrowded and an inappropriate temperature) to being purpose-built, considered appropriate for the group.

Mothers attending the group were mainly aged between 30 to 40 years, had completed third-level education and about one in six had not been born in Ireland. Over 60% were first time mothers and a further 6% had not breastfed before, although they had other children.

A majority (40%; n=4) of PHNs had been facilitating a breastfeeding group for more than five years, 30% (n=3), had been facilitating for between one and five years, and 30% (n=3) had been involved for less than 1 year. Four of those included in the study had undertaken the required training to be a lactation consultant, while the remaining PHNs had completed a range of training and education in breastfeeding. The groups were facilitated in different ways including by one PHN (generally a lactation consultant), by two PHNs, and in one case by a rota of PHNs where each PHN facilitates the group every six to eight weeks. Sixty percent of PHNs (n = 6) reported that it took zero to two hours, while the remaining 40% (n=4) who answered this question reported it took three to four hours of their time. The final two PHNs indicated that as there was now on a rota, they only attended every two or three weeks

Other than time costs for PHNs, other costs for PHNs associated with facilitating the group were negligible and the vast majority did not pay for the hire of the venue. In general, funding is not provided for the operation of breastfeeding groups, although in one case €200 was grant aided through a community scheme and in another couple of cases, the HSE paid for the hire of the room. In some cases, the PHNs paid for tea and biscuits themselves. In most cases, PHNs reported no travel costs associated with attending the group. Again, costs associated with attending the group were small for mothers. The vast majority of mothers did not have any childminding costs although five (5%) reported having child minding costs of more than €20. Almost all (96%) reported having no travel costs (54%; n=54) or costs of less than €5 (43%; n=43), although some mothers did report travel costs.

Findings: Processes and activities

This section presents the findings on the processes and activities that take place before, during and after the breastfeeding group meetings.

Pre-group activities	Activities during group	Post group activities
Referrals	One-to-one PHN consultation	Re-arranging room
Creating a rota, if required	General discussion about breastfeeding/parenting	Recording information
Preparing the venue (including, setting up chairs, baby mats, weighing area if used, refreshments)	Discussion about specific challenges	Providing information for PHNs
Making arrangements for childminding	Weighing infants	Following-up with referrals
	Networking between mothers	

Figure 6. Overview of activities around the breastfeeding group

Pre-group activities

Activities that took place prior to the group meeting include referrals to the breastfeeding group and preparing the venue for the meeting.

Referrals to the group

Some PHNs highlighted their involvement in antenatal classes as a way of ensuring mothers were aware of the breastfeeding group and, in some cases, these mothers were invited to come to the breastfeeding group:

“We would have brought them from the ante-natal classes, say ‘If anyone is wanting to breastfeed, come to the group on [name of day] morning and talk to the other mothers’, and we have some mothers here now that have done that. They know the setup” (PHN, Area 2, Joint interview).

In general, however, it was reported at all groups that almost all referrals to the group came through the Public Health Nursing service post-natally although other sources (mainly GPs and maternity hospitals) were also identified. One PHN facilitating a group noted:

“We link in with our own GPs. There’s some GPs that are great, and I know the [name of maternity hospital] would send moms to us, but we don’t get as many as we would like” (PHN, Area 4, individual interview).

Preparing the venue

While the preparation of the venue, facilities and organisation of the room differed according to breastfeeding group, in general, some preparation was required as most rooms were also used by other groups or people at other times. The preparation of the room usually included: putting out chairs; setting up a weighing station (if weighing takes place); setting out all information (e.g. health promotion leaflets); getting the refreshments ready; and making sure that records are available. One PHN described the process as follows:

“I set up over here with, say, for my weights and all of my information. I kind of do the circle [of chairs] and try to make sure they have enough space in that, while my kettle is set up, my trolley, for the teas and coffees, and get my mats ready to put them on the floor. If we have toddlers coming in, we put out the box of toys” (PHN 1, individual interview).

Activities at the group

Most breastfeeding groups followed a similar type process. When mothers arrived, they were generally welcomed by the PHN or “checked in with the Public Health Nurse”. When a mother new to the group arrived, the PHN made a point of welcoming this mother to the group. In some groups, introductions took place and mothers remained in the group for a specific time (usually 1 to 1.5 hours) but in others, mothers came and went throughout the duration of the group.

The initial arrival was generally followed by mothers removing their baby from a car seat/pram, taking a place within the group, placing the baby on the floor (on a mat) or, in one instance, on the table in front of them. This was followed by engagement and interaction between mothers. At most groups, mothers were offered a cup of tea or coffee and, in general, this was provided by the PHN.

Where weighing of the infants was carried out at the breastfeeding group, the mothers would then rotate to the PHN where the infant would be stripped and weighed and have a one-to-one consultation with the PHN. The length of this consultation depended on whether there were issues arising for the mother and it could range from a couple of minutes to several minutes.

In situations where weighing did not take place (or where an offer to weigh was not taken up), the nurse would speak to individual mothers around the room and, in some instances, observe breastfeeding.

Most mothers breastfed during the breastfeeding group and sometimes breastfeeding was observed by the PHN. In some instances, the PHN would raise a particular topic with the group of mothers (e.g. pelvic floor exercise, diet, specific feeding problems, or using breastfeeding pumps) and this was often in response to a specific issue identified by a mother or, sometimes, in response to particular information received by the PHN that might be considered useful (e.g. lifting the baby seat or shopping basket without injury).

In general, there were five main activities that occurred within the group and these were:

1. mediating the group;
2. sharing information;
3. one-to-one consultations with the PHN;
4. mothers socialising with each other; and
5. weighing the infants.

Each of these areas are now considered in turn.

Mediating the group

In all breastfeeding groups attended by the research team, the PHN mediated the group. This was done by providing a structure within which the group could take place, making people feel welcomed, ensuring that each mother was included in the group and by “watching out for mothers”. One PHN explained her process as follows:

“If I see new faces, we’ll start by...So, we just do an introduction. I say, ‘Go run around’ and we do an introduction... Then they’ll start back talking to themselves. I’ll offer them all tea or coffee. They’ll all have their tea and then they’ll start coming up for weighing the babies and then if anybody has a problem they’ll say, ‘Look’, or I go around to say, ‘Is everything okay?’ Or when they come up, you know, I say, ‘Is everything okay?’ [and the mother could say], ‘Well I have a sore nipple’” (PHN, Area 1, individual interview).

Another PHN noted that they might be looking for someone in particular, following a referral from the mother’s own PHN.

“They’d say, there’s someone coming in, keep an eye out for her, she’s having problems with latching... You have that kind of thing” (PHN, Area 6, individual interview).

One PHN who had been facilitating a group for a long time noted that it was important to ensure that everyone was included and that sometimes you can get “cliques” forming in the group which can be difficult for new mothers. The PHN noted:

“You just kind of keep, try to draw everybody in you know, but they would have got up and left people in the room and said, ‘Oh, we’re going to [name of coffee shop] now for a coffee’ and they wouldn’t have said to [other mothers], ‘Will you come for a cup of coffee?’ You’d be dying of embarrassment for the people” (PHN 1, individual interview).

Sharing information

Information shared at the breastfeeding group was widely welcomed, with this information coming from both mothers and PHNs. Mothers highlighted the importance of getting consistent information and this was reported as a key advantage of attending the breastfeeding group. Mothers noted that being able to get information from other mothers whose babies were a bit older or from mothers who had previous children was very useful. One mother noted:

“You might have a question, you might say, ‘Oh my God, this is happening’ and then you come here and it’s like, ‘Ooh she’s doing the same, or he’s doing the same’, so you kind of feel, ‘Okay, it’s not just me’” (Mother, Group 1).

A wide range of topics were covered as highlighted in the following quote:

“Which kind of Rice Krispies to buy? Where to get them? Anything. Like, ‘Where do I get the pair of shoes for my child?’ Anything...Everything. Like, ‘Which pillow for breastfeeding to buy? Do I need one?’ They said, ‘No, don’t buy it; it’s a waste of money’. Everything” (Mother, Group 9).

An iteration between mothers at a small group drew attention to the way in which different options can result in breastfeeding for longer as follows:

Mother 1: “Sometimes we talk about the outside world or your previous life of working...We also talk about, I suppose, about the future and what options there are. You know when the babies are older and are you going to use a pre-school?...Or how are you going to manage going back to work?”

Mother 2: “You realise there’s different options. When I go back to work now, I will feed morning and evening. You realise you can do both. You don’t have to just stop” (Mothers, Group 4).

Another mother highlighted the usefulness of being able to see other babies and look at what they are doing noting that:

“The different babies at the different ages and you have some kind of a yard stick then against your own baby. Because this is probably the first time you’re going to see so many babies together. Because apart from that you just have, maybe your cousin’s having a baby and you see them once a year or twice a year and that’s it” (Mother, Group 1).

In addition to the informal discussions that take place between mothers, PHNs also share information. The areas are generally initiated by mothers and may refer to a specific challenge they are experiencing at that particular time. An example of this was observed at a breastfeeding group where the in response to the query raised by the breastfeeding mother, the PHN provided information on purchasing or renting, using and maintaining the breastfeeding pump. Other mothers also contributed and shared their experiences on various types of approaches, the pros and cons of different types of pumps and the ways in which it had impacted on them.

As well as focussing on breastfeeding issues arising, more general discussions about health and wellbeing also took place. At one breastfeeding group, the PHN gave demonstrations on the safest way to lift an infant car seat so that mothers would not damage their backs. Information sharing on a range of topics was observed at breastfeeding groups attended including, for example:

- pelvic floor exercises;
- family nutrition;
- weaning;
- using breastfeeding pumps;

- mastitis;
- tummy time for infants;
- talking to baby;
- expressing milk;
- weaning;
- sleep; and
- normal development.

In sharing this information, it is clear that PHNs build on a broad range of knowledge drawn from their professional backgrounds rather than a specific focus on breastfeeding. One PHN spoke about preparing an information topic for the following week on infant sleep, as she and her colleague had recently attended a study day about this area.

It was also highlighted that while the information is mediated through a professional lens, mothers are actively encouraged to engage in these discussions. This was explained by one PHN:

“The other thing we would do is when someone is asking a question...about mastitis or about weaning or about...And I would say, listen, do you mind if we put that out to everyone because other moms have really good information that they can give to us all and we’re all learning from it” (PHN, 4, individual interview).

Ensuring the information being shared is appropriate was also highlighted as a role taken on by the PHN. This is exemplified in the quote below:

“We’re also there if there’s information that mightn’t be appropriate. We can say, ‘Thank you very much for your contribution, however, within the HSE or the WHO [World Health Organisation] we couldn’t recommend that’, but we would then say what we would recommend. So, I think that’s important, that someone might have read something, Googled something and say she’s found something very good but it might be something that’s inappropriate’ (PHN, 5, Joint interview).

The information provided by PHNs was often supplemented by information leaflets about the specific topic

Socialising

Mothers and PHNs both drew attention to the socialising that took place and the ways in which mothers in the group connected with each other. One mother spoke about *“kind of checking in with people, seeing how their week has been, talk about your week”*, while another noted, *“We have a chat amongst ourselves”*. Similarly, in response to the question of *“Why do you come here?”*, another mother said, *“Chat. Socialise. Rant. Complain”*.

It was also noted that *“it’s a nice safe place to feed, socialise”, “a way of meeting other people”, “it’s a reason to get out and get dressed”* and *“the babies socialise as well”*. One mother stated that:

“If I have a bad night even on a [name of day] night, [I] come on, go in, chat to people that you know. It’s kind of motivating” (Mother, Group 3).

A number of mothers in breastfeeding groups have *“set up a ‘WhatsApp group’ themselves and when anybody new comes in, somebody says, ‘Oh, we’ll take your number now”*. It was noted that many of the mothers remain in contact long after they have stopped coming to the breastfeeding group and the following example was given:

“It’s handy for kind of walks in the park and people also meet up for walks in [name of area]” (Mother, Group 1).

Another mother reported that she was still in contact with the mothers she met at the breastfeeding group when her now four-year-old son was born.

