

Maternal and child nutrition

[M] Evidence reviews for facilitators and barriers to continue breastfeeding when returning to work or study

NICE guideline NG247

Evidence reviews underpinning recommendations 1.3.11 to 1.3.14 in the NICE guideline.

January 2025

Final

*These evidence reviews were developed by
NICE*

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Facilitators and barriers to continue breastfeeding when returning to work or study

Review question

What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Introduction

The UK Scientific Advisory Committee on Nutrition alongside World Health Organization and UNICEF recommend exclusive breastfeeding for the first 6 months of age with continued breastfeeding alongside solid foods to 2 years of age or beyond.

In the UK there can be a perception that breastfeeding and returning to work are incompatible with few employees aware that they are entitled to special considerations if breastfeeding. Under the Equality Act 2010, it is unlawful for a business and service provider to treat an employee unfavourably because they are breastfeeding. Employers have certain legal obligations in supporting returning employees who wish to continue with breastfeeding. The Health and Safety Executive make recommendations for good practice to protect breastfeeding mothers returning to work.

Supporting people to continue breastfeeding following a return to work, training or education ensures continuing health benefits for both mother and baby as the longer breastfeeding is maintained, the greater the benefits.

Supporting breastfeeding can also improve workforce engagement and retention, and reduce absence. Better understanding of the barriers and facilitators can help healthcare professionals and employers to support people returning to work and study to continue breastfeeding. The aim of this review is to explore what are the facilitators and barriers to help women returning to work and study to continue breastfeeding.

Summary of the protocol

See Table 1 for a summary of the population and phenomenon of Interest for this review.

Table 1: Summary of the protocol (population and phenomenon of interest)

Population	<ul style="list-style-type: none"> breastfeeding women, parents and carers of babies and children from birth to 5 years who wish to continue breastfeeding when returning to work or study anyone involved in facilitating the continuation of breastfeeding when returning to work or education
Phenomenon of interest	<p>Factors that facilitate or impede women who wish to continue breastfeeding returning to work and study.</p> <p>Themes will be identified from the available literature. The committee identified the following potential themes (however, they are aware that not all of these themes may be found in the literature and that additional themes may be identified):</p> <ul style="list-style-type: none"> emotional difficulties

- support from partners and other family members
- support from colleagues and employers
- peer support
- physical challenges (for example, time constraints, lack of workplace facilities)
- distance between workplace/place of study and childcare setting
- convenient and flexible childcare
- workplace and study place breastfeeding policies or flexible working arrangement
- length of maternity leave
- co-operation of childcare (for example, storage of milk)
- nurseries and independent child minders
- workplace facilities
- workplace training
- emotional and technical support, advocacy, and information for the transition back to work or study (and the timing of this)
- home working
- shared parental leave
- risk assessments

For further details see the review protocol in appendix A.

Methods and process

This evidence review was developed using the methods and process described in [Developing NICE guidelines: the manual](#). Methods specific to this review question are described in the review protocol in appendix A and the methods document (supplementary document 1).

Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

Qualitative evidence

Included studies

Seventeen qualitative studies were included for this review (Alianmoghaddam 2018, Al-Imari 2019, Burns 2019, Desmond 2016, Gatrell 2007, Gilmour 2013, Hauck 2016, Hentges 2021, Iglesias-Rosado 2021, Jackson 2021, Kosmala-Anderson 2006, Llorente-Pulido 2021, Payne 2008, Rowbotham 2022, Wallace 2008, Weber 2011, West 2017).

The included studies are summarised in Table 2.

The studies included the views of breastfeeding women about facilitators and barriers to continue breastfeeding when returning to work or study. Data collection methods included interviews, focus groups, free text questionnaire responses, and the citizen science approach.

Four studies were conducted in Australia (Burns 2019, Gilmour 2013, Rowbotham 2022, Weber 2011); 2 studies were conducted in Canada (Al-Imari 2019, West 2017); 1 study was conducted in Ireland (Desmond 2016); 2 studies were conducted in New Zealand (Alianmoghaddam 2018, Payne 2008); 2 studies were conducted in Spain (Iglesias-Rosado 2021, Llorente-Pulido 2021); 1 study was conducted in The Netherlands (Hentges 2021); 4 studies were conducted in the United Kingdom (Gatrell 2007, Jackson 2021, Kosmala-

Anderson 2006, Wallace 2008); and 1 study was conducted in Australia, Ireland, and Sweden (Hauck 2016).

