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Online social support group use by breastfeeding mothers: A content analysis

Amanda J Wagg

Canterbury Christ Church University

Author Note

Amanda J. Wagg, PhD in Professional Practice: Psychological Perspectives/ Lecturer in  
Adult Nursing at Anglia Ruskin University/ Lactation Consultant at

[www.lactationmotivation.com](http://www.lactationmotivation.com)

Correspondence concerning this article should be addressed to Amanda Wagg

Contact email: [m.wagg524@canterbuy.ac.uk](mailto:m.wagg524@canterbuy.ac.uk)

Co-Authors

Margie M. Callanan, Professor of Clinical Psychology, Salomons Centre for Applied  
Psychology, Canterbury Christ Church University, Kent, UK.

Alexander Hassett, Principal Lecturer, Salomons Centre for Applied Psychology, Canterbury  
Christ Church University, Kent, UK.

## Abstract

**Background:** Breastfeeding is a public health priority and lack of breastfeeding support a contributing factor to the low initiation and continuation rates in the UK. Online social support groups are being increasingly utilised by breastfeeding mothers and research into this phenomenon is only now emerging.

**Aim:** To document and describe the posts made within an online breastfeeding support group.

**Method:** The posts made to an online breastfeeding social support group between 1<sup>st</sup> -7<sup>th</sup> November 2016 were recorded using an unobtrusive non-participant design, and subject to systematic message content analysis. Themes relating to topics of discussion were deduced from the data and concepts of social support used to analyse the data.

**Results:** The group received 501 posts over the week ( $m=72$ , range 20-93 a day) and was accessed 24 hours a day. Eighty-two percent of posts received comments ( $m=12$ , range 0-415,  $SD=24$ ) and 93% received likes ( $m=11$ , range=0-641,  $SD 42$ ). The group was used from pregnancy and until the child was over two years old. The majority of infants discussed were aged 6 weeks to 6 months. Informational support was the greatest reason for use (65%), followed by esteem support (18%) and emotional support (10%). Thirteen topics of conversations were identified.

**Conclusion:** Mothers are using online social support groups in their thousands to seek information from people in similar situations. Not only do they pose questions but they discuss a range of parenting and breastfeeding topics in an environment that aims to support and facilitate responses. The impact of this support avenue within the wider context of professional, family and offline support warrants further investigation through a qualitative approach.

## **Introduction**

Globally, breastfeeding has long been regarded as a public health priority due to the benefits for mothers and babies (WHO, 1981, UNICEF 2018). In the United Kingdom (UK) exclusive breastfeeding rates are some of the lowest in the world, with 24% of mothers exclusively breastfeeding at 6 weeks and only 1% at six months (Infant Feeding Survey 2010). Positively, the implementation of the UNICEF baby friendly initiative into national and local policy has coincided with an increase in breastfeeding rates to 55% at six weeks (rising from 48% in 2005) and 34% at six months (rising from 25% in 2005) (Health and Social Care Information Centre, 2012). Such initiatives are based on a large body of evidence around breastfeeding support, promotion and protection.

Despite current government policy around Infant Feeding (Department of Health (DH), 2009, Public Health England, 2013, Public Health England & UNICEF, 2016), breastfeeding rates remain low and lack of support is noted as a contributing factor (Victora et al., 2016). Breastfeeding support is also impacted by the closure of children centres, and infant feeding lead roles across England, due to restrictions in government spending (UNICEF, 2017). The conversation around breastfeeding rates is moving away from the individual mother and acknowledging the public health imperative for which government, policy makers, communities and families all share responsibility (UNICEF, 2018).

Professional breastfeeding support, noted in the policies above, place emphasis on a biomedical model of professional training and support. This leaves peer support falling mainly to the voluntary and charity sectors such as the Association of Breastfeeding Mothers, Le Leche League or smaller local charities. However, mothers are increasingly forming their own peer led groups online. These online social support groups are increasingly being utilised as a way of sharing and interacting with others with similar experiences, irrespective of geographical location.