Weighing infants

PHNs facilitating breastfeeding groups were not in agreement about weighing infants and most, while providing this option, spoke of a reluctance or unwillingness to offer this as part of the group. Mothers, however, welcomed this aspect. One PHN reported that while they had carried out weighing for a number of years at the breastfeeding group, they had not done so in recent years. Another PHN noted:

“I try not to but I mean, that’s what they want. I suppose when I weigh them then I pass on the weights to the other girls [PHNs] so it means that they don’t have to do a visit” (PHN 1, individual interview).

In general, however, PHNs felt that weighing could mitigate against the normalisation of breastfeeding and that mothers needed confidence in their own ability to breastfeed and recognise if their infant was not thriving. One PHN noted:

“I like the moms to look at their baby and look at their own feeding practice and experiences and kind of say, ‘I’m doing it right. My baby is safe’. There’s no need to weigh the baby every week. The signs, the wet and dirty nappies. The feedings, the baby’s satisfied. My breast empties after feeding. I like them to know they are doing it right, rather than having me tell them they’re doing it right. To give them that kind of confidence to kind of go forward and not feel like they are doing anything wrong” (PHN 5; joint interview).

Of the 11 PHNs facilitating breastfeeding groups, the majority (73%; n=8) reported weighing infants at the breastfeeding group on a weekly basis, although two (18%) indicated they never did so. One individual reported sometimes weighing infants.

Mothers, however, highlighted the weighing as being very important to them. They spoke of reassurance it provided for them: *“Cause you don’t know what they’re drinking when you’re breastfeeding”*. One mother noted: *“It’s fantastic to get them weighed because usually it’s peace of mind” (Mother, Group 8).*

Another mother noted that:

“Every week, my mother or my husband would come to me straight after, what does he weigh? It was exciting” (Mother, Group 7)

It was highlighted that initially when the baby is small you can become *“obsessed”* with getting the baby weighed but this changes as the infant gets bigger.

One-to-one consultation with the PHN

One-to-one consultation with the PHN formed a core part of the breastfeeding groups in this study and there were a number of different aspects to it.

One-to-one consultations took place in the following ways:

- In some instances, weighing the baby was used as an opportunity for mothers to raise specific issues with the nurse. It also provided the nurse with an opportunity to examine the baby and, in one example observed by the researcher, the nurse identified a medical problem with the baby when he was undressed and the mother immediately left to attend her GP.
- In other instances, the PHN observed individual mothers breastfeeding and where an issue was identified (e.g. latching, mastitis, positioning), a direct intervention took place. This approach was explained by one PHN:

“I think an awful lot of the work is done within the group, getting position attachment and you’re helping that mom, giving her the confidence, giving her websites, maybe little video clips to look at, doing a breast compression and that. Saying, ‘Would you come back?’ and they always light up and say, ‘Yeah, I will definitely be back next week’. Follow-up with the weight, and we might have to put a plan in place, like, ‘We’d like you to start pumping’ and, ‘If you want to breast feed’...Ask them what they want to do” (PHN 4, individual interview).

Another PHN noted that:

“If somebody new comes in, I always make a point of going down to see how they are feeding” (PHN 6, individual interview).

A number of mothers gave examples of how specific problems had been immediately resolved at the breastfeeding group by the PHN:

"I had like a milk bled early on. [Name of PHN] went and got a sterilised needle and sorted me out. And you know, she's just a fountain of knowledge. So, it's great to have her" (Mother, Group 8).

Another mother reported:

"Well, I didn't know what it was a blocked duct and she [the PHN] told me how to, you know, how to sort it out" (Mother, Group 10).

In response to a question of whether it mattered whether it was a PHN who facilitated the group, there was wide agreement by mothers that having somebody who had a Public Health Nursing background made a positive contribution.

One mother noted that you:

"Need to be able to ask medical questions and get some advice that you can have confidence in it and I think it gives me the complete reassurance" (Mother, Group 1).

Another mother spoke about "being able to ask the PHN specifically health related problems...sometimes you can have a list". A number of mothers drew attention to the PHN providing a more preferable alternative to going to the GP:

"You know it's too small to go to the GP or just to call the nurse and you know that the nurse is here so you can ask something. Mother, Group 6).

A number of mothers and PHNs reported that infants with tongue tie had been identified by the PHN at the breastfeeding group. Others noted that PHNs were able to pick up tips from other mothers that they could then share with them. Another mother described: "I feel like you have to have confidence in it as well, and I think it gives me the complete reassurance". In groups where the same nurse(s) attended on an ongoing basis, mothers noted that getting consistent advice was particularly welcome, expressing how "... you know you're following one path, you're not jumping from one to another". Mothers also highlighted the non-judgemental approach by the PHN as illustrated in the following quote:

"When I was having the problems and I was like, 'I don't know how long I can do this', they're very, 'Well, listen. You have to be happy. Do whatever makes you happy. The baby will be happy'... There's no judgements or anything like that, I suppose is what I'm trying to say, even though they're very pro-breastfeeding" (Mother, Group 8).

Benefits were also identified where the nurse herself had breastfed and it was suggested that they had a credibility around the area.

"I think also to the fact that she actually breastfed herself. Because one of the first PHNs I had come in with breastfeeding, but she'd never breastfed so she kind of found it hard to come up with things that might've helped in those difficulty to latch, you know. Whereas the fact that she'd did it herself helps" (Mother, Group 1)

One PHN suggested that while anyone with the right training can be supportive to breastfeeding, the service provided by a PHN-facilitated breastfeeding group was more holistic. This is highlighted in the following quote:

"If you have right training, anyone can be supportive to breastfeeding and interest, but, I think the follow-up afterwards...because not only do we look at the breastfeeding if you're there assessing them you might say, 'Oh look!' They might ask a question on meaning, they might ask a question on, "'Oh look, at the hips', or they might ask a question on skin. So, it's more holistic I think that they feel, yes, they can talk about breastfeeding, but, along with breastfeeding they can talk about other things" (PHN, Area 5, Joint interview).

This holistic approach was reiterated by mothers as highlighted in the quote below:

"So, when they're naked lying there on the scale getting weighed the nurse is also noticing there's something wrong with them. If they have any spots they shouldn't have, baby acne...you never know" (Mother, Group 9).

Activities following the group

While some mothers went for coffee following the breastfeeding group, in general only PHNs identified additional activities associated with the group. These included ensuring their record keeping was accurate and up-to-date. One PHN explained:

“We keep a card on every client that comes in, a very small card with basic details so we can follow-up...so we know what’s been said...maybe the weight the previous week or there was an issue and what was the advice given so that we can follow-up on that”(PHN, Area 5; joint interview).

PHNs also spoke about sharing information with the mothers’ own PHN as follows:

“I’d have to send all the weights to everybody and so I send a few emails and the girls [PHNs] here in the building, I just write it on a slip of paper and leave it under their door. The rest of them [not based in the building], I send them an email when I go back up...and if you’re particularly worried about somebody you ring them. You’d ring the PHN and say, ‘You might need to check in on her during the week and just see how she’s doing’”
(PHN 1, individual interview).

Mothers also highlighted activities by the PHN following the group, including calling them on the phone to see how they were doing and visiting them in-person if they were in their area. One PHN noted that it *“would be brilliant to be able to follow-up personally”* but that generally was not an option due to other commitments.

Summary

In summary, a range of activities were identified by PHNs and mothers as taking place before, during and after the breastfeeding group. While mothers could attend the group without a referral, it was noted that in general, they were told about it and referred to it by their PHN. Other less common sources of referral included ante-natal classes where attending the breastfeeding group was an element for anyone wishing to breastfeed, GPs and maternity hospitals. In some instances where the same PHN was not in attendance each week, a rota had to be developed. On arrival at the venue, PHNs generally prepared the room which includes putting out chairs, getting baby mats ready for use, making a weighing area available if that activity took place there, preparing tea and coffee and getting records ready. In a small number of instances, mothers spoke about getting childminding arrangements in place.

The activities taking place at each breastfeeding group were very similar and five main activities were identified, including: PHNs mediating the group; mothers socialising with each other; sharing information; one-to-one consultations with the PHN; and, in eight of the 11 groups, weighing breastfeeding infants. There was a reluctance on the part of PHNs to weigh babies as it was felt that mothers needed to be confident in their own ability and to understand the signs of their baby getting enough milk. Many mothers, however, reported this was an important aspect of coming to the group and particularly in getting an objective measure of how much milk their infant was getting, which it was noted was important for other family members as well.

After the group, some mothers went for coffee together, while PHNs reported that they ensured their records were up-to-date, that feedback to other PHNs were given, if necessary, and that they followed up with mothers they had concerns about.

Findings: Outcomes and impact

Two broad impacts for mothers were identified:

- **Improved mental health through:** having a purpose and reason to get out of the house; development of a social network; and feeling reassured and supported.
- **Breastfeeding for a longer period of time by:** increasing their knowledge and their confidence about breastfeeding; being better able to deal with negative attitudes from others about breastfeeding; overcoming embarrassment about breastfeeding and being better able to breastfeed.

Findings relating to these impacts are now presented.

Improved mental health

Many mothers noted that the breastfeeding group resulted in improved mental health for them. One mother highlighted the benefits of attending the group as follows:

“Mental health of the baby and yourself. If I miss one week meeting with the group, I’m cranky and I’m not socialising. You need to open up and talk to people that have the same problems because the husband comes home in the evening and he just doesn’t get you. He doesn’t know how hard it is. He thinks you’re home and cosy and having coffees and watching telly. They don’t realise the stress of being a mother and, to be honest, all of us are just heroes. I never thought it was going to be so hard” (Mother, Group 8).

Improvements in mental health took place as a result of the following changes:

- having a purpose and a reason for getting out of the house;
- creation of a social network; and
- being reassured and supported.

Having a purpose and a reason for getting out of the house

Many mothers spoke about the breastfeeding group giving them a purpose, a reason to get dressed and an opportunity to get out of the house. The following iteration at one breastfeeding group highlights this:

Mother 3: “I think it’s a great way of getting up and getting out. Having your quick shower and getting dressed and out the door and not that you have to be here on time, but it’s kind of something to aim for, to know I have to be there around 11”.

Mother 4: “It’s an anchor in your day”.

Mother 3: “And it gives a little bit of structure to your week as well. You can go okay, [Name of day], I go to the breastfeeding group” (Mothers, Group 6).

One mother explained the link between this and mental health:

“Well, just to get out of the house actually. You know, when your baby’s screaming all day and you just need a bit of fresh air and to talk to people that are going through this as well and I’m a first-time mum so I don’t have a clue what I’m doing, but it’s lovely to speak to people that are kind of in the same boat... Yeah, just keeps you sane” (Mother, Group 6).

It was noted that this was particularly important where mothers had been working prior to the birth of the infant, and perhaps did not have local connections in place. One mother noted:

“Especially if you’re just finished work and you’re so into your work when you go everywhere. This is kind of a nice... even if you’ve nothing else on for the whole rest of the week... You know, [day of the week] at 11....and then you might add other things, like when you’re more confident and you add more activities to your week...often with people you meet here actually, that’s what I’m saying” (Mother, Group 7).

Social network

PHNs and mothers highlighted the importance of the social network created through the breastfeeding group. One PHN drew attention to the informality of the group noting that:

“A lot of them [mothers] do find, though, that they like coming in because they find it a great way to meet people, and they like the informality about it actually” (PHN, Area 6).

Both mothers and PHNs noted the isolation that some mothers feel when they have a new baby. Sometimes this was because the mother was at a different stage to her friends and so they were not available or interested in “baby things”. One mother described:

“Suddenly you’re here alone with a baby in a house the whole day. All of your friends are at work and you’re like, ‘Who’s around? There’s no one around’. So, this is kind of a forum to meet people and then you might go to the baby cinema or you might go for a walk or whatever” (Mother, Group 5).