Two studies reported on breastfeeding women returning to education (Burns 2019, West 2017) and 15 studies reported on breastfeeding women returning to work (Alianmoghaddam 2018, Al-Imari 2019, Desmond 2016, Gatrell 2007, Gilmour 2013, Hauck 2016, Hentges 2021, Iglesias-Rosado 2021, Jackson 2021, Kosmala-Anderso 2006, Llorente-Pulido 2021, Payne 2008, Rowbotham 2022, Wallace 2008, Weber 2011).

Data were identified for most of the themes listed in the protocol by the committee and some data were identified that created additional themes other than those initially anticipated by the committee (please see section below 'The outcomes that matter most' for further details).

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Excluded studies

Studies not included in this review are listed, and reasons for their exclusion are provided in appendix K.

Summary of included studies

Summaries of the studies that were included in this review are presented in Table 2.

Table 2: Summary of included studies.

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Alianmoghaddam 2018 Study design General qualitative inquiry Country New Zealand Study aim To understand why exclusive breastfeeding stops between three and six months after birth. Study funding Not industry funded	N=30 women Age, years, n: <25: 2 25-35: 18 >35: 10	Data collection: Interviews. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> physical space nature of profession
Al-Imari 2019 Study design General qualitative inquiry Country Canada	N=56 women Age, years, n (%): <25: 1 (1.8) 25-29: 25 (44.6) 30-34: 26 (46.4) 35-40: 4 (7.1)	Data collection: Free text questionnaire responses. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> access education internal policies nature of profession open communication physical space self-conscious emotions

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Study aim To explore the breastfeeding experiences of doctors returning to work. Study funding Not reported			<ul style="list-style-type: none"> • support from others
Burns 2019 Study design General qualitative inquiry Country Australia Study aim To explore women's experiences of breastfeeding at university. Study funding Not industry funded	N=10 women Age (SD), years: NR (NR)	Data collection: Free text questionnaire responses and interviews. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> • access • education • internal policies • nature of profession • open communication • physical space • role modelling for others • self-conscious emotions • societal stigma • support from others
Desmond 2016 Study design General qualitative inquiry Country Ireland Study aim To explore women's experiences of breastfeeding after their return to work. Study funding Not industry funded	N=16 women Age, years, n: <25: 1 25-35: 9 >35: 6	Data collection: Interviews. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> • external policies • feeding routine • nature of profession • physical space • self-conscious emotions • societal stigma • support from others
Gatrell 2007 Study design General qualitative inquiry Country United Kingdom	N=20 women Age (SD), years: NR (NR)	Data collection: Semi-structured interviews. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> • internal policies • nature of profession • physical space • self-conscious emotions • support from others

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Study aim To explore the differences in health information regarding breastfeeding.			
Study funding Not reported			
Gilmour 2013 Study design General qualitative inquiry Country Australia Study aim To explore women's experiences of returning to work. Study funding Not industry funded	N=18 women. Age, years, n: 31 to 35: 15 Note: data for 3 participants unavailable	Data collection: Focus groups. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> • access • nature of profession • open communication • physical space • support from others
Hauck 2016 Study design General qualitative inquiry Country Australia, Ireland, Sweden Study aim To explore perceptions of what women found helpful to continue breastfeeding. Study funding Not industry funded	N=356 women. Mean (SD) age, years, [range]: Australian women: 33.5 (4.92) [22-49] Irish women: 34.9 (4.01) [24-43] Swedish women: 33.5 (5.61) [20-51]	Data collection: Interviews. Data analysis: Content analysis.	<ul style="list-style-type: none"> • flexibility on return to work/study
Hentges 2021 Study design Phenomenological Country The Netherlands	N=13 women. Mean (SD) age, years: 34 (NR)	Data collection: Semi-structured interviews. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> • access • education • external policies • internal policies • nature of profession • physical space

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Study aim To identify the experiences of women returning to the workplace about breastfeeding.			<ul style="list-style-type: none"> • role modelling for others • self-conscious emotions • societal stigma • support from others
Study funding Not industry funded			
Iglesias-Rosado 2021	N=19 women.	Data collection: Semi-structured interviews.	<ul style="list-style-type: none"> • physical space
Study design General qualitative inquiry	Age, years, n: <25: 1 25-35: 7 >35: 11	Data analysis: Inductive content analysis.	
Country Spain			
Study aim To explore breastfeeding experiences of migrants.			
Study funding Not industry funded			
Jackson 2021	N=24 women.	Data collection: Semi-structured interviews.	<ul style="list-style-type: none"> • physical space • support from others
Study design General qualitative inquiry	Mean (SD) age, years: 35.5 (NR)	Data analysis: Realist thematic analysis.	
Country United Kingdom			
Study aim To explore what motivates women to continue breastfeeding.			
Study funding Not reported			
Kosmala-Anderson 2006	N=44 women.	Data collection: Free text questionnaire responses.	<ul style="list-style-type: none"> • education • nature of profession • physical space • support from others
Study design General qualitative inquiry	Age range, years: 30 to 35	Data analysis: Not reported.	