A site search of [www.Facebook.com](http://www.Facebook.com) showed on average 60,000 breastfeeding support groups available in a given month (average taken from 5 consecutive months July-November 2016), with one group boasting 20,000 members and approximately 177 posts a day. To help explain this phenomenon, the Office of National Statistics (ONS, 2016) shows that the internet usage of adults doubled between 2006-2016, searching for health related information was one of the top five reasons for use, and the largest internet activity for people aged 16-44 was browsing Facebook. This increasing availability of the internet, home computers, mobile phones and tablet technologies means quick easy access to others in similar situations.

Online breastfeeding support is only now emerging within the literature (Alianmoghaddam, Phibbs & Benn, 2018; Jin, Phua & Lee, 2015, Bridges, 2016, Victora et al. 2016, Brockwell et al., Brockwel, Benzies & Hayden, 2017), and for that reason is still not present in systematic reviews looking at interventions to support breastfeeding. A review of the literature into the use of computer mediated communication in patient support (Wagg, Callanan & Hassett, 2017) identified many professionals beginning to use online social support groups to support their patients. This includes diabetes care (Glasgow et al, 2003), post-partum care (Salonen et al., 2012), oncology (Shaw et al., 2007) and mental health (Castillo et al., 2013). The aim of this research is to explore the use of online, peer led, social support groups by breastfeeding mothers. In order to achieve this, the theory around social support is explored.

### **Background to social support theory.**

Social support is a term that describes a variety of different pathways linking the involvements of social relationships to wellbeing (Cohen & McCay, 1984), and is well documented as being able to reduce mental health issues, work related stress, and increasing a person's resilience (House, 1981; House & Khan, 1985; Antonucci, 1986; Antonucci &

Jackson, 1990). The most basic of the social support models describes how when a person is faced with a stressor they turn to their social networks and close relational partners with whom they talk about their problems and are offered emotional, informational, instrumental and esteem support (House, 1981). Berkman and Glass (2000) stated that seminal theories have provided richness, understanding and a rigorous attempt to define the critical domains of social support, that are still used today.

Group support, however, occurs within a context. A collective context can help individuals coordinate actions and meaning all within communal norms. Social network theories, from Hymes (1972) through to Parks (2007), describe how groups share the same language, which is used to accomplish social purposes. For example, we tolerate different kinds of support from different people in different settings and a degree of reciprocity is part of the communal rules.

Despite the potential benefits to online social support groups, these groups may not be supportive to all that use them. Harris (1992) added that when expectations of support from others may be strong, the failure to receive support can be devastating. When advertising a group as supportive caution is required, as those that do not find support through the group may be disappointed. Additionally, online use may expose the user to cyberbullying, online harassment and abusive online comments (Thurlow, Lengel & Tomic, 2007). The negative aspects to group use requires further investigation (Barlett & Chamberlin, 2017), however this is not the focus of this study.

### **Study aims**

This study aims to firstly describe and document the use of an online breastfeeding support groups in an attempt to provide an insight into the group activity. Secondly, the aim is to provide a greater understanding of the support needs of breastfeeding mothers by

exploring the types of support requested and common discourses discussed. The research questions included: Is the group utilised at all times day and night, are pictures used to elaborate text, does it provide an avenue in which the mother can tell her story or simply ask quick questions, is it useful in the early weeks of breastfeeding or used for long periods, do mothers receive responses to their posts, what are the typical support requests and what are the topics of discussion? The intent of this exploration is to provide those supporting breastfeeding mothers with an insight into this phenomenon and provide consideration for future practice.

## **Method**

### **Design and data collection**

Online support groups, that support breastfeeding mothers, already exist in large quantities on many social media platforms. By way of illustration, on Facebook.com data is readily and freely available for viewing and sits within the public domain. For this reason, the study assumes an ontological approach that the phenomenon already exists and is measurable to some degree. The research questions sit within the positivist paradigm, and includes variables such as the frequency of posts. Verbatim text is also explored, categorised and the quantified.

A large, UK based, online breastfeeding support group, through Facebook.com was chosen for data collection. The group was chosen for its freely available information, active engagement levels, lack of affiliation to any medical professionals, and because it was peer led. The page boasted in excess of 8000 members, was moderated by volunteer breastfeeding mothers who agreed to the study being undertaken, and had a strong set of group rules stating the need for all members to ensure a supportive community.