One PHN also drew attention to the isolation some mothers feel highlighting how:

“It’s a social outing...There’s lots of people living in [name of place]...It’s one of those hub towns. They’re living here because they’re commuting in different ways or because it suits where they’re originally from or where they’re working...you have a lot of that going on...They don’t have family support here, a lot of these moms, so they have the support, so they have the support of their peers and the people that they meet” (Mother, Group 3).

Another PHN highlighted:

“I think particularly for the mothers, the [non-national] mothers, that have no family, they have no network; they have a network here” (PHN 2).

The creation of a network, that was sustained over time, was highlighted as an important and positive outcome for mothers. In the questionnaire survey, almost three-quarters (72%; n=72) of mothers agreed they socialised more as a result of attending the breastfeeding group (Figure 7).

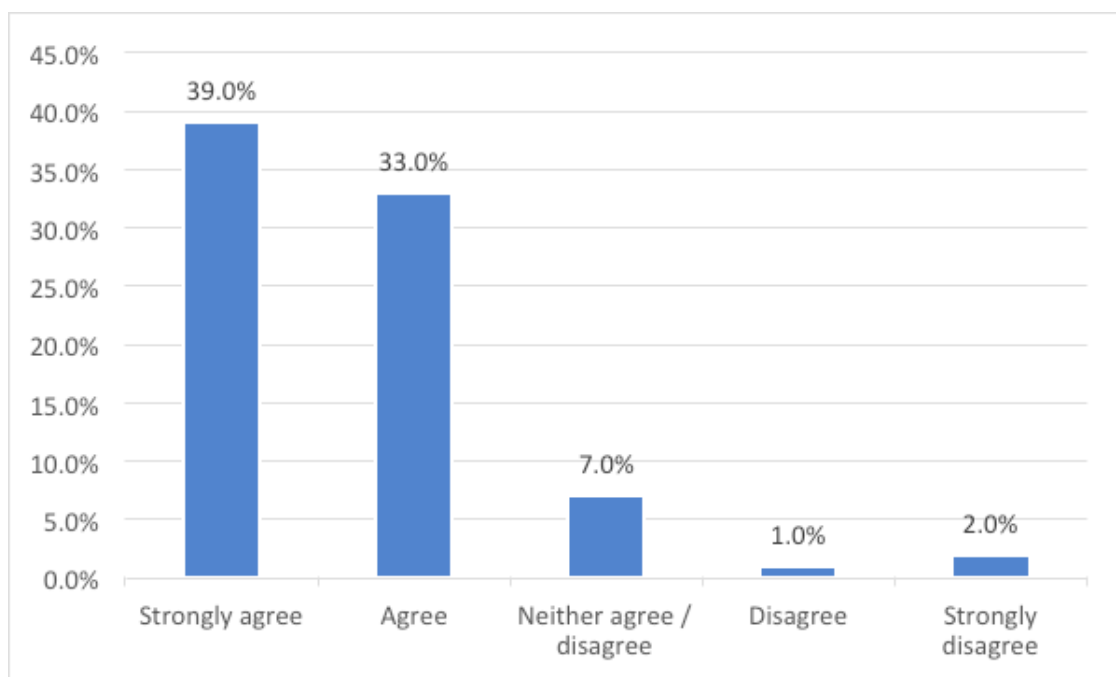


Figure 7: Extent to which mothers agreed/disagreed with the statement “As a result of attending the breastfeeding group, I socialise more”

One mother described her experience:

"I've just found that a lot of people who'd comment that if you're not in the breastfeeding group it's quite hard to meet other moms in the area...Because unless we stop and talk to somebody on the street really you don't know, there are so many young moms in the area, really, around us" (Mother, Group 6).

As noted earlier, a number of mothers had created a WhatsApp messaging group for keeping in contact with each other and this was used as a mechanism to arrange social meetings with other mothers. This was highlighted by one mother who stated:

"I mean the group is just called [name of group]. All kinds of comments and questions about everything and you'll often just see people saying, 'Anyone going for a coffee at a certain place?' or 'Anyone going to a play group in a certain place?' or whatever. So, it's great" (Mother, Group 7).

This was re-iterated by the PHNs who described the social meetings:

PHN 1: "A lot of them go and have their own lunch over at the [name of place]."

PHN 2: "Yeah, they do. They meet up and do a little group kind of thing" (PHNs, Area 3, Joint interview).

It was also noted that the WhatsApp group was very useful *"if they have a problem at four o'clock in the morning, there's always somebody else up"*.

Mothers who had attended the breastfeeding group with other children noted that they continued to stay in contact with the mothers they met there. One mother explained her experience:

"...the friends I made through this last time, we're still on each other's lifelines. We still need to go through pregnancy loss. Relationship breakdown. Kids. Going through all sorts. We're still there for each other. We set up a private Facebook group. We still keep in contact. Every so often, we started calling it tea and cake. We used to meet up with tea and cake once or twice a week. We'd go around to each other's houses and now there's been life has gone on. We're four years on" (Mother, Group 10).

The benefits of being part of a network was highlighted by one mother:

"And you know the people are around and you can just text if you're having a hard time. You can send a text and you can feel a bit connected. You're not on your own in that way. That's the isolation" (Mother, Group 7).

Being reassured, supported and having problems solved

Mothers spoke of the importance of support and encouragement at the group which enabled them to continue breastfeeding. One mother explained her situation as follows:

"My mom didn't breastfeed and my mother-in-law, she tried to breastfeed, and when she came home...from the hospital with my husband, he was crying and crying and she rang her sister who was a nurse and asked what to do and she said, 'Give him a bottle'. So, that was the advice. So, you know, she couldn't help me out. My mother couldn't help me out and I don't really have any friends with a baby at the moment" (Mother, Group 2).

In the early stages, it was agreed by both mothers and PHNs that a short-term, step-by-step approach to breastfeeding worked very well. One mother spoke of her experience:

"At the beginning, I just took it day-by-day. I didn't think I was going to be able to...'I won't be doing this next week. I won't be doing this next week', cause he was so slow putting on the weight. The girls just kept saying, 'He's grand. Just do what you're doing. Do what you're doing. Keep doing it'. Without them saying that every week, I wouldn't still be feeding him...Yeah, and it just gave me the bit of...It was just that bit of reassurance then that, 'Yeah, you're doing the right thing. Just keep feeding him. You're doing it right'" (Mother, Group 9).

Another mother noted:

“When people say to me, ‘How long’re you gonna feed him for?’ I don’t ever say, ‘I’m going to feed him for this, and then I’m going to feed him for that’. I just feed the baby until I don’t want to anymore. It lasted for over a year for the other two, so it’s just...It’s all pressure and it’s just your head and how confident you feel. If you’re happy, then that’s it” (Mother, Group 8).

Adopting a short-term approach to breastfeeding was also highlighted by the PHNs as a strategy for supporting mothers. One PHN highlighted her approach as follows:

“They’d come in and say, ‘I was going to give the bottle all weekend, I was going to give it, I was fed up with it’, and we’d say, ‘We’ll just get you through today now. Just take one feed at a time...one step at a time. Take one feed at a time, and we’ll see” (PHN, Area 1, individual interview).

Another PHN described her approach:

“You would say to them, ‘All you got to worry about today is today, right? Then tomorrow is tomorrow’. Then you get them through the first week. Then you say, ‘Look, you’ve done one fabulous week. You’re doing great. No matter whether you decide to formula feed your baby or breastfeed your baby, this takes six weeks anyway’. It’s not an overlying solution to anything. It’s tiring. It’s demanding. You have to be a little bit laid back about it. You have to be a bit relaxed about it no matter what” (PHN, Area 3).

Many mothers spoke of being reassured as a result of coming to the group and this reassurance came from other people experiencing the same issues (“I just found that it was reassuring that everyone had the same issues”) and being able to share problems and solutions. One mother noted:

“I know I’m always anxious cause I don’t know, it’s my first time having a baby, my first time breastfeeding, none of my friends or family have done it. So, I don’t know if I’m doing it correctly. Whereas I come in, and I can talk, and ask about, get the reassurance that everything is going fine, and even all the problems that I’m having are completely normal or, you know, get advice on how to fix it” (Mother, Group 2)

Another mother highlighted the importance of being with peers:

“I think for a lot of people it is kind of scary the first few times. Well it’s hard on the baby anyways. But then you have to feed ..., right, and maybe you’re a little bit anxious like that. This is a good place to start where you’re with peers. Where everyone obviously is in the same boat with feeding the babies” (Mother, Group 6).

Others highlighted the impact of this reassurance on them and on their decision to continue breastfeeding. This is highlighted below where one mother recounts her experiences with her previous infant:

“Last time, it definitely kept me feeding...I was always saying, ‘I’ll get to six weeks. That’d be great’. Then I was like, ‘I’ll get to eight weeks’. Eight weeks, it was magic, and everything slipped into place. I said, ‘I’ll carry on for six months’. And I carried on until nine months...This time I’d say I’ll probably carry on longer. I’m already thinking about pumping going back to work. It’s the mindset of people here that definitely changed my thinking” (Mother, Group 4).

Another mother noted:

“It’s good to know that you’re not isolated in the not sleeping...or what to do with you baby in the evenings or you know what other moms have best ideas of. What’s good to know is that you’re not the only one who’s got a baby who’s not settled or...having problems and that” (Mother, Group 10).

Having problems solved

Many mothers gave examples of specific areas where they had benefited from attending the group and meeting the PHN on a one-to-one basis. As noted earlier, sometimes, this related to breastfeeding as highlighted in the quote below:

“She [PHN] actually did this, one hand, took the one hand and boob, and put her on in one go, and I was like, ‘Oh my god. I’ve been struggling for like an hour trying to put her on’” (Mother, Group 8).

The informal and accessible nature of the group was particularly highlighted in this regard:

“There’s someone here all the time and it’s free. There’s no appointment, they can come into us. It’s easier for them to attend us I think than the GP, which seems more formal” (PHN, Area 5).

Mothers gave examples of where the professional expertise of the PHN helped them resolve problems they were having. One mother noted:

“Because he had thrush last week on the tongue and [name of PHN] was there, she was also giving me advice that the GP didn’t that I needed to treat my nipples with the cream or you keep infecting each other and the GP didn’t say that” (Mother, Group 9).

Another mother highlighted:

“Well, my little boy had tongue tie issues and it was [name of PHN] that spotted it. That was really helpful and I just spoke to a lady there who helped me with my latch with him cause it’s still quite painful so that has been really helpful because that wasn’t spotted in the hospital when he was born” (Mother, Group 5).

Another mother spoke of asking her PHN for advice about a rash her baby had, with the PHN suggesting she: “Go to the doctor if it doesn’t clear up by the end of the week,” or, “That’s definitely normal. Don’t worry about it, put a bit of cream on it, it’ll be fine.”

Continuation of breastfeeding

Mothers highlighted the importance of attending the breastfeeding group in enabling them to continue breastfeeding for longer. Differences, however, were identified in the extent to which PHNs and mothers believed the breastfeeding group increased the length of time which mothers breastfed. All PHNs facilitating groups reported they either agreed (27%; n=3) or strongly agreed (73%; n=8) with the statement “Mothers breastfeed for longer” as a result of attending the breastfeeding group. This compares with only 51% of mothers who reported that breastfeeding increased the length of time they breastfed for (from one month to six months), as displayed in Figure 8.