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Country United Kingdom Study aim To determine the experience and views of employees concerning breastfeeding support at work. Study funding Not reported			
Llorente-Pulido 2021 Study design General qualitative inquiry Country Spain Study aim To determine factors that are detrimental to breastfeeding. Study funding Not industry funded	N=20 women. Age, years, n: <30: 2 30-40: 8 >40: 10	Data collection: Semi-structured interviews. Data analysis: Content analysis.	<ul style="list-style-type: none"> • nature of profession • physical space
Payne 2008 Study design General qualitative inquiry Country New Zealand Study aim To describe mothers' experiences of returning employment and breastfeeding. Study funding Not industry funded	N=34 women. Age range, years: From early 20s to late 30s	Data collection: Interviews. Data analysis: Thematic analysis.	<ul style="list-style-type: none"> • internal policies • nature of profession • physical space • role modelling for others • support from others
Rowbotham 2022 Study design General qualitative inquiry	N=37 women. Age, years, n: 18-29: 13 30-39: 30	Data collection: Citizen Science Method Data analysis:	<ul style="list-style-type: none"> • education • nature of profession • physical space • support from others

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Country Australia Study aim To explore what breastfeeding support is available at work. Study funding Not industry funded	40-49: 4 50-64: 1	Thematic analysis.	
Wallace 2008 Study design General qualitative inquiry Country United Kingdom Study aim To examine women's experiences on breastfeeding support in the workplace. Study funding Not reported	N=296 women. Age, years, n 20-25: 15 26-40: 258 >40: 23	Data collection: Free text questionnaire responses. Data analysis: Not reported.	<ul style="list-style-type: none"> • education • feeding routine • nature of profession • physical space • self-conscious emotions • societal stigma • support from others
Weber 2011 Study design General qualitative inquiry Country Australia Study aim To describe women's experience of support on breastfeeding when returning to work. Study funding Not industry funded	N=496 women. Mean (SD) age, years: 35 (NR)	Data collection: Free text questionnaire responses. Data analysis: Not reported.	<ul style="list-style-type: none"> • nature of profession • physical space • support from others
West 2017 Study design General qualitative inquiry	N=8 women. Age, years, n: <25: 5 >25: 3	Data collection: Semi-structured interviews. Data analysis:	<ul style="list-style-type: none"> • nature of profession • physical space • self-conscious emotions

Study and aim of the study	Population	Methods	Themes applied after thematic synthesis
Country Canada Study aim To explore the breastfeeding experience of students on a university campus. Study funding Not industry funded		Thematic analysis.	

NR: not reported; SD: standard deviation

See the full evidence tables in appendix D. No meta-analysis was conducted as this was a qualitative review (and so there are no forest plots in appendix E).

See summary of evidence section and appendix F for further details about the themes, review findings and CERQual ratings.

Summary of the evidence

A summary of the qualitative data is presented here, by overarching theme together with a thematic map to visually illustrate the connection between the overarching themes and sub-themes (Figure 1 and Figure 2).

The themes identified through analysis of all the included studies are summarised in Table 3 together with their CERQual quality rating and the number of studies contributing to each theme.

Table 3: Themes and sub-themes generated from analysis

Themes and subthemes	CERQual quality	No. of studies
Facilitators to continue breastfeeding when returning to work or study		
A.1 Establishing a feeding plan	Low	1
A.2 Role modelling for others	Moderate	3
A.3 Knowledge of policies	Moderate	1
A.4 Open communication	High	2
A.5 Support from others	Moderate	2
A.5.1 Partner/peer support	Moderate	1
A.5.2 Workplace demographic	High	3
A.6 Workplace/university policies	Moderate	1
Barriers to continue breastfeeding when returning to work or study		
B.1 Establishing a feeding plan	Moderate	1
B.2 Self-conscious emotions		
B.2.1 Breast feeding is unprofessional	Moderate	2
B.2.2 Duality of being a good mother/good employee	Moderate	1
B.2.3 Feeling embarrassed	Low	5
B.2.4 Feeling isolated	Moderate	1
B.2.5 Shame when washing breast pump	High	2
B.3 Education		
B.3.1 Increase awareness of breastfeeding policies	Moderate	2
B.3.2 Knowledge of policies	Low	5