Data was collected between the 1<sup>st</sup> and 7<sup>th</sup> November 2016 and all posts made within this time was collected as a unit of data and included for analysis. Data were collected unobtrusively using a non-participant design to maintain ecological validity and to avoid damaging the community by raising suspicion and disrupting the dynamic within the group (Hewson, Vogel & Laurent, 2016).

## **Ethics**

Internet text based communication has opened up a whole new field for ethnographic investigation of textual data, including chat rooms and email correspondence (Silverman, 2013). University ethical approval was obtained and care was taken to anonymise the data by removing all names and applying unit numbers to the posts. Care was taken so that no data could be traced back to the original source, as although information is freely available the online members retain an expectation of privacy.

Methodologically, care is given to disclose the findings in full and to not misinterpret the data. Positively harvesting data online can produce rich linguistic data, from a diverse sample and responses are non-biased and straight from the source. Data collection such as this is increasingly becoming popular, acceptable and justifiable through online platforms (Hewson et al., 2016).

## **Data Analysis**

The data collected was subject to systematic message content analysis (Figure one), used as a research design and method of analysis. Firstly, a single coder collated the presence or absence of variables within each unit of data including date, time, location, word count, infant's age, presence of visual content (videos, poems, inspirational quotes, and pictures), and presence of a shared link, to provide an overview of how the page is used. Secondly, to explore the support needs of the mothers, social support theory was utilised, guided by House



(1981). House (1981) categorised four social support types; emotional, informational, tangible and esteem support, and the framework continues to be used in recent literature (Grassley, 2010). For each unit of data a support code was applied, and to provide rigour an 'other' box was added to allow for any other emerging elements to be captured (Breakwell et al., 2006). The support definitions and examples from the data are contained within the code book (Table one).

Prior to coding, a coding form and the code book (Table one) were sent to the research supervisor who piloted a selection of units ( $n=51$ ) to ensure rigour of definition and usability of the code book. Differences in application/ interpretation of terms were discussed between researchers before commencing full data analysis, as recommended by Neuendorf (2017). In this instance over 10% ( $n=51$ ) of the data was rated by a second rater and inter-rater reliability was 96%. The coding scheme was then finalised and coding began on all 501 units of data. Lastly, deductive thematic analysis was applied to deduce from reading and re-reading the data the data any common topics discussed.

## **Results**

### **Page activity**

Over the seven days, 501 self-authored posts were uploaded to the breastfeeding support group with an average of 72 posts a day (*range=20-93 posts a day*). When choosing a UK titled page, there is an assumption that the users are from the UK. In fact only thirty two percent of the 501 posts contained a location ( $n=162$ ), and a wide spread of people across the UK were noted. There were two mothers identified that posted from outside of the UK from Spain and the United States of America. The largest geographical area represented was London, however this location was only noted in 14 of the 501 posts.

Looking at the age of the children being discussed, 284 of the 501 posts (56.69%) provided an age, 217 did not (43.31%), and 12 women stated they were pregnant. The average age of the child being discussed was 35 weeks old (*range= 0-156 weeks*). The frequency of ages were grouped into the following categories in line with the UK breastfeeding data collection; 0-6 weeks, 7-26 weeks, 27-52 weeks, 1-2 years and then 2 and over. When grouped by frequency the majority of infants discussed ( $n=105/284$ ) were within the 7-26 week category, accounting for 37% of posts.

With regards to page activity it was clear that posts were made throughout the day and night (*range=2-44 posts an hour*) with a trend line showing an increase in frequency throughout the day and the highest frequency of posts at 8pm. To elaborate the text, twenty five percent ( $n=127$ ) of posts contained a picture or video whereas 74.6% ( $n=374$ ) did not. All pictures or videos shared were of mother's breastfeeding their infants. These posts were often used to pose questions to the group for instance "Why is he doing this? [Video of an infant feeding at the breast]" (#47), "my lg [little girl] is struggling so much... any advice [video of infant feeding at the breast]" (#45). Some posts attached a picture and stated "pic for attention]" (#118).