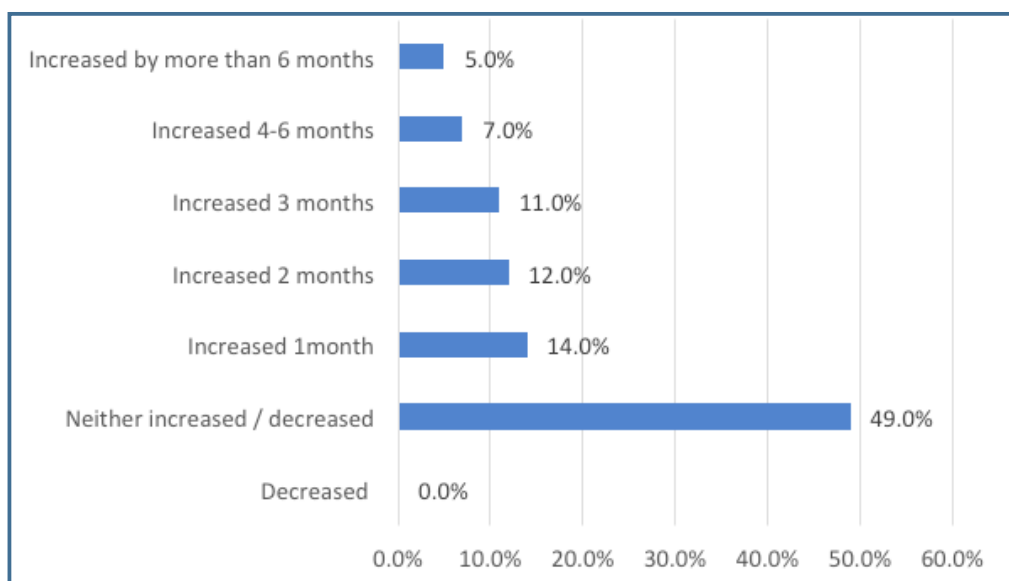


Figure 8: Extent to which mothers report attendance at the breastfeeding group impacted on the length of time mothers breastfeed based on questionnaire completed by mothers^{4 5}

Based on the work of Creedon (2013), a number of outcomes arising for mothers from attending the breastfeeding group were included in the questionnaire for mothers in order to identify the extent to which they occurred. The findings are presented in Table 4 which shows that the vast majority of mothers agreed (25%-34%) or strongly agreed (51%-74%) that attending the breastfeeding group had resulted in improvements for them, including:

- increased knowledge about breastfeeding (95%);
- confidence in breastfeeding (95.5%);
- overcoming embarrassment about breastfeeding (75%); and
- being better able to breastfeed (86%).
- being able to deal with negative attitudes from others about breastfeeding (71%);

Table 4: Extent to which key outcomes arise as a result of the breastfeeding group

	Strongly Agree	Agree	Neither agree or Disagree	Disagree	Strongly
Increased knowledge about breastfeeding	67%	28%	5%	0%	0%
Confidence in breastfeeding	71%	24%	3%	1%	1%
Overcoming embarrassment	49.5%	25%	15%	2%	9%
Better able to breastfeed	61%	25%	9%	1%	4%
Better able to deal with negative attitudes from others	39%	33%	22%	0%	6%

Increased knowledge about breastfeeding

As noted earlier, mothers and PHNs share knowledge about breastfeeding within the group and this may be done in a formal or informal way. Mothers commented that in the early stages, *“You always learn something new from either the nurses or the other mothers so you never know enough”*. This increase in knowledge helped mothers to manage problems arising and, as highlighted in the previous section on the sharing of knowledge and information, a range of different issues were addressed. Some mothers highlighted the importance of seeing others continuing to breastfeed which they felt increased their likelihood of breastfeeding for longer:

“I really think when you see mums with babies over six months, I think that kind of inspires you to keep breastfeeding. It’s like if you see, okay they’re doing it til nine months and you’re like, ‘Oh, right,’ you know even though it’s kind of an individual choice thing...It’s what you want to do” (Mother, Group 7).

Dealing with negative attitudes of others

Several mothers made reference to a negativity from others around breastfeeding and this ranged from being *“doubtful”* or *“unsupportive”* to being *“disgusted”* by it. Comments included:

“They [family and friends] thought it was crazy when I told them I was going to breastfeed.”
“I find a lot of people aren’t as supportive of breastfeeding. I really, really find that.”
“Or they’re not negative, they’re just very – doubtful” (Mothers, Group 3).

One mother spoke as follows about her experience of breastfeeding at her mother-in-law’s house:

“Even my mother-in-law, when I started breastfeeding her in her house, she wasn’t comfortable...Because she’d

⁴ It should be noted that the length of time the breastfeeding group increases breastfeeding is mitigated by the age of the infant. This is taken into account in the calculation of Social Return on Investment in the next chapter. The data presented in this graph does not add to 100% due to rounding.

had [number of] children but she didn't breastfeed. Also, my father-in-law's sister who is almost 70, if we go over and we visit her and I start feeding her, I feel like she's a little bit disgusted somehow and I know I'm not exaggerating because I've noticed it, and I observed it several times" (Mother, Group 10).

Another mother spoke of her belief that the lack of support from family and friends often came out of a sense of concern about the mother as explained in this quote:

"You don't sleep when you're breastfeeding every two hours. You don't sleep and your family sees that. They're all dying to come see the baby, and they see you look awful and they think, 'God, if she'd just allow someone to give baby a bottle she could probably sleep'. So, they're worried about you as well" (Mother, Group 2).

It was also highlighted that there was more visible and concrete support for breastfeeding in other countries. One mother spoke of her experiences in the Middle East where:

"It's completely different. [Name of country] is breastfeeding-friendly. All of the malls have fantastic feeding rooms. You can go in, they have recliner chairs where you can sit. They have changing rooms where you can go change your baby. It's fantastic... Obviously here, you're going to the coffee shop and finding a corner where nobody wants to look at you. Breastfeeding in [name of country], [is] completely different. They encourage breastfeeding in [name of country]" (Mother, Group 5).

Gaining confidence in breastfeeding

Mothers noted that at the start, first-time mothers are getting introduced to breastfeeding and do not have much confidence, with one mother explaining how "I think you kind of doubt yourself as a first-time mom breastfeeding". The breastfeeding group gave them an opportunity to feed in front others and that it was "like a rehearsal" for going public. One mother noted:

"You get used to breastfeeding with other moms and that makes it easier than when you're actually publicly feeding... when you see other moms breastfeeding. Yeah, that's a really big one... When you go out you've had a practice run in front of other people" (Mother, Group 3).

Another mother spoke about being "very nervous and anxious about feeding in public" and that "all these people are gonna see me and look at me". She noted that when she started coming to the group:

"It took away that stigma of feeding him. It definitely gave me the confidence to feed outside the house".

Another mother in the focus group shared how she felt "exactly the same way. It definitely took that stigma and that fear away for me".

Being confident in breastfeeding was considered critical to being able to continue as highlighted in this quote:

"It [the breastfeeding group] gives you confidence. Breastfeeding is just confidence. Everybody really can, it's just how confident you are. I had two. I breastfed them, didn't blink an eye, never needed help, I never asked for help. And I had the third, and now all of the sudden, I'm questioning everything" (Mother, Group 9).

A PHN noted that breastfeeding at the group was the norm and:

"So, I think they get their confidence here then. Sometimes you see them come in with their scarves, and they'll be hanging the scarves over you know but by half an hour the scarf is gone because nobody else is doing it. They do get confidence" (PHN, Area 1, individual interview).

Normalises breastfeeding

Others spoke about the need to normalise breastfeeding and the role played by the breastfeeding group. At one breastfeeding group, the PHNs facilitating the group made arrangements for everyone to meet at a coffee shop rather than the usual venue as a way of normalising breastfeeding in the community. The need for this was highlighted in the following quote:

“I think we definitely need to see a lot more breastfeeding out in the community so that it is more normal and that somebody walking past a woman in a coffee shop who’s breastfeeding, they’re not going to take the second look with the big shock on their face, you know?” (PHN, Area 2).

Mothers spoke of coming to the group and realising *“that what I was doing was actually normal”* and that *“it was like a relief. Like it’s normal. Right? It’s normal”*. One mother explained how seeing other mothers breastfeeding was very important for her. She stated:

“Actually, for me it was seeing other women breastfeeding, actually breastfeeding. Because my husband, he was like very cranky and very anxious about ‘Don’t open, don’t open in public. Don’t do this’. It’s like, ‘I’m going to...do this. Hello?’ We have our fitted tops and all that stuff...It normalises it I think. It makes it just like when you see other people doing it, that it’s okay. You don’t feel like you have to be so discreet here. When you’re out other places, you’re kind of trying to hide, whereas here you don’t have to be so discreet” (Mother, Group 6).

Benefits for the PHN

In addition to benefits for mothers, the PHNs who took part in the interviews carried out in the study also noted there were benefits for themselves and for other PHNs.

Six PHNs completed the question about benefits of the breastfeeding group on the questionnaire and provided information about the extent to which they agreed or disagreed with a number of statements. They all agreed or strongly agreed that while their workload had increased as a result of the breastfeeding group they were:

- more knowledgeable about breastfeeding;
- able to offer a better service for their breastfeeding mothers; and
- had greater job satisfaction.

More knowledgeable about breastfeeding

One PHN facilitating a group noted:

“I am more aware of the difficulties mothers experience with breastfeeding and also due to researching the answers to the queries that mothers have makes me more knowledgeable as a PHN” (PHN, Area 6, individual interview).

Job satisfaction was identified by the following PHN as a reason for facilitating the breastfeeding group:

“You do it because you’re interested in it and it makes your job feel better. You’re more satisfied with it, definitely. I think that’s the way we both feel about the breastfeeding support group. We’re both really, really interested in it, so you’re going to drive it then. You know I mean?” (PHN, Area 5; joint interview)

In response to a question of what changed for the PHN as a result of facilitating the group, one PHN identified a higher level of job satisfaction noting:

“It’s nice to hear amongst women coming in, thanking you for the support you’re offering and that they...You would hear every now and then that they’re very grateful of the amount of support they’re getting and that...” (PHN, Area 3).

Another PHN noted that mothers were grateful for their help and this was reflected by:

“The cards we get, the thanks we get. ...and they say, ‘God, this has really changed our life. We never would have breastfed’. Beautiful cards” (PHN, Area 4).

Better quality service provided by PHN

In terms of the service provided, PHNs noted that it would not be possible to provide the level of support needed by some mothers if the breastfeeding group was not there. One PHN detailed how they tailored the service which made it better for mothers:

“We like to bring our new moms [at an earlier time] just to give them a little bit more room...the moms are less anxious and stressed out about it and we’re there to give them that little bit of extra time and encouragement. They can stay on and meet the other moms and have a chat, have a glass of water and relax into it, or they can leave if they want to” (PHN, Area 5).

Impact on workload

The breastfeeding group was also identified as having an impact on the PHNs’ workload. While one PHN noted that it greatly increased her workload, 5 indicated it decreased their workload in respect of breastfeeding mothers. Five PHNs indicated it did not have an impact on the overall workload.

Benefits for colleagues

Eight PHNs who were not facilitating breastfeeding groups but who had mothers in their care who attended these groups completed an online questionnaire. They noted that those facilitating the groups acted as an expert for their colleagues and this was particularly the case where they had completed the lactation consultant course. One PHN noted in the questionnaire commentary that:

“The PHN lactation consultants are a great resource for staff to be able to contact if they have any questions” (PHN, associate questionnaire).

Another PHN stated that:

“I feel that the group is a very important resource for me and my colleagues. I rely on it to help promote breastfeeding and support the mothers during the times when I cannot see them...I often phone the PHN that runs the group for advice and she is always about to advise me and often will contact the mother directly to discuss any issue” (PHN, associate questionnaire).

Another PHN highlighted complex cases where they noted it was very important to have access to someone who was more expert than they were:

“I think it’s very important for any of the more complex cases. Definitely that knowledge, and you’re sharing it with your colleagues” (PHN, associate questionnaire).

These eight nurses identified a number of different outcomes as a result of the breastfeeding groups, including an increase in their own knowledge, confidence and awareness about breastfeeding. The availability of the breastfeeding group was also identified as improving the quality of service they provide to breastfeeding mothers. One PHN noted:

“If the breastfeeding group wasn’t there, you would have an awful lot of phone calls from desperate moms looking for help that you probably wouldn’t be able to give them because you can’t...” (PHN, associate questionnaire).

Four of these PHNs indicated it increased the development of positive relationships with breastfeeding mothers “a lot”, although a further four indicated it did not have any effect. Seven of the eight respondents indicated that the breastfeeding group increased the length of time in which mothers in their area breastfed.