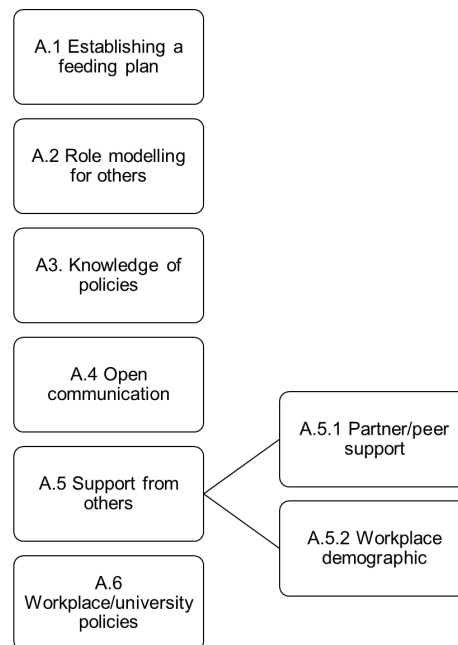
Themes and subthemes	CERQual quality	No. of studies
B.4 Open communication	Moderate	3
B.5 Support from others		
B.5.1 Pressure from supervisors	Moderate	1
B.5.2 Workplace culture	Low	7
B.5.3 Workplace demographic	Moderate	6
B.6 Societal stigma	Moderate	4
B.7 Access to childcare	Moderate	3
B.8 Nature of profession		
B.8.1 Employment contract	High	3
B.8.2 Flexibility on return to work/study	Low	6
B.8.3 Size of company	Moderate	1
B.8.4 Time during work to breastfeed/pump	Low	9
B.8.5 Work schedule	Moderate	2
B.9 Physical space		
B.9.1 Accessibility of space	High	2
B.9.2 Cleanliness of space	Low	3
B.9.3 Comfort of space	High	4
B.9.4 Having no space	Moderate	9
B.9.5 Location of the room	High	2
B.9.6 Privacy	Low	5
B.9.7 Storage of breast milk	High	6
B.10 External policies		
B.10.1 Legislative protection	High	2
B.11 Internal policies		
B.11.1 Workplace/university not upholding legal policies	Moderate	1
B.11.2 Workplace/university protection	Low	3

See appendix F for full GRADE-CERQual tables.

Facilitators to continue breastfeeding when returning to work or study

- The evidence generated 6 themes and 2 sub-themes.
- The evidence ranged from high to low quality, with most of the evidence being of a moderate quality.
- The main reasons that evidence was downgraded was due to minor or moderate concerns with methodological limitations and relevance of evidence.

Figure 1: Thematic map for facilitators to continue breastfeeding when returning to work or study



A.1 Establishing a feeding plan

One study reported that women who were able to establish a feeding routine before returning to work considered themselves to be ‘very lucky’. In the experience of one woman, who was able to extend her maternity leave, she could move her child onto solids and did not need any support at work when breastfeeding.

A.2 Role modelling for others

Three studies reported on some women’s desire to normalise breastfeeding by increasing the visibility of it. In doing so, some women were encouraged to be open and to become an advocate and role model for other women. Others support and acknowledgement of this could make breastfeeding part of the working culture. Some women felt that women who had previously breastfed could set standards in the workplace so that it was easier for future breastfeeding women. In one study, the shared experience of breastfeeding women created a kind of norm, which allowed them to combine breastfeeding and work. Such support was valued and spoken of positively by these participants. Experiences with breastfeeding helped to build women’s confidence with breastfeeding at university. However, students reported that breastfeeding at university required you to develop a “thick skin” so what others thought would not factor into their experience.

A.3 Knowledge of policies

One study reported a strong preference to be directly informed about their entitlements and available facilities upon or prior to returning. When returning to study, many women were unaware that there were facilities available on most of the university’s campuses advertised as spaces designated for breastfeeding or expressing. In one case, one woman had a positive experience with information on the university’s breastfeeding policy.

Some women reported that assessing each woman’s needs individually would be the best approach so to prevent pressure and avoid stigmatising those that could or did not wish to breastfeed.

A.4 Open communication

Two studies reported on the importance of having open communication that is timely, proactive, and supportive. Open communication is important facilitate flexible workspaces that are conducive to successful breastfeeding and reduce any apprehension women may feel before returning to work/study. Women noted the importance of communication being effective from both sides and valued conversations that began prior to their return.

A.5 Support from others

Two studies reported on the benefits of having the support of tutors, supervisors, managers, and colleagues breastfeeding at work and university.

There were 2 sub-themes contributing to this theme.