In respect to the page activity the following question was asked 'do mothers ask quick questions or do they write long posts in which they tell a story'? To begin to answer this question the word count was explored and was variable (*range= 0-440 words,  $m=55$ ,  $SD=46.49$* ). Sixty-six percent ( $n=331$ ) of posts were long posts and forty percent ( $n=170$ ) were short posts. A short post is defined as 140 characters (28 words) or less, similar to the characters allowed within a standard text message, and a large post was 141 characters (29 or greater words). The ratio of word count to character count was agreed from the analysis of 10 random posts ( $m=4.9$ ). The largest post contained 440 words and was a request for

information regarding re-establishing milk supply. In contrast, there were fourteen posts that contained no words, instead only a picture or link to an online resource was shared.

Alternatively looking at the reaction to the posts, the 'comments' and 'likes' to each post were quantified. Eighty three percent of posts received comments ( $n=415$ ) and 93% received 'likes' ( $n=466$ ). An average of 12 comments ( $range=0-415$ ,  $SD=24$ ), and 11 likes ( $range=0-641$ ,  $SD=42$ ) were observed. The post with the greatest amount of comments ( $n=415$ ) was one asking for group opinion relating to breastfeeding school aged children (#162), of which the comments were pro-breastfeeding. The post with the greatest amount of likes ( $n=641$ ) was a mother who shared professional breastfeeding pictures (#462). However, 86/501 posts (17.2%) received no comments and 35/501 (7%) of posts received no likes or comments.

Overall, the longer posts received more comments ( $n=4457$ ,  $mean=13$ ,  $median=7$ ,  $range=0-415$ ) than the shorter posts ( $n=1653$ ,  $Mean=10$ ,  $Median=3$ ,  $range=0-139$ ) and showed a statistical significance (*Spearman's correlation coefficient*= .317). Likewise, the posts that do not contain a picture had on average more comments ( $m=12.29$ ,  $range=0-415$ ,  $SD=19.244$ ) than those that did ( $m=11.91$ ,  $range=0-95$ ,  $SD=25.929$ ).

### **Support type requested**

Analysis showed that 65.3% ( $n=330$ ) of posts were for informational support, 18.2% ( $n=92$ ) were relating to esteem support, 10.1% ( $n=51$ ) for emotional support. Five percent of posts ( $n=25$ ) were added to the 'other category' and only 2.7% of posts requested tangible support ( $n=7$ ) with requests for administration assistance to add group members making the majority of these posts.

Typical informational posts included questions such as "does anyone own the \* breast pump, is it any good or worth the money?" (#2), or "where can I buy an amber anklet from

please” (#26). The posts often stated “Quick question!”(#35), “ladies I need your help” (#37) “Hi I have a question” (#38). Additionally mothers were seen to post questions whilst waiting for specialist advice, an example being “I’ve contacted an IBCLC waiting for a reply therefore I am wondering...” (#50) or whilst in hospital “any advice. Had my baby just before lunch... he has no idea how to latch. The midwives have recommended...” (#159). They also use the site to ask medical questions e.g. “Can I take these [Picture of high strength effervescence vitamin C tablets] it just says contact a doctor or pharmacist” (#239), in which instance other’s shared their experiences and directed her to a reputable source of information, in this instance the ‘Breastfeeding Network’ website.

Esteem support posts were often easily identifiable, for instance “no advice guys, just purely moral support” (#332). Thirty three posts referred to how proud the mother was of her breastfeeding journey and nine posts referenced a social media trend which involved awarding mothers at different stages of breastfeeding. Appreciation was also expressed ‘thank you ladies. I did \* as advise’ (#449), and ‘thank you all you lovely ladies for your daily posts that help me get through tough times’ (#438). The greatest frequency of pictures were found within the esteem support posts (n=56), closely followed by the informational posts (n=51) and a statistical significance observed (Chi square= 62).

Thirdly, emotional support posts were seen and highlighted in the following; “I think I’m at breaking point” (#344), “feeling miserable” (#362), “want to cry” (#356), “please tell me it’s normal to have days when you feel like this (crying emoji) (#377). One mother referred to her feelings as ‘a mothers guilt’ (#376) and others stated “I’m feeling completely overwhelmed... just want to talk to someone” (#362). The reason for the emotional post was clearly documented in all cases and included being upset by family members or professionals. One mother who wrote “OK so I’m left feeling... awful [concerning poor weight gain in her

infant]” (#364) after a health visitor had recommended a human milk substitute and illustrated their text with three angry emoji’s (#247).