Impact on family and friends

A questionnaire survey of family and friends of mothers who took part in this study yielded 16 responses. About two-thirds of these were partners (n=11) of breastfeeding mothers, and about one-quarter were grandmothers of the infant (n=4). The remaining individual was a friend of a breastfeeding mother.

The questionnaire asked individuals if they had experienced any positive impact from the breastfeeding group and between 69% (n=11) and 87% (n=15) of respondents agreed or strongly agreed the following benefits accrued for them (Figure 9). Only one individual, a partner, disagreed or strongly disagreed with the statements.

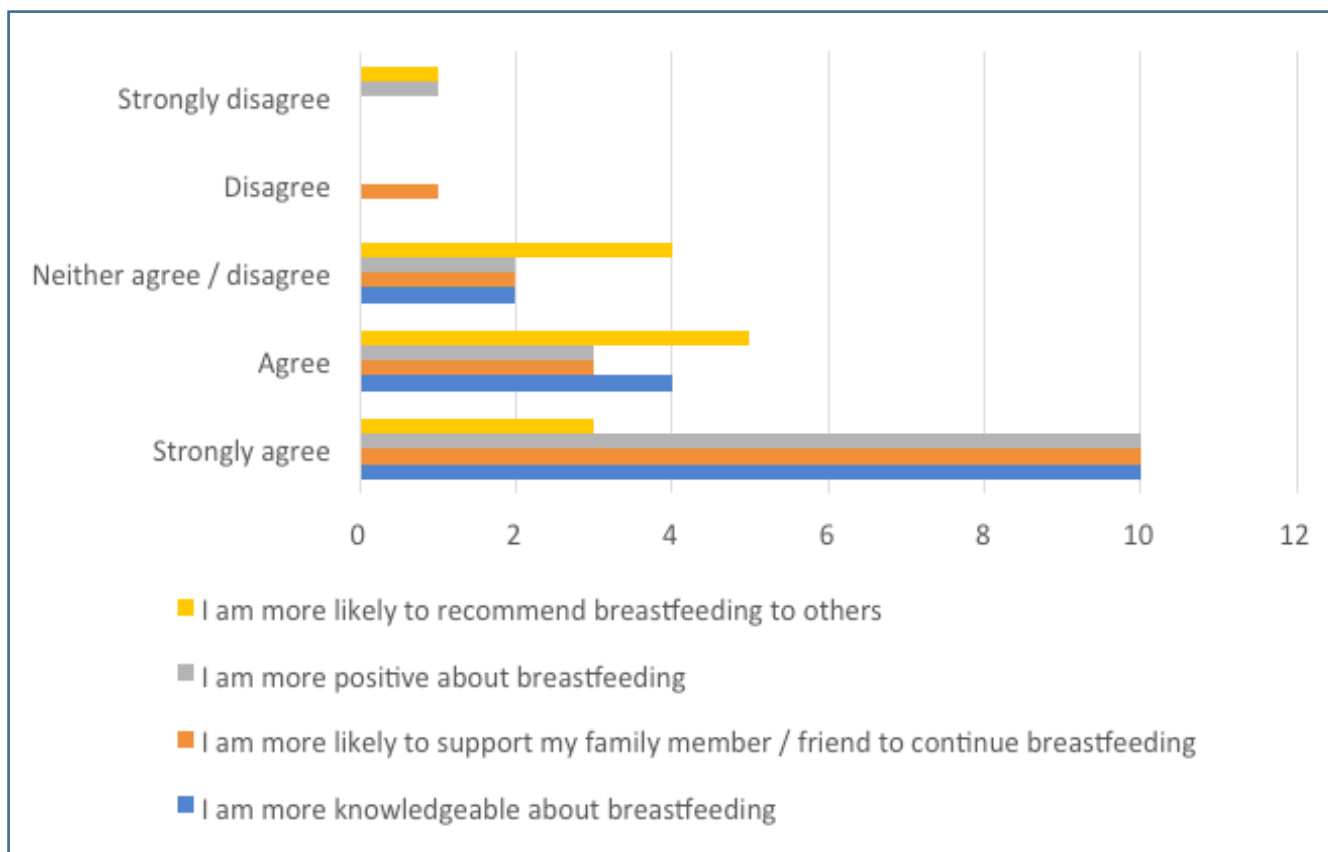


Figure 9: Family/friend agreement/disagreement with statements about the breastfeeding support groups

Only one individual, a partner, reported being more negative about breastfeeding as a result of the group, including strongly disagreeing with statements such as *“I am more likely to recommend breastfeeding to others”* and *“I am more positive about breastfeeding”*.

Many participants also highlighted the benefits to family/friend with comments relating to positive impacts from the breastfeeding group, such as the social network, practical support, sharing knowledge, and increases in confidence and happiness of the breastfeeding mothers. One partner wrote:

“I think it has given my wife more confidence and she has learnt from other women’s experience and the nurse is there as a backup for questions” (Partner, friend and family questionnaire).

Another family member, a mother of a breastfeeding mother, also highlighted positive outcomes noting

“I am so glad to see the brilliant encompassing service and information available today to support breastfeeding mothers. Especially the breastfeeding club which provides continuing support, advice and care for as long as mother and baby require it. I cannot fully express how much it means to me to know they are both in good capable hands, at a short walking distance from home” (Mother, friend and family questionnaire).

Summary

In summary, this section has focused on the outcomes and impact of the breastfeeding group on a range of stakeholders. These include breastfeeding mothers, PHNs facilitating breastfeeding groups, PHNs who do not facilitate themselves but whose breastfeeding mothers in their care attend the groups, and friends and family of mothers attending the group. Two broad impacts for mothers were identified and these were improved mental health (through having a purpose and reason to get out of the house, development of a social network and feeling reassured and supported) and breastfeeding for a longer period of time (through improvements in knowledge, enhanced confidence and the normalisation of breastfeeding). In general, findings were very positive and many examples were given of specific incidents or developments that were beneficial to mothers were provided.

Positive outcomes were also identified for PHNs facilitating the groups (n=11) and these were an increase in their knowledge about breastfeeding, an increase in job satisfaction and the ability to provide a better quality service. PHNs who did not facilitate the breastfeeding group themselves but who had mothers in their care who attended the group (n=8) also highlighted positive benefits of the groups, including an increase in the quality of their service to breastfeeding mothers, greater levels of confidence in helping mothers, an increase in their own knowledge and an improved awareness of breastfeeding. Almost two-thirds of these PHNs reported their workload decreased in respect of breastfeeding mothers.

With the exception of one partner, family and friends of mothers attending the group (n=16) reported that as a result of the breastfeeding group they were more knowledgeable, more supportive of their family member, more positive about breastfeeding and more likely to recommend breastfeeding to others.

Introduction

Activities are normally considered worth pursuing if the benefits exceed the costs or, sometimes, if they exceed them by a certain amount. Measurement of costs and benefits is not always easy and is particularly challenging in the area of social interventions. Greater significance is often attached to things that can be bought and sold and have a clear market price but many important aspects may get overlooked as a result. Furthermore, it is generally more straightforward to measure costs than benefits.

Social Return on Investment (SROI) was developed from cost-benefit analysis and social accounting and is about value rather than money. It provides a framework for measuring and accounting for a wider range of impacts of actions and activities than is normally captured in measurement techniques. It seeks to consider social and environmental costs and benefits, as well as traditional economic costs and benefits based on market price. It uses monetary values to represent all such costs and benefits and attempts to establish monetary values for all inputs and outcomes.

A challenge in evaluating programmes is that it is often difficult to get good outcomes data and to find suitable measures for important benefits. Proxies are often used where direct measures are not available (such as “relief from depression and anxiety” for “wellbeing”). Much valuation is often speculative and judgemental where there are no clear right or wrong answers. It is important therefore to set out clearly what assumptions are being made and the basis for choosing specific measures.

Key SROI principles include stakeholder involvement, understanding what changes as a result of the intervention being measured, only including what is material (i.e. what might influence a stakeholder’s decision), avoidance of over-claiming and transparency of calculation (Nicholls et al. 2012). Avoidance of over-claiming puts a premium on conservatism in estimation. The process of identification and involvement of stakeholders has been described in the section on methodology. Understanding changes induced by breastfeeding support groups was refined in consultation with the nominated individual from the ICHN Child and Family Group and in focus groups with mothers and PHNs. Only including what is material was achieved by excluding impacts that were unlikely to exceed a threshold of relevance and significance or were too uncertain to be relied upon (for example, impact on diabetes and obesity or impact on breastfeeding by others outside the group). Avoidance of over-claiming was also ensured through adoption of conservative assumptions throughout, including, for example, estimating a group’s impact on length of breastfeeding based on responses from all mothers although they included some who had only recently joined the group. A complication in the present study is the tentative or imprecise nature of some of the evidence of medical benefits (for example, as regards incremental impact of additional duration of breastfeeding). All assumptions and calculations are fully transparent and explained in the sections that follow. In this report, costs and benefits are calculated and presented in terms of average annual figures for a group.

Calculating an SROI for any programme of action involves a number of stages, notably:

- I. mapping outcomes and impacts for all relevant stakeholders (showing the relationship between inputs, outputs and outcomes)
- II. the summation of all impacts, both positive and negative;
- III. verifying and putting a value on outcomes; and
- IV. accounting for impacts that cannot be attributed to the programme (that might have happened anyway or might be attributable to other factors).

These steps need to be taken in consultation with identified key stakeholders and results verified with them. Actual calculation involves summation of impacts, both positive and negative, the subtraction of negative impacts and comparison with costs/investment.

The SROI calculated value is discounted to take account of a number of factors. To begin with, the expected duration of each benefit is considered. Durations can vary. The benefit from a medical operation may last a lifetime, for example, whereas the benefit of a short course of acupuncture or physiotherapy may be considerably less. The duration of many final outcomes of breastfeeding can be expected to be relatively long-lasting and similar to each other (e.g. premature deaths avoided, improved cognitive ability) and the estimated durations are set out for each outcome. Values in years two to five are discounted at a cumulative rate of 5%, in recognition of the higher value of cash today compared with cash in future years. The rate of 5% is the standard rate recommended by the Department of Public Expenditure and Reform in its Public Spending Code (2012, 2013). Drop-off is a related concept that addresses the reduction over time in causality between the intervention and the effect; the intervention is less directly responsible for the outcome each year as the direct impact weakens.

A reduction for deadweight and attribution also needs to be considered.

- Deadweight is the term used for change that would have occurred anyway in the absence of the intervention being evaluated.
- Attribution is the term used to take account of change caused by interventions by other services and agencies.

In the present evaluation, deadweight and attribution were considered jointly. Questions in surveys were framed in such a way as to link the answer to attendance at the breastfeeding group. In the survey of mothers, for example, the participants were asked to indicate the extent to which they agreed or disagreed with various statements “*as a result of attending the breastfeeding group*”. In a similar vein, another question asked: “*To what extent, if any, has attending the breastfeeding group increased the length of time you have breastfed for?*”

Displacement is also normally considered in SROI calculations.

- Displacement refers to the causation of negative effects to others by the intervention being measured.

There was no evidence of positive impacts on participants or others being offset in any way by negative impacts on anyone else.

The end result of an SROI is a simple ratio of benefits to costs. This crystallises the value of a programme in an easily-communicated figure and can be very useful in its own right. However, the process of calculation may be more important in that it facilitates strategic discussions between stakeholders and a focus on understanding the constituent elements of the social value and ensuring that the overall social value is maximised. It can provide an opportunity to change the way things are done and complement any strategic review.

Overview of benefits of attending a breastfeeding support group

The direct benefits for mothers of attending a breastfeeding support group are discussed elsewhere in this report. They include: notably increased knowledge of and ability to breastfeed; increased confidence and less embarrassment associated with breastfeeding; better ability to deal with negative attitudes related to breastfeeding; and greater socialisation. A large majority of the mothers who participated in the survey reported improvements under these headings as a result of attending their group, with the largest majorities reporting improvements in respect of knowledge, confidence, ability and socialisation (86%-95%) and smaller majorities reporting improvements in respect of overcoming embarrassment and dealing with negative attitudes (71%-75%). These benefits have social value in terms of overall wellbeing and happiness and while the survey did not seek to measure the quantum of improvement for each of the above factors, it is nevertheless possible to calculate a social value for these factors^o

The key beneficial outcome of group participation follows from the immediate benefits just described. It relates to the impact on extended duration of breastfeeding since this effect unlocks the significant health, development and other benefits that derive from breastfeeding.