One study reported that these supportive relationships led to positive experiences of breastfeeding and expressing in the workplace and on campus. The evidence also reported on the benefits of peer support. Some women discussed how helpful peer support is, particularly when family support was lacking. For other women, partners and husbands were reported as being the greatest support, especially for practical and emotional support.

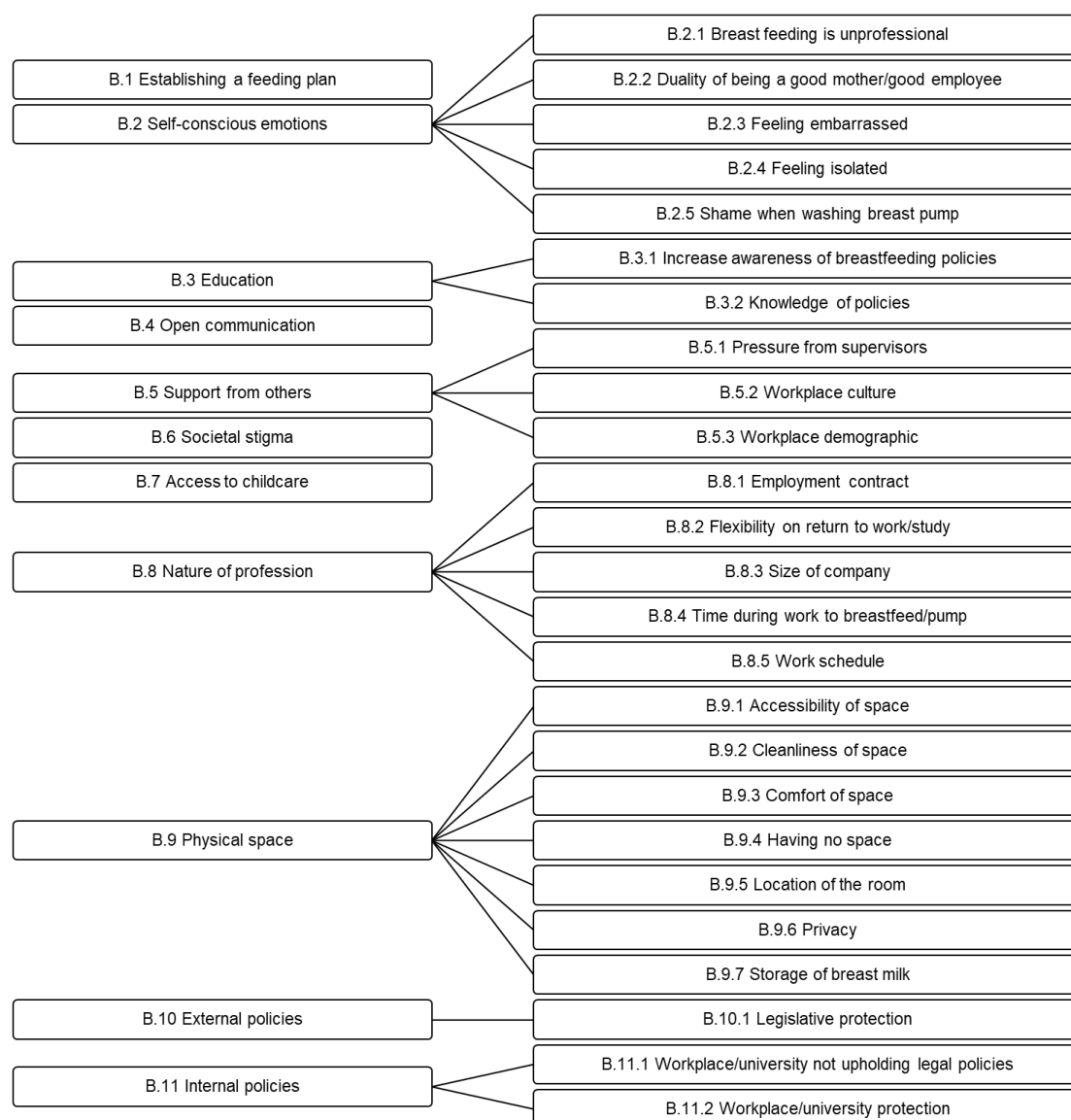
Three studies reported on how the workplace demographic affected comfort levels when breastfeeding or expressing. One woman worked for a company that had multiple worksites and several different employees. She described the variation in support dependent on the location and how many women were at the site. Women in female-dominated departments where breastfeeding was normalised felt “lucky” and empowered.