Several other types of posts were also seen ( $n=25$ ), such as posts that shared personal experiences aimed at normalising breastfeeding and the everyday challenges of breastfeeding, seen through a post explaining obscure places or in seemingly unusual positions. Some of which were intended to be humorous illustrated through laughing emoji’s or emotional through the sharing of poetry or memes (pictures videos or text, typically humorous that are copied and spread across the internet).

### **Topics of discussion**

Thirteen main topics of discussion were deduced from the data and included, in descending order with posts not relating to breastfeeding being the largest group ( $n=66$ ). Following this were post relating to the mothers’ health ( $n=63$ ), effective feeding ( $n=60$ ), the breastfeeding journey ( $n=53$ ), expressing milk ( $n=49$ ), the infants’ health ( $n=40$ ), breastfeeding at night ( $n=38$ ), introducing solid foods ( $n=19$ ), medications in human milk ( $n=16$ ), breastfeeding whilst out and about ( $n=15$ ), human milk substitutes ( $n=5$ ), and group administration ( $n=6$ ). And an ‘other’ category (topic 13) was added and contained 45 posts to ensure all topics of discussion were captured. These topics will be discussed below in more detail.

Topic one highlighted the non-breastfeeding related posts and discussed topics such as advent calendars, amber anklets for teething, visiting a dentist, and pregnancy. Secondly, the mother’s health category covered posts regarding pain in the breast and/or the nipple. Effective breastfeeding (topic three) saw the sharing of pictures, videos, links, or videos to pose questions such as “why is my baby doing this [Video of infant crying and fussing at the breast]” (#47). Others asked questions such as “my little boy is \*weeks old, he hasn’t been

latching quite right and its making me sore” (#147). Posts around babies stools, weight gain, the use of dummies/pacifiers, and feeding patterns were all common here.

The majority of posts that discussed the mothers’ breastfeeding journey (topic four) fell under the category of esteem support and talked of how happy and proud they were to have reached a milestone, such as “so proud of us both” (#472), “so proud to be sporting golden boobs [with reference to the social media awards]” (#493). Words of reassurance were also posted “YOU CAN DO THIS” (#412) along with appraisals of their journey such as “I really never expected to go this long” (#267)

Topic five was categorised as expressing milk. Posts relating to expressing milk included breast pumps recommendations, reusing expressed milk, how to feed expressed milk, expressing milk when returning to work, and questions around how much expressed milk to feed the infant. Emotional posts were seen within this topic for example “I feel like I’m going mad!! or “Pumping is such a struggle but I need some expressed” (#333) as well as posts of excitement “Excited to make... breast milk ice lollies (clapping emoji)” (#463).

Infant health ( $n=45$ ) was highlighted within the data and included “Sticky, stringy slightly lumpy mustard coloured stool... can this be normal”?(#10), “On average how many wet nappies do you change in a day?” (#15) and medical conditions such as cow’s milk protein allergy, reflux and remedies for conjunctivitis were also seen. Whereas, the posts regarding breastfeeding at night typically included sleeping positions, bed sharing, co-sleeping, as well as humorous posts about being unable to move because the baby will wake.

Introducing solid foods was discussed in 19 posts. Direct questions such as “When did you all start weaning?” (#36) were seen, as well as emotional posts around introducing solids foods before the recommended age of six months “sorry... but I needed to get that off my chest [9x angry emoji]” (#365). This post criticised another’s choice to introduce solid foods

before the recommended age of 6 months and generated 49 comments. This is one example of how the group may not be entirely supportive. Conflicts and online judgemental comments made by group members are not within the remit of this research, however such posts do warrant further investigation.

Topic nine saw mother's requests for informational support around medications in human milk. Seen were posts relating to hay fever medication, relieving sinus pain, contraception, treating dehydration, cold remedies and even how safe it was to breastfeed whilst taking strong prescription pain killers. People again shared their experiences and directed others to reputable websites for further information. Whereas, topic 10 included discussion and celebration around breastfeeding whilst out and about included "I just did it- just nursed in public place" (#481), another post read "I breastfed on \*... my biggest audience to date" (#465).