Calculation of the social value of group participation requires information on the size of group. However, establishment of group size from the survey data was not straightforward. The survey asked PHNs how many mothers attended the breastfeeding group in 2016 and, on average, how many attended each week. Eleven respondents answered one

or both questions. A number of respondents recorded the total number of attendances per annum rather than the total number of unique participants in the group. The average per group per week was 10.5 (taking the mid-point of a category as the group average), but this figure does not allow calculation of the number of mothers attending in a year, counting each mother just once. Other information helps inform the estimate. One PHN indicated, for example, that two to three new mothers attended each group. The survey of mothers showed that 11% had attended their group just once, 33% two to five times, 26% six to 10 times and 32% more than 10 times. Based on all the information available, a conservative assumption has been made for SROI calculation purposes that a group supports 100 mothers and 100 infants on average per annum.

Group impact on duration of breastfeeding

Mothers surveyed were asked the extent to which attendance in the group increased the length of time they had breastfed. Just over half of respondents (50%; n=49) reported that participation had increased the duration of breastfeeding, ranging from one month to more than six months⁵. The average reported increase in duration of breastfeeding was 1.29 months and this figure is used in the SROI baseline calculation.

However, as noted earlier, this reported average is likely to be a significant underestimate of the impact of group participation given that many mothers had not participated in their group for very long and for them there was little or no opportunity for any impact to be revealed. Almost half of respondents (49.5%; n=48) felt participation had neither increased nor decreased the duration. Of these, seven mothers had infants aged four weeks or less and were relatively new to their group and, overall, 29 infants were aged eight weeks or less. Given positive responses to other questions (e.g. high percentages who would recommend attendance at the group to others and who had greater confidence around breastfeeding) and given the abundance of related qualitative information from interviews, it is likely that some of the mothers would have prolonged their breastfeeding still further as a result of participation. No adjustment has been made for this factor in the SROI baseline calculation, although it is taken into account in sensitivity analysis.

The impact of group participation on breastfeeding is likely to be greater for two other reasons. First, two-thirds of respondents were first-time mothers or had not breastfed before with a previous infant. Therefore, a positive impact of group participation is likely to have a positive influence on a decision about whether to breastfeed any subsequent children and the duration of their breastfeeding. Second, participation may also have a positive influence on other women outside the group and increase the overall number of mothers who breastfeed. It is not possible to quantify such benefits at this stage and they are not included in the SROI calculation.

Value of prolonged breastfeeding due to group participation: Health benefits

Benefits of breastfeeding include many health benefits for infants and mothers. These are listed elsewhere and there are many studies supporting the view that breastfeeding improves general health, growth and development of infants and protects them against a number of acute or chronic diseases and conditions. Evidence also exists of significant benefits for mothers who breastfeed.

Looking first at general health and development of infants, evidenced health improvements can reasonably be expected to result in fewer visits to doctors, dentists and hospital and reduced use of medication, with consequential benefits for families and the State. This is amply supported by responses from mothers who were interviewed as part of the present study. For SROI calculation purposes, it is assumed rather conservatively that average annual medical and dental costs of €300 are avoided through breastfeeding, averaging €25 per month. It is further assumed that the benefits increase the longer the period of breastfeeding. The value is calculated over three years, with the standard discount rate of 5% and drop-off of 20%. The resultant value is €7,869 (Table 5).

Table 5: Value of reduced medical, dental and medicine costs as a result of mothers' participation in breastfeeding support groups

⁵ Two cases reported increased duration longer than the current age of their child and the periods were adjusted to the difference between the infant's current age and their age at joining the group.

Area	Amount
Reduced costs per annum per mother	€300
Reduced costs per month per mother	€25
Number of participants	100
Reduced costs per month per group	€2,500
Average prolongation of breastfeeding (months)	1.29
Nominal value of group in terms of reduced costs	€3,225
Nominal value over three years	€9,675
Value after discount rate of 5% and drop-off rate of 20%	€7,869

Other longer-term benefits are also likely, e.g. through lower levels of obesity and diabetes. A large UK study, for example, found a reduction of one percent in body mass index for every six months of breastfeeding. Such impacts are likely to result in health, lifestyle and wellbeing improvements. These are omitted from the SROI baseline calculation, however, for reasons of uncertainty of impact other than in a general way, as described above, and in the valuation of improved wellbeing below.

In keeping with international evidence cited earlier in the report, improved health can also be expected to reduce workplace absences and loss of output of mothers who have returned to work but need to take off to attend to sick children. This is calculated here at an average of three days per annum for the first three years of the child's life and costed at the rate of average earnings, resulting in a benefit of €422.30 per annum. For SROI calculation purposes, it is assumed that the benefit can be averaged over 12 months, giving the value of a prolongation of breastfeeding by 1.29 months of €45.40 per group member. The estimated total value of reduced workplace absences is €10,750 (Table 6).

Table 6: Value of fewer work days lost as a result of mothers' participation in breastfeeding support groups

Area	Amount
Average weekly earnings (Central Statistics Office, 2014)	€703.83
Average daily earnings	€140.77
Reduction in days lost	3
Value of reduction per annum	€422.30
Value of reduction per month	€35.19
Number of months prolongation of breastfeeding	1.29
Value per group member	€45.40
Size of group	100
Value per group per annum	€4,540
Nominal value over three years	€13,620
Value after discount rate of 5% and drop-off rate of 20%	€10,750

Breastfeeding is also associated with reduced infant mortality, especially in less developed countries, but in higher income countries as well. Reductions of 58% in deaths due to necrotising enterocolitis and 36% in Sudden Infant Death have been reported in meta-analyses in higher income countries (Ip, et al., 2007). The incidence of such deaths is low in Ireland but the value of lives saved is high with the net effect that the value of additional breastfeeding is significant. The calculation of the SROI includes the value of reductions in mortalities under these two headings because of the evidence available. It is likely that breastfeeding impacts on infant mortality under other headings but the extent of impact is not yet clear and reliable and usable data are not available.

Putting a value on a human life saved can be challenging and controversial. Many people feel uncomfortable with the idea of valuing in monetary terms something that is seen as precious and priceless. Yet decisions are made all the time about investing in life-saving interventions and compensation for lost life. There are various methods for valuing life, including present value of lifetime earnings, contingent valuations, labour market wage differentials based on risk, consumer preferences, the value of a statistical life year and the Quality Adjusted Life Year (QALY) method. Examples of valuations according to Social Value UK (2016) are \$1.5 million (approximately €1.8m) using a lifetime earnings approach, around €4.6 million for the life of a child using contingent valuation methods, \$7-12 million (approximately €8-14m) using labour market methods, between \$95,000 and \$264,000 (approximately €114,000-€317,000) per additional life year from a medical intervention and between £20-£30,000 (approximately €18-€36,000) per QALY (Social Value UK, 2016). Life expectancy in 2014 was calculated at 83.5 years for females and 79.3 for males (Department of Health, undated) and benefits of lives saved or improved health can be assessed using these figures or estimates for added years at various stages of life. The valuation of life used in the present SROI calculation is based on average earnings in 2016 using Central Statistics Office sources (Central Statistics Office, 2017). The net present value of lifetime earnings is calculated at €633,496 and assumes a working life of 40 years. The discount rate is 5% which is the standard rate recommended by the Department of Public Expenditure and Reform in its Public Spending Code (2012, 2013). These values are used in the calculation of benefit from additional lives saved through prolongation of breastfeeding.

As regards necrotising enterocolitis, the incidence in Ireland is 6% in infants with birthweights lower than 1.5 kilograms and results in death in 20% to 30% of cases (Health Service Executive & Royal College of Physicians of Ireland, 2015). According to the CSO, 576 births in this weight category occurred in Ireland in 2014, representing less than 1% of all live births (0.856%). This allows estimation of the number of deaths that might be expected in the absence of breastfeeding and the number of deaths that might be prevented through prolongation of breastfeeding. Applying this to the net present value of expected life time earnings of a child (€633,496) yields a social value of €1,014 (see Table 7).

Table 7: Value of reduced mortalities due to necrotising enterocolitis

Costs	Amount
Reduction in incidence (Ip, et al., 2007)	0.58
Period of breastfeeding in months to achieve benefit (assumed)	6
Incidence in Ireland in infants with birthweight <1.5Kg (Health Service Executive and Royal College of Physicians of Ireland)	0.06
Mortality rate 20-30% (Health Service Executive and Royal College of Physicians of Ireland)	0.25
Percentage of births in Ireland <1.5 kilograms (CSO, 2017)	0.00856
Number of infants per group per annum	100
Estimated number with low birth weight	0.856
Estimated number of deaths	0.0128
Reduction in deaths due to breastfeeding	0.0074
Estimated number of deaths prevented per month	0.0012
Average prolongation of breastfeeding (months)	1.29
Net present value of child's life (expected life earnings)	€633,496
Value of prolongation of breastfeeding	€1,014

As regards Sudden Infant Deaths, the incidence in Ireland was 0.55 per thousand in 2004 according to the National Paediatric Mortality Register (2012) which described it as the leading cause of death in infants aged four weeks to one year. This rate is used in the SROI calculation. The meta-analysis by Ip et al. (2007) showed that breastfeeding was associated with a 36% reduction in Sudden Infant Deaths. It is assumed for SROI purposes that the benefit derives from breastfeeding over a six-month period and that the benefit is increased by extending the period of breastfeeding at any stage. The number of deaths that might be expected in a group of 100 infants is thus 0.055 and the number of deaths that might be prevented through prolongation of breastfeeding is 0.0033 each month. Using the net present value of expected life time earnings (€633,496) as a valuation of a child's life, the social value of extending breastfeeding by 1.29 months is thus €2,697 (see Table 8).

Table 8: Value of reduced Sudden Infant Deaths

Costs	Amount
Reduction in incidence (Ip, et al., 2007)	0.36
Period of breastfeeding in months to achieve benefit (assumed)	6
Mortality rate 0.055% (National Paediatric Mortality Register, 2012)	0.00055
Number of infants per group per annum	100
Estimated number of deaths per group	0.055
Reduction in deaths due to breastfeeding	0.0198
Estimated number of deaths prevented per month	0.0033
Average prolongation of breastfeeding (months)	1.29
Net present value of child's life (expected life earnings)	€633,496
Value of prolongation of breastfeeding	€2,697

Breastfeeding offers health benefits to mothers as well as their infants. A meta-analysis by Victora et al. (2016) reported a reduction of 7% in invasive breast cancer associated with longer versus shorter breastfeeding durations. It also reported a reduction of 18% in incidence of ovarian cancer and a reduction of 30% in associated mortality. The Lancet Breastfeeding Series reported a 6% reduction in risk of invasive breast cancer for each year of breastfeeding and an unspecified reduction in risk of ovarian cancer (The Lancet, 2017). The SROI includes calculation of the benefits of reduced deaths and reduced treatment costs for individuals and the State for both of these cancers. The calculated benefits are relatively modest because expected lifetime earnings are used as the basis for valuing lives saved and the incidence of these cancers falls heaviest on older women with shorter remaining earning lives (calculated up to age 65). Use of other methods of calculating the value of a life, such as contingent valuations, consumer preferences or quality of adjusted life years, would increase the social valuation considerably by putting a value on each year of life after age 65.

As regards invasive breast cancer, the incidence in Ireland is approximately 123 per 100,000, with approximately 27 deaths per 100,000 per annum and a median age at death of 70 (National Cancer Registry Ireland, 2016). The Lancet's slightly more conservative estimate of reduction in incidence due to breastfeeding is used in the SROI calculation for reduced incidence and mortality rate. The cost of treatment is based an estimate of monthly costs to individuals by the Irish Cancer Society (2015) and a working assumption of a monthly cost of €10,000 to the State (incorporating staff time, medicine, equipment, infrastructure, etc.). The valuation of avoided deaths is based on remaining life-time earnings calculated over six years from age 59. The contribution to the overall SROI is modest (€22.36), largely because of the incidence of the disease and the number of remaining years of earning for those affected.