A.6 Workplace/university policies

One study reported that many women who returned to university described it as a positive environment for breastfeeding compared to other working environments. It was described by staff as progressive and as having policies and facilities that assisted them with breastfeeding, such as maternity leave, flexible work arrangements, and campus childcare.

Barriers to continue breastfeeding when returning to work or study

- The evidence generated 11 themes and 25 sub-themes.
- The evidence ranged from high to low quality, with most of the evidence being of a moderate quality.
- The main reasons that evidence was downgraded was due to minor or moderate concerns with methodological limitations and relevance of evidence.

Figure 2: Thematic map for barriers to continuing breastfeeding when returning to work or study**B.1 Establishing a feeding plan**

One study reported on difficulties women faced trying to establish a feeding routine (for example, solids or bottle feeding) for their child in time for return to work. Some women found the transition from breastfeeding on demand to trying to get the baby onto a bottle for feeding during the day very difficult. The associated emotional stress and anxiety with trying to do this was widely reported.

B.2 Self-conscious emotions

There were 5 sub-themes contributing to this theme.

Two studies described how some women returning to work thought others might perceive them breastfeeding as 'unprofessional'. Some women felt that breastfeeding was not compatible with being in a professional sphere where one dresses and conducts themselves differently. One woman conflated breastfeeding with feeling fatigued and worried that colleagues might perceive her as unhealthy, and consequently unreliable.

One study reported on the internal and external pressures some women faced when returning to work, whilst trying to be a good mother and a good employee. Some women

experienced the transition to work as difficult or 'horrible', which led to feelings of guilt and insecurity. Separating the role of mother and employee was difficult and this was only worsened by trying to breastfeed or pump at work. Managing this whilst also handling heavy workloads and delivering high quality outputs was challenging. Although women faced these difficulties, some women did report that they enjoyed being back at work.

Five studies reported that women returning to work and to study felt embarrassed breastfeeding at their work or their place of study. Many women chose not to disclose that they were still breastfeeding for fear they would be subject to judgement or criticism. A few discussed how they felt embarrassed when pumping in the washroom as they felt that others would wonder what they were doing for so long in the bathroom stall. Some also worried about the 'noise' the breast pump made when in they were using it in the washroom. In one study, a woman who was a postgraduate student spoke about being self-conscious breastfeeding in front of students she taught and feeling uncomfortable breastfeeding around colleagues. All women from this study expressed concerns over what other people would think in relation to breastfeeding on campus.

One study reported that some women felt strong feelings of isolation upon returning to study after childbirth, because they felt 'different' and disconnected to their classmates. A few women expressed feeling that they were not part of a community on campus, and all women said that they were unaware of any other women breastfeeding on campus.

Two studies reported that in some cases, women felt that washing up breast expression equipment was associated with feelings of shame because they were combining work with breastfeeding. Mothers were worried about rinsing their equipment in the kitchen, not only due to hygiene concerns, but also because it exposed something personal. One woman reported feeling especially uncomfortable doing it around male colleagues for fear of making them feel uneasy. Overall, many women did not want to embarrass others, which was associated with (perceived) social norms regarding breast milk.

B.3 Education

There were 2 sub-themes contributing to the theme.

Two studies reported on the need for ongoing education for managers and other workplace employees to increase awareness about the importance of breastfeeding. By doing this, it would lift the onus off women and generate support for breastfeeding in the workplace. Similarly, the desire for greater understanding for women breastfeeding on campus was shared by undergraduate students. The evidence suggested that women and their employers were unaware of their workplace's or university's policies on breastfeeding or what facilities were available for them to use.

Five studies reported that some women reported being unsure of workplace policies, facilities available to them, or their rights, for example knowing whether it was against workplace policy to feed, or express, in the office. Often women noted that this was because employers did not actively share this information and so the responsibility fell on them to find this information (such as looking online, through National Childbirth Trust, La Leche League, Maternity Alliance, from breastfeeding colleagues, friends, or lactation specialists). In 1 study, 1 woman stated that despite excellent workplace breastfeeding facilities, there was a lack of communication regarding the availability of and access to these facilities, so ultimately, she could not use them. This furthered the point that providing information, such as sending photos or arranging visits to spaces beforehand, would reduce uncertainties.

B.4 Open communication

Three studies suggested that for women without openly supportive employers or supervisors, women had to take the active role in initiating conversations, however once they had raised the issue it was met with support.

B.5 Support from others

There were 3 sub-themes contributing to this theme.

One study reported on the challenges some women faced when returning to university. One woman reported that although her university was flexible to allow her to take an intermission in study due to pregnancy, pressure (internal or external) to finish her course of study negatively impacted her breastfeeding experience.