The last two identified groups were administrative tasks and human milk substitutes. A small percentage of posts were requests for the group administrators to add other members and another small group was around human milk substitutes. One post was a mother's reflection upon something that she had seen and disagreed with that made her feel angry "she made her formula bottle with water from the tap (angry face emoji)" (#441), implying that the mother had endangered her baby. This also provides another case where group members may be critical of each other. Other posts were seen relating to the sale of milk substitutes and posed questions related to the laws around the sale of breastmilk substitutes.

Lastly, the 'other category' were breastfeeding related posts that failed to fall into one of the other categories already described ( $n=47$ ). These posts included worries about letting the family look after their breastfed child, articles they had read in magazines, comments about others, including "Why are people so uneducated about breastfeeding [5x crying

emoji]” (#331). Only one post was seen where a mother requested information about her local area for example “anyone know of a good BF [Breastfeeding] groups in \*” (#247).

## **Discussion**

### **A need for support**

Social relationships and activities are arguably one of the most important areas of life (Bowling, 1995, Bowling & Windsor, 2001). When a woman is pregnant, births her infant, and chooses to breastfeed, her body experiences significant changes. These changes will undoubtedly be a stressful life event, the entire process of child bearing has long been conceptualised as a period of change, anxiety, and adaptation where the women is not in control of her body (Hanford, 1968, Levy & McGee, 1975, Leifer, 1977, Hobfoll, 1986, Borders et al., 2013), hence she will seek support. At times there may be intimate encounters with professionals, as well as possible discomfort if breastfeeding challenges arise. Likewise, there may be feelings of pleasure and happiness due to a release of oxytocin (Bartz et al., 2010). These online communities provide an environment for women to interact, share experiences and support each other through the possible positive and negative aspects of breastfeeding. Moreover, it has been noted that individuals identify and socialise with others who are similar to themselves (Neal, 2013).

This study draws awareness to the fact that many breastfeeding mothers are participating in online communities, such as those on Facebook, to support their breastfeeding journey. There is an assumption that a group titled ‘breastfeeding support’ actually does provide support. This study, through documenting and describing the use of the group, goes part way in looking for evidence of this.

### **Page activity**



It is seen through this study that social media does provide an avenue in which to request support, at any time of the day, with no geographical boundaries. This study saw that, despite the group being titled as a breastfeeding support group, the largest topic group related to posts that were non-breastfeeding related. Previous studies have found benefit in online groups due to fact that they are available 24 hours a day (Jung & Lee, 2011). The literature states that simply having access to such groups could provide a sense of self-identity which could provide a feeling of worth and external validation (Yoo et al. 2013). This study saw mothers thanking each other for the informational support they were receiving (#449, #438).

Additionally, mothers are able to tell their story, share pictures and videos, links, poems, inspiration words, questions, and thoughts with their peers. Previous studies have shown that clinical decisions around complex skin conditions and soft tissue injury can be effectively made through videoconferencing and photographs (Lowitt et al., 1998, Gilmour et al., 1998, Vandepol et al., 2013). With digital photography available on even the basic models of smartphones, sharing videos and pictures could be both feasible and effective in supporting breastfeeding online.

A strong set of group rules, identifying the communal norms and social identity for the group is seen. Positively these rules focused on the promotion, protection and support of breastfeeding, which happens to be in line with the strategic and national breastfeeding aims such as DH, 2009, Public Health England, 2013, Public Health England & UNICEF, 2016. This community, and its group rules, provides a space for likeminded mothers to come together the following comment illustrates this “I just wondered about people’s opinion on here as I’m sure they are extremely different”, “I can’t really post on my profile“( #483). For this mother the breastfeeding support group was somewhere she could write something that she would not put on her own Facebook page.

Although not the remit of this study, judgemental posts were seen within the data around early weaning and preparing a bottle, despite the presence of strong group rules. More research is required to look at the impact of these, as well as the group and individuals management of such comments.