Table 9: Value of reduced incidence of invasive breast cancer

A. Reduced treatment costs	
Incidence in Ireland: 123 per 100,000	0.00123
Reduction per year of breastfeeding: 6% (The Lancet, 2017)	0.06
Reduction per month	0.005
Number of mothers per group	100
Estimated number of incidences prevented per month	0.000615
Average prolongation of breastfeeding (months)	1.29
Cost of treatment to individuals per month (Irish Cancer Society, 2015)	€2,262
Cost of treatment to State per month (assumption)	€10,000
Total cost of treatment	€12,262
Value of reduced treatments due to prolongation of breastfeeding	€9.73
B. Reduced deaths	
Death rate in Ireland 27 per 100,000	0.00027
Percentage of cancer cases aged under 65: 38.7%	0.387
Deaths aged under 65 per 100,000	0.000104
Reduction per year of breastfeeding: 6% (The Lancet, 2017)	0.06
Reduction per month	0.005
Number of mothers per group	100
Estimated number of deaths prevented per month	.000052245
Average prolongation of breastfeeding (months)	1.29
Net present value of life of adult aged 59	€187,389
Value of reduced deaths due to prolongation of breastfeeding	€12.63

As regards ovarian cancer, the incidence in Ireland was approximately 15 per 100,000 in 2010, with a mortality rate of about 11 per 100,000 and a median age at death of 75 (National Cancer Registry Ireland, 2012). Victora et al.'s (2016) estimates of reduction in incidence and mortality due to breastfeeding are used and the same costs of treatment are assumed as for invasive breast cancer. The valuation of avoided deaths is based on remaining life-time earnings calculated over 15 years from age 50. Again, the contribution to the overall SROI is modest for similar reasons. Combined, the reduced cancer incidences result in an SROI contribution of €59.17 (see Table 10).

Table 10: Value of reduced incidence of ovarian cancer

A. Reduced treatment costs	
Incidence in Ireland: 15 per 100,000	0.00015
Reduction per year of breastfeeding: 18% (Victora, et al., 2016)	0.18
Reduction per month	0.015
Number of mothers per group per annum	100
Estimated number of incidences prevented per month	0.000225
Average prolongation of breastfeeding (months)	1.29
Cost of treatment to individuals per month (Irish Cancer Society, 2015)	€2,262
Cost of treatment to State per month (assumption)	€10,000
Total cost of treatment	€12,262
<i>Value of reduced treatments due to prolongation of breastfeeding</i>	€3.56
B. Reduced deaths	
Incidence in women aged under 65: 50% national incidence	0.000075
Mortality rate: 60%	0.60
Estimated number of deaths aged under 65	0.000045
Reduction per year of breastfeeding: 30% (Victora, et al., 2016)	0.30
Reduction per month	0.025
Number of mothers per group	100
Estimated number of deaths prevented per month	.00001125
Average prolongation of breastfeeding (months)	1.29
Net present value of life of adult aged 59	€383,207
<i>Value of reduced deaths due to prolongation of breastfeeding</i>	€55.61
A+B Total value of reduced treatments and deaths	€59.17

Value of prolonged breastfeeding due to group participation: Improved wellbeing of mothers

Participants in the breastfeeding support groups benefit from greater socialisation. Just over nine out of ten participants (90.2%) agreed or strongly agreed with the statement “I socialise more as a result of attending the group”, with the majority strongly agreeing (56.9%). Benefits of this nature extend to others. In the survey of family and friends, 87.5% of respondents agreed or strongly agreed with the statement “As a result of the breastfeeding group, I am happier”. It is assumed for SROI purposes that the greater socialisation improves wellbeing for 20% of participants and that the percentage improvement is 5%. These estimates are deliberately conservative. Valuing wellbeing is complex and a

Table 11: Value of improved wellbeing through greater socialisation

Reduction in depression and anxiety	
Unit value per annum	€43,837
Value per month	€3,653
Period of prolongation of participation (months)	1.29
Value of prolongation per participant	€4,712
Number of beneficiaries	20
Percentage improvement	.05
Attribution to group	1
Total value of prolongation per annum	€2,354
Period of benefit in years	2
Discount rate	.05
Drop-off rate	.20
Total value of reduction in depression and anxiety	€8,294

proxy of relief from depression and anxiety is used here for SROI calculation purposes and has a value of £36,949 for adults (HACT, 2016), equivalent to €43,837. The benefit is assumed to last for two years and drop-off rate of 20% is applied, along with the standard discount rate of 5%. The estimated total value of improved wellbeing through greater socialisation is €8,294 (see Table 11).

Value of prolonged breastfeeding due to group participation: Education benefits

According to the Lancet breastfeeding series, longer breastfeeding is associated with higher performance on intelligence tests among children and adolescents (3.0 IQ points on average) controlling for maternal IQ, and this can translate into improved academic performance, increased long-term earnings and productivity (The Lancet, 2017). Horta, de Mola, and Victora (2015) found that breastfeeding was associated with a gain of 2.62 IQ points, controlling for maternal IQ. However, the relationship between duration of breastfeeding and increased IQ, and specifically the incremental change from an additional month of breastfeeding, is not clear. An assumption is made in the present SROI calculation that the 2.62 gain relates to breastfeeding for six months and that the benefit is spread evenly over that period, i.e. a gain of 0.437 IQ points per month of breastfeeding. Hanushek and Woessmann (2008) estimated that 15 IQ points was associated with a 12% increase in hourly earnings over the child's working lifetime. This is equivalent to a 2.1% increase in hourly earnings for a gain of 2.62 IQ points. For purposes of the present SROI, it is assumed that the earnings apply over the working life of the child, as above. The social value of the increased earnings is calculated as €1,427 per child and the estimated total value per group is €141,739 (see Table 12).

Table 12: Value of increased intelligence

Increased intelligence	
Increase in IQ points due to breastfeeding (Horta, et al., 2015)	2.62
Increase in earnings for each IQ point (Hanushek and Woessmann, 2008)	0.008
Increase in earnings due to breastfeeding	0.021
Required period of breastfeeding in months (assumed)	12
Increase in earnings per month	0.0017
Average prolongation of breastfeeding (months)	1.29
Increase in earnings due to prolonged breastfeeding in group	0.0025
Number of infants	100
Total increase per group	0.2253
Net present value of child's life (expected life earnings)	€633,496
Value of prolongation of breastfeeding	€142,739

Value of prolonged breastfeeding due to group participation: Avoidance of cost of formula food

Savings arise for mothers who breastfeed in respect of avoided costs of using baby and infant formula and various estimates of these costs exist. The US National Library of Medicine (undated) reports costs of \$1000 or more a year, while the American Pregnancy Association (2017) estimates the cost of formula as between \$54 and \$198 per month (\$648-\$2376 per annum) depending on the brand. Adams (2017) estimates that formula feeding will add somewhere between \$900 and \$3,000 to feeding costs depending on the type used over the first 12 months. The Breastfeeding Center of Ann Arbor (2017) estimated total costs of formula feed for one year of \$1,138 to \$1,188, based on what it identified as conservative assumptions. King (2013) estimated an annual cost of \$1251.32 factoring in baby development and variable consumption rates over 12 months. Irish estimates appear somewhat lower. The website MummyPages.ie (undated) estimates that formula milk will cost about €700 in the first year, although this allows for use of baby food as well (an additional €420). An article on IrishHealth.com cited costs of baby formula of €541.68 per annum, drawing on a July 2015 survey of 1000 parents on the costs of raising a child in Ireland. McBride (2013) in an article on Independent.ie estimated costs of baby milk of over €500 per annum (and higher costs where alternatives to cow's milk are necessary).

Other costs arise in respect of formula feeding, including notably baby bottles, teats and steriliser. Again, estimates

vary. MummyPages.ie estimates costs of baby bottles at €25 and €43 on a steriliser. The McBride (2013) article referred to costs of baby bottles as typically around €14 for two, bottle teats around €4.50 for two, and a bottle steriliser usually between €40 and €80. While breastfeeding is assumed to have zero costs as regards milk, other costs are typically incurred however, including notably nursing bras (€30-€60), breast pump (€50-€250) and breast pads (€84 over six months). These estimated costs are taken from MummyPages.ie and Independent.ie.

For purposes of calculating the SROI, the annual cost of formula is estimated at €750 for an infant who is fed formula for a full year and this figure is used as the value of the benefit to a mother who breastfeeds exclusively for 12 months. The monthly cost is therefore calculated at €62.50.

Additional set-up or equipment costs for formula feeding are estimated at €120 over 12 months and set-up costs of breast-feeding are assumed to be €250 over the same period. The estimated total value of reduced formula food purchases is €7,933 (see Table 13).

Table 13: Value of savings in formula food purchases

Avoided cost of formula food per infant per annum	€750
Avoided cost per month	€62.50
Period of prolongation of breastfeeding (months)	1.29
Value of prolongation per infant	€80.63
Number of infants in group	100
Value of prolongation per group	€8,063
Set-up costs avoided	€120
Set-up costs incurred	€250
Net set-up costs incurred	€130
Total costs avoided	€7,933

Costs of breastfeeding support groups

Costs of breastfeeding groups arise in respect of organisation and delivery costs to the State (notably staff time, travel and group running costs) and costs of attendance to participating mothers. Some of the costs may be offset by savings elsewhere, such as nurses making fewer home visits, with the qualitative aspect of the research providing anecdotal evidence to support this. However, the survey of PHNs suggests that their workload increases as a result of facilitating groups (all of those who responded agreed or strongly agreed that their workload had increased) and there is limited scope to cease other activities (over half of respondents said there were no activities they did not do as a result of involvement in the groups and the majority of the other respondents referred to having less time with other clients or re-prioritising or postponing other activities). No off-setting reduced cost is therefore assumed for SROI calculation purposes.

PHNs organise and run the support groups. From the survey of PHNs, they spend an average of 1.875 hours a week organising, preparing and being in attendance at the groups. It is assumed for SROI purposes that group meetings are held 48 weeks a year. Other PHNs with mothers on their caseloads who attend support groups that are not organised by them attend the groups occasionally. Based on evidence from the qualitative research, an assumption is made that they attend two out of three meetings. They are not involved in organising and preparing the meetings but are assumed to attend for the duration of the meetings (1.5 hours).

The salary costs of PHNs are calculated on the basis of the mid-point of the relevant salary scale (€50,544) with an addition for PRSI, pension and overhead in accordance with the Department of Public Expenditure and Reform Spending Code (2012, 2013). On this basis, the average hourly rate is €45.58 per worked hour, giving a total cost of PHN involvement in breastfeeding support groups of €6,290 (i.e. $(1.875 \times 48 \times €45.58) + (1.5 \times 32 \times €45.58)$).

The survey PHNs (n=11), asked about group running costs under a number of headings: hire of venue, provision of

refreshments, bringing in a speaker, insurance, travel by the PHN and other costs. Only three respondents indicated costs for venue hire with the rest indicating zero costs. An opportunity cost of €50 for venue hire is allocated in the SROI calculation on the basis that the venues could be used for other purposes at the time the groups used them. Five respondents reported costs for refreshments; of the remainder, one indicated that no refreshments were provided and that is assumed for the other groups too. The average cost of refreshments was €2.50 per week, giving an annual total of €120 (48 weeks). No respondent reported costs for invited speakers, although six reported bringing in a speaker as one of their activities and the average number of speakers was 2.17 per annum. It is not clear who the speakers were and while there was no direct cost to the group, an assumed cost of €100 (costs for one hour and local travel) per speaker has been included for SROI purposes, giving an annual cost of €217. No respondent reported any insurance costs and it would seem that the venue provider (HSE in most cases) carries the cost. A shadow cost of €300 per annum is included in the SROI calculation to cover public liability. Travel costs were reported in five cases and averaged €4.70 per week. They are included without adjustment, although in one case an estimate of €30 was used for unspecified mileage. Other costs were reported in just one case and related to parking charges. The total adjusted cost of groups is estimated at €3,425 per annum per group, summarised in Table 14.