Seven studies suggested how different workplace cultures affected the experience of breastfeeding on return to work or study. For example, some women noted the differences between public and private led workplaces, where often the latter could be less supportive. Whilst women were aware that no one was deliberately trying to make them feel uncomfortable, the lack of an accepted breastfeeding culture made them feel uneasy. In one case, one woman actively felt hostility from her colleagues when she went to express milk, where colleagues repeatedly called her mobile phone to see where she was. Some women discussed the financial implications of taking extra unpaid maternity leave being an issue, making their return to work particularly difficult. Women, especially first-time mothers, reported being concerned about job security and feeling nervous about negotiating flexible work arrangements. Many women didn't want to complain, particularly when no other breastfeeding employees expressed problems.

Six studies reported on different experiences, which varied depending on the gender and age of colleagues and superiors. For instance, several women spoke about their difficulty discussing breastfeeding with male supervisors, and one woman who worked as a teacher explained how she needed to make her body 'fit in' with the male environment at her school. Several women noted that when their colleagues were predominantly male, the support for breastfeeding seemed less. This made them feel more uncomfortable and stressed, and more inclined to stop pumping at work. Stress resulting from the male gaze was key when expressing breast milk at work, perhaps indicating that the sexualisation of breasts presented a major obstacle for women.

B.6 Societal stigma

Four studies noted how the attitudes of colleagues and the stigma surrounding breastfeeding was an issue. This was reported by women returning to work and returning to study. The evidence described how several women were made to feel that breastfeeding is still not an acceptable or normal thing for a woman to do at work or on campus. Evidence suggested that women's social environment, particularly the presence of men, might not be aware of how physically and mentally intense it can be. They reported that breastfeeding felt as though it was an unusual thing to see in the public sphere. As a result, a few women felt forced to reduce the provision of breast milk. Two studies reported on how 'Irish' and 'Dutch' culture was not pro-breastfeeding, and how made these women feel as though they were doing something wrong. Many women felt that normalising breastfeeding was very important so that society would be more open to the practice.

B.7 Access to childcare

Three studies reported how having childcare near work or on campus was a key factor in maintaining ongoing breastfeeding. The type and proximity of childcare impacted on the length of the working day, travel time and the ability to breastfeed. For example, women needed to easily get to the childcare centre, so they breastfeed their child during breaks. In some cases, the proximity of childcare led to mothers reducing their work hours. Regardless of proximity of childcare the experience for women trying to breastfeed their infant either at work or by going to childcare encroached on the working day. Some mothers found it difficult to come to the childcare centre because of problems with parking on their return to work. All women suggested that going to the child to feed, occasionally bringing it to the office or working from home made infant feeding easier.

B.8 Nature of profession

There were 5 sub-themes contributing to this theme.

Three studies reported that those in very inflexible, unpredictable or inconsistent jobs, experience difficulties in accessing facilities and/or setting time in the workday for breastfeeding and expressing, with implications for maintaining their milk supply. For example, one woman described the challenges she faced as a teacher when breastfeeding or expressing at work due to set break times. There was mixed evidence about the negative and positive experiences women had with the flexibility of their work or study arrangements upon return. Many mothers described the struggle managing workload, childcare drop offs, and feeding or expressing, which would have benefited from their workplace showing flexibility. For example, negotiating a gradual return with fewer responsibilities, colleagues taking over workloads, working from home arrangements, flexible hours, and flexible breaks.

Six studies reported that many women perceived their workplace and the lack of flexibility as the main barrier to continued breastfeeding. In one example, a woman's employers had reluctantly accommodated her short maternity leave but closed down negotiations about part-time work and breastfeeding by threatening to demote her. Overall, women valued being able to stay at home, being financially supported with access to maternity leave, or having a supportive or flexible work environment so that they could breastfeed for longer.

One study reported that the size of the company affected how supportive workplace policies were. It was reported that medium or large workplaces and in sectors including health, public service and local government and education or research were most supportive of breastfeeding women returning to work. For example, dedicated breastfeeding spaces were more common in large workplaces, whereas communal spaces such as offices or storage rooms were more common in small workplaces. Similarly, the availability of certain furniture and equipment such as a private fridge for breast milk storage, breast pumps, power points or privacy curtains were far more common in large workplaces. Often, small or medium workplaces lacked clean, comfortable and private workplace spaces for breastfeeding and expressing. However, women noted that a lack of facilities was mostly because their employer was limited in what they were able to provide.