### **Support needs of mothers**

This study found that the majority of posts were to seek informational support. In recent studies, Facebook has been found to be a useful way to share breastfeeding information amongst women (Jin, Phua & Lee, 2015, Tomfohrde & Reinke, 2016). Whereas, older studies have found that the giving of emotional support and expressing feelings has been the biggest reasons for using breastfeeding forums (Cowle, Hill & Robinson, 2011). This study saw esteem support closely followed requests for informational support. This category of support contained the most amount of pictures and topics of discussion included the mother's breastfeeding journey and breastfeeding accomplishments. Overall emotional support accounted for only 10% of posts with a smaller percentage of requests for tangible support identified. Most of this category was for administrative group assistance.

Additionally, this study found that the largest category, for the child's age at time of posting, was between seven weeks and six months of age. In practice this coincides with a gap in routine health services, a time when the health visiting services offers no routine service and the midwifery service is no longer involved. Although causation cannot be implied there is a correlation seen.

Lastly, this study found that the group also provides a platform in which to normalise breastfeeding. Leahy-Warren, Creedon, O'Mahony, and Mulcahy (2017) found that facilitating a sense of normalcy for breastfeeding women at individual, community and

societal levels was essential in promoting breastfeeding. The online support group provides a platform in which to achieve this.

### **Study limitations**

The aim of this study was to document and describe the use of an online breastfeeding support group however this study does not look at the quality of the information being provided, or the effects of receiving support online. This study does not examine the mothers satisfaction with the support offered, or the negative effects attributed to its use.

As a method, content analysis can be applied to the dynamic communication environment of the web as long as care is taken not to over simplify, and generalizability is questioned (Krippendorff & Bock, 2009). Current findings indicate that mothers use the page, for the most part, to request information. In some posts questions were short and clear, however, a mother may post a question to bolster her self-esteem indirectly. For example a mother may already know the answer to the question but would like the reassurance from the group that she has made the right decision, affecting the results.

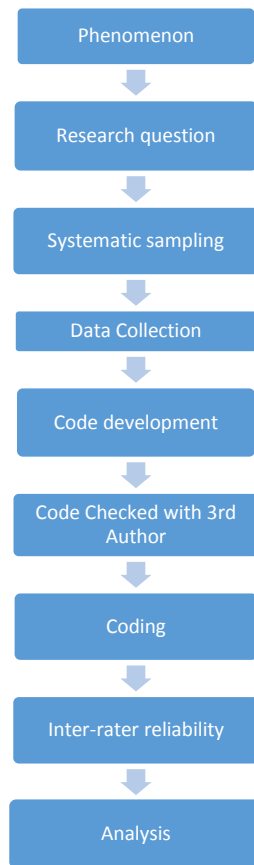
The positive and negative impact of such an intervention is also not explored, and further research into the perceived value of online groups would add to this areas of study. There is always a wider context, each woman with have differing levels of tangible support, varying levels of support from friends and family or the environment in which they live, all of which will impact the choices that they make around infant feeding. Many factors such as socio-economic status, age, and education level are already known to influence feeding choices (Glassman et al., 2014). The impact that online community has overall and in relation to all these other factors, when faced with stressful events, is unknown and again warrants further investigation.

## **Conclusion**

Breastfeeding is a public health priority and cuts to government spending, the closure of community breastfeeding support groups and pressures on the health service is leading practitioners to find new, innovative, and cost effective ways to support breastfeeding mothers. This research drew on the social support theory to explore the use of online breastfeeding support groups. Online support groups are being actively used by women as peer led interventions to support their breastfeeding journey, and research into this area is growing. Understanding how the groups are being used and the support needs of mothers will enhance understanding of the supportive capacity of online peer-led platforms.

This research has shown how one breastfeeding social support group has provided a medium by which to request informational, esteem support, and emotional support and to pose questions to their peers on a range of breastfeeding and non-breastfeeding related questions any time of the day and night. Positively, the online social support group creates a community of likeminded people, regardless of geographical boundaries, that share not only questions but celebrate accomplishments within an environment of mutual acceptance.

Overall, the majority of posts were made by mothers seeking informational support relating to their child, typically aged between six weeks and six months old. Previous research has provided evidence of the usefulness of Facebook for sharing breastfeeding information, whereas previous research emphasised emotional support as a driver of use. Further qualitative research is needed to explore the positive and negative experiences of mothers that use these groups and to further explore the impact that such groups have on their breastfeeding journey in relations to other avenues of support.