The survey of breastfeeding group participants (n=106) asked about costs related to their attendance in terms of childminding, travel, time off work and other costs. The vast majority of respondents reported no costs in respect of child-minding, time off work and “other” costs and travel costs were small, averaging €1.52 per week over all responding participants. These are summarised in Table 14.

Table 14: Annual group costs

Category	Basis of calculation	Annual amount in €
Salary costs:		
PHN salary (1)	1.875 hours per week, 48 weeks, hourly salary cost of €45.58 (incl PSRI, pension, overhead)	4,102
PHN salary (2)	1.5 hours per week, 32 weeks, hourly salary cost of €45.58 (including PSRI, pension, overhead)	2,188
Total salary costs		6,290
Running costs:		
Venue hire	€50 per week, assumed	2,400
Refreshments	Average €2.50 per week (survey)	120
Speakers	€100 per speaker, assumed, 2.17 speakers per annum (survey)	217
Insurance	€300, assumed	300
Travel	Average €4.70 per week, survey, n=80 (48+32)	376
Other	Average €0.15 per week, survey, n=80 (48+32)	12
Total running costs		3,425
Participant costs:		
Childminding	Average €1.83 per week, survey	88
Travel	Average €1.52 per week, survey	73
Time off work	Average €0.025 per week, survey	1
Other costs	Average €0.035 per week, survey	2
Total per participant	Per annum	164
Total participant costs	Per group, 10.5 average group weekly attendance	1,728
Grand total		€11,443

Calculation of the Social Return on Investment

The value of benefits and costs is summarised in Table 15. This shows total benefits worth €181,378 and total costs of €11,443. This yields a net benefit of €169,935.

Table 15: Calculation of Social Return on Investment

Benefits	Annual amount in €
Reduced medical, dental and medicine costs	7,869
Fewer work days lost	10,750
Reduced mortalities due to necrotising enterocolitis	1,014
Reduced Sudden Infant Deaths	2,697
Reduced incidence of invasive breast cancer and ovarian cancer	82
Improved wellbeing of mothers	8,294
Increased intelligence, increased lifetime earnings	142,739
Savings from avoided formula food	7,933
Total value of benefits	181,628
Costs	
PHN salaries	6,290
Group running costs	3,425
Participant costs	1,728
Total costs	11,443
Net yield (benefits less costs)	169, 935
Social Return on Investment (SROI)	€15.85

The ratio of benefits to costs, i.e. the social return on investment, is thus €15.85. In other words, every €1 spent on breastfeeding support groups returns €15.85 in social value.

The calculation of the SROI is dominated by the benefit of the gain in intelligence attributed to breastfeeding and the link to improved academic performance and increased earnings over the full life-time of a child for each child in a support group. Changes in the assumptions about this benefit and others are looked at in the next section – sensitivity analysis.

Sensitivity analysis

The sensitivity analysis in this section looks at changes to valuations of key benefits, particularly in respect of benefits of increased intelligence and improved lifetime earnings for infants and the benefits of reduced cancer incidence. It should be noted that the assumptions made in the SROI calculation are generally conservative to begin with and sensitivity analysis is not suggesting that the revised lower assumptions are more realistic. Sensitivity analysis is merely testing the impact of making different assumptions.

As regards the benefit of gains in intelligence attributed to breastfeeding, the underlying assumptions based on international research are that breastfeeding increases IQ by 2.62 points and that an increase of 15 points produces a 12% increase in earnings. If the increase in IQ is halved to just 1.31, the benefit is halved to €71,370 and the SROI is reduced to €9.61. If, additionally, the percentage increase in earnings is halved, the benefit is halved again to €35,685 and the SROI is reduced to €6.50. These are still impressive returns. If the intelligence gains are removed altogether, the SROI is reduced to €3.38. To reduce the SROI to €1.00, it would be necessary to make changes of the following order: eliminate the benefit of gains in intelligence and reduce all other benefits by two-thirds. Costs of the groups

would need to be increased by a factor of more than three, along with eliminating intelligence-related benefits, to achieve the same break-even effect.

Two sensitivity tests were also carried using more optimistic assumptions. First the period of prolongation of breastfeeding as a result of participation in the support groups was doubled to 2.58 months, in recognition of the fact that many participants were new members of the group with very young infants. This has the effect of almost doubling the SROI to €31.71. Second, the basis for assessing the value of lives saved due to lower incidence of invasive breast cancer and ovarian cancer was changed from expected life earnings to additional life years from a medical intervention and the quality of life adjusted years (QALY). Social Value UK (2016) estimated these as between €114,000 and €317,000 per additional life year and between €18,000 to 36,000 per QALY. Applying the minimum values in the range and assuming average life expectancy of 83 (Department of Health, undated) has the effect of marginally increasing the SROI to €15.95 using the additional years formula and €15.86 using the QALY method.

In conclusion, it is worth pointing out again that the original assumptions are conservative and err on the side of caution. The sensitivity tests give confidence that the SROI is soundly based and show that returns are high even under extremely pessimistic assumptions and are significantly higher when more optimistic assumptions are made about period of benefit and the value of adult lives saved.

Summary, conclusion and areas for consideration

Summary

This research has focused on breastfeeding groups facilitated by PHNs in 11 locations across Ireland. The overall aim of the project was to evaluate the value of PHN-facilitated breastfeeding support groups and the research was informed by, and coherent with, the methodology used to calculate Social Return on Investment (SROI). This type of approach provides a framework for measuring and accounting for the broad concept of value by measuring changes in ways that are relevant to the people or organisations that experience or contribute to it.

Information was collected using qualitative and quantitative methods and data were collected from all relevant stakeholders. In total, 75 interviews (individual, joint and focus groups) were conducted with PHNs who facilitate a breastfeeding group (n=8), mothers currently attending a breastfeeding group (n=61), PHNs who do not facilitate a breastfeeding group but where mothers in their care attend one (n=3) and PHN managers (n=2). Surveys were completed by mothers (n=104), family and friends of mothers attending a PHN-facilitated breastfeeding group (n=16), PHNs who facilitate a breastfeeding group (n=11) and PHNs who do not facilitate a breastfeeding group but where mothers in their care attend one (n=8).

Mothers, PHNs and inputs into the groups

Mothers attending the group were mainly aged between 30 to 40 years, had completed third-level education and about one in six had not been born in Ireland. Over 60% were first time mothers and a further 6% had not breastfed before although they had other children. About 30% of the 11 PHNs who facilitated groups had been doing so for more than five years, about 40% for three to five years and 30% for less than one year. Four of those included in the study had undertaken the required training to be a lactation consultant while the remaining PHNs had completed a range of training and education in breastfeeding. The groups were facilitated in different ways, including by one PHN (generally a lactation consultant), by two PHNs, and, in one case, by a rota of PHNs where each PHN facilitates the group every six to eight weeks. Facilitating a group was estimated to take zero to two hours by six of the PHNs and three to four hours by three PHNs.

Costs, other than time costs for PHNs, associated with facilitating the group were negligible and the vast majority did not pay for the hire of the venue. In general, funding is not provided for the operation of breastfeeding groups although in one case, €200 was grant aided through a community scheme and in another couple of cases, the HSE paid for the hire of the room. In some cases, the PHNs paid for tea and biscuits themselves and, in most cases, PHNs reported no travel costs associated with attending the group. Again, costs associated with attending the group were small for mothers. The vast majority of mothers did not have any childminding costs although five mothers (5%) reported having child minding costs of more than €20. Almost all mothers (96%) reported having no travel costs (54%; n=54) or costs of less than €5 (43%; n=43). Some mothers identified travel costs.

Activities taking place at the groups

In summary, a range of activities were identified by PHNs and mothers as taking place before, during and after the breastfeeding group. While mothers could attend the group without a referral, it was noted that in general, they were told about it and referred to it by their PHN. Other less common sources of referral included ante-natal classes where attending the breastfeeding group was an element for anyone wishing to breastfeed, GPs and maternity hospitals. In some instances where the same PHN was not in attendance each week, a rota had to be developed. On arrival at the venue, PHNs generally prepared the room which included putting out chairs, getting baby mats ready for use, making a weighing area available if that activity took place there, preparing tea and coffee and getting records ready. In a small number of instances, mothers spoke about getting childminding arrangements in place.

The activities taking place at each breastfeeding group were very similar and five main activities were identified. These were:

- PHNs mediating the group;
- mothers socialising with each other;

- sharing information;
- one-to-one consultations with the PHN; and
- in eight of the 11 groups, weighing breastfeeding infants.

After the group, some mothers went for coffee together, while PHNs reported that they ensured their records were up-to-date, that feedback to other PHNs were given, if necessary, and that they followed-up with mothers they had concerns about.

Outcomes and impact of attendance at the group

Two broad impacts of attendance at the breastfeeding support groups for mothers were identified and these were:

1. improved mental health (through having a purpose and reason to get out of the house, development of a social network, and feeling reassured and supported) and
2. breastfeeding for a longer period of time (through improvements in knowledge, confidence and through the normalisation of breastfeeding).

The findings for each area were exclusively positive and many examples were given of specific incidents or developments that were beneficial to mothers.

Positive outcomes were also identified for PHNs facilitating the groups and these were:

1. an increase in their knowledge about breastfeeding;
2. an increase in job satisfaction; and
3. the ability to provide a better quality service.

PHNs who did not facilitate the breastfeeding group themselves but had mothers in their care who attended the group (n=8) also highlighted positive benefits including an increase in the quality of their service to breastfeeding mothers, greater levels of confidence in helping mothers, and an increase in their knowledge and awareness of breastfeeding. Almost two-thirds of these PHNs reported their workload decreased in respect of breastfeeding mothers.

With the exception of one partner, family and friends of mothers who attended the group (n=16) reported that as a result of their family member/friend attending the breastfeeding group, they were more knowledgeable, more supportive of their family member, more positive about breastfeeding and more likely to recommend breastfeeding to others.

Social Return on Investment

Calculating an SROI for any programme of action involves a number of stages, notably (i) mapping outcomes and impacts for all relevant stakeholders (showing relationship between inputs, outputs and outcomes), (ii) verifying and putting a value on outcomes, and (iii) accounting for impacts that cannot be attributed to the programme (that might have happened anyway or might be attributable to other factors). These steps need to be taken in consultation with identified key stakeholders and results verified with them. Actual calculation involves summation of positive impacts, subtraction of negative impacts and comparison with costs/investment. The findings from this study show:

The social return on investment is €15.85. In other words, every €1 spent on breastfeeding support groups returns €15.85 in social value.

Areas for consideration

The findings from this study clearly highlight a number of benefits for key stakeholders, reflected in the positive return on investment of €15.85 for every €1 invested. It is clear that the facilitation of breastfeeding groups by PHNs has a demonstrable impact on maternal and child health. Based on these findings, it is suggested that the following areas be considered:

1. Adopt a more systematised approach to the implementation of PHN-facilitated breastfeeding groups nationally

- to ensure equity of access for all breastfeeding mothers at local level.
2. PHN lactation consultants should be made universally available, and resourced, so that they can share their expertise with all PHNs providing a service for breastfeeding mothers.
 3. A national policy on activities, processes and procedures for breastfeeding support groups should be developed to ensure consistency in how groups are implemented.
 4. Consideration should be given to ensuring the premises, location and facilities available for breastfeeding support groups are a suitable environment for the delivery of the group.
 5. It is suggested that each PHN-facilitated group be provided with a small amount of annual funding to ensure that basic equipment and facilities (e.g. baby mats, tea, coffee) are available at each breastfeeding group.
 6. Local level information about the breastfeeding groups (e.g. leaflets with information about times, location and contact details) need to be made widely available and accessible.
 7. It is recommended data on the frequency and outputs emerging from PHN-facilitated breastfeeding groups be collected and published.

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