***Figure 1: Systematic content analysis***

Code	Name	Description	When to use	When not to use
1	Information support	The giving, sharing and/or request for information/ knowledge.	<p>The sharing of a story and then a direct request for further information e.g. “How long should a new born baby go between feeds” (#263) “Any advice on...” (#264). “Please help...” (#276).</p> <p>Direct questions without the sharing of a story e.g. “Are hand pumps any good or is it worth investing in an electric pump” (#269).</p> <p>A post that shares a link, picture, or information, with or without discussion and/or question.</p>	<p>The criteria for use is not met.</p> <p>When a question is not posed.</p> <p>When the post does not offer information.</p> <p>When the post relays a statement with no question.</p> <p>When the criteria for emotional, esteem appraisal support is met.</p>
2	Emotional support	Emotions are a subjective psychological phenomenon in which someone expresses a strong feeling derived from one’s circumstances, mood or relationship with others. It may be anger, fear, disgust, surprise, happiness, anxiety, depression, empathy, frustration, gratitude, remorse, stress, horror. Emotional support posts either contain or request support with such emotions.	<p>There is a direct request for emotional support, reassurance or motivation to deal with a stressor. Example: “Just looking for a bit a reassurance really” (#338), “HELP!!!” (#61)</p> <p>A post that states a strong feeling or emotional state for example anger, panic, and upset. Example: “An article in...magazine made me so angry” (#331), “Really panicking” (#343)</p> <p>A post disclosing a situation in which they are struggling, distressed, tearful, crying, lacking motivation, vulnerable, sensitive, happy and expressing humour. Example: “I’m exhausted 3x cry emoji” (#341), “Don’t really know what I’m asking but tired and frustrated” (#342).</p>	<p>The criteria for use is not met</p> <p>When there is a clear question being asked requesting information</p> <p>When the criteria for esteem appraisal is met.</p>
3	Esteem/ appraisal support	The definition of esteem is to admire and respect someone. In sociology and psychology self-esteem reflects a person’s overall subjective emotional evaluation of his or her own worth. Esteem support posts contain either a reflection upon a mothers own situation or that of others, is a post in which she judges herself or can be an attitude towards herself.	<p>An appraisal/ reflection upon their own situation. “When baba stops mid feed, and gives these big smiles [picture shared]” (#404), “Today I am officially nursing a one year old..... thank you ladies for educating me” (#410)</p> <p>Someone shares a link that they appraise and pass comment on “it makes me a bit annoyed that breasts are so sexualised in the Western culture we live in” (#406).</p> <p>Post offers encouragement to others or offers information that allows others to appraise their situation, or offers gratitude. Example: “is it just</p>	<p>The criteria for use is not met.</p> <p>When there is clear request for emotional support.</p> <p>If the post is telling someone out right how to feel, think or what to do and there is no appraisal of the situation.</p> <p>When a question for information is posted.</p>

			me that cringes when they see early weaning posts” (#408), “YOU CAN DO THIS” (#412).	
<b>4</b>	<b>Tangible/ instrumental support</b>	Instrumental support could relate to a tangible assistance to address a problem and could be financial.  Concrete direct way to assist others	A direct request for someone to do something for someone in a hands on way. Examples would be to do someone’s shopping if they recovering post birth or driving to someone to an appointment if post caesarean section they could not drive yet. The nature of online support implies a lack of tangible assistance due to a lack of geographical boundaries however some posts directed at the admin team are seen. i.e. “Hi, please can an admin add me to the off topic group please? I have an off topic question. TIA x” (#78) “Can someone from admin plz inbox me? Tia.” X (#302).	If someone is asking for information about something tangible like buying a breast pump or where to find a face to face group. This would be recorded as informational support as would a request for tangible support “Any know of real life help in ***” (Post 8)
<b>5</b>	<b>Other types of post</b>	Other refers to a post made by a breastfeeding mother that is neither a request for information, esteem, emotional or tangible support.	Post uses humour to normalise breastfeeding e.g..A shared link showing a picture of a breastfeeding Barbie doll (#425).  Post to another person e.g. “to the lady at * .....it warmed my heart seeing you feeding ..... I hope you enjoyed your day xxx” (#435)	When the criteria for tangible. Esteem, emotional or informational support is met.

Table 1: *Support type codes*

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