Nine studies reported that women felt there was not enough time during work or in their university schedule to breastfeed or pump. The main issue being that there are no scheduled breaks for breastfeeding, which often meant women had to use their lunch breaks for this purpose. This rigid schedule made it difficult to maintain milk supply, ultimately preventing women from breastfeeding. Some women reported having feelings of guilt about taking time out to breastfeed and in the few situations where designated breastfeeding breaks were scheduled, women felt they were perceived negatively and as unprofessional by their colleagues. To overcome these attitudes some overcompensated by combining the time spent expressing milk with completing work tasks, either by doing these simultaneously, or by staying back at the end of the day. Some women described the lengthy process of washing and sterilizing pumping equipment, which was described as a 'chore' during their working hours.

Two studies reported that work schedules were a barrier for breastfeeding or expressing in the workplace. From 1 study based in New Zealand, women stated that because there are no legislated breaks for women in paid employment to breastfeed, they had to use their lunch or tea breaks. Most felt pressure to fit this into scheduled work breaks and felt like they missed out on their lunch/tea break being a time of relaxation where they could socialise with colleagues. Instead, their tea breaks being a time of isolation and another kind of work. Women desired a flexible work schedule to help them to continue breastfeeding after returning to work. Women who worked in healthcare settings wanted to limit frequent rotation changes and allow for lighter duty rotations upon return to work. Other women wanted to have an option for part-time return to work. This affected casual staff more so as they did not have access to full maternity leave rights and were often employed on short-term contracts.

B.9 Physical space

There were 7 sub-themes contributing to this theme.

Two studies reported the difficulties some women experienced accessing breastfeeding spaces where they were available. For example, at one university some students reported designated breastfeeding spaces were locked during regular business hours. In one workplace, some employees had to book time slots in advance, which was difficult when meetings unexpectedly lasted longer and there were other breastfeeding employees with similar pumping routines. In these situations, multiple women pumped together, or mothers had to wait for the previous person, who was then pressured to finish. In another case, women had to rely on secretaries for access to breastfeeding spaces, which was perceived as discouraging, making one mother feel “watched”. Describing the accessibility as a “nuisance”, one woman stopped pumping at work.

Three studies reported that where there were breastfeeding spaces, some women found these to be unclean and unsuitable for use. In one study, women reported that electricity, a sink, fridge, and cupboard were favourable, but rarely supplied. In some cases, women did not feel confident to express milk at work because of poor facilities.

Four studies reported that women who were able to access breastfeeding spaces were dissatisfied with them, describing them as “small and not very private”, and lacking features such as power plugs, a sink or fridge. Most women were dissatisfied with the interior and some designated spaces were storage rooms or classrooms with old office furniture. Women wanted homelike atmospheres through couches, plants, music or reading material. Some women were satisfied with the way the rooms were, claiming that rooms did not need to be “special”, although all agreed they must be safe, private, clean, and easily accessible.

Nine studies reported that more often there were no designated spaces to breastfeed or pump at work or on the university campus. Women had to find appropriate spaces within and without their workplace’s help. For example, disabled washrooms, vacant staff rooms, spare offices or meeting rooms, shower cubicles, outdoor areas, and their cars. Some women were happy to breastfeed anywhere, but most women wanted somewhere they felt comfortable to breastfeed. Overall, most women were unhappy that the only available space to feed or pump was washrooms.

Two studies reported that some women had difficulties locating or accessing breastfeeding or pumping spaces. In large spaces, such as university campuses, women expressed their frustration in trying to navigate the environment.

Five studies reported that women wanted to feel safe when breastfeeding or pumping at work or university and, for this, required more privacy. At university, staff and students discussed the importance of having a private space in which to breastfeed and express milk. For example, the need for internal locking doors or being able to avoid being seen by men.

Six studies reported on the difficulties women faced when storing breast milk at work or at their place of study. Generally, women wanted somewhere safe to store breast milk, which seemed to be challenging in the workplace or university. One study reported that these difficulties affected students and casual staff members disproportionately. Some women felt embarrassed storing expressed milk in a shared fridge, which was also used for other people’s lunches. This also led to some concerns about the milk being contaminated or ‘going off’. Often women reported that shared fridges were very full and most considered them unclean.

B.10 External policies

Two studies reported that women wanted legislative protection to continue after 26 weeks post-delivery as it would increase their confidence when approaching employers about providing adequate facilities and breaks to support breastfeeding or pumping upon returning

to work or study. In one study based in The Netherlands, all women felt maternity leave was too short for breastfeeding and considered this as the primary barrier to continued breastfeeding.

B.11 Internal policies

There were 2 sub-themes contributing to this theme.

Evidence from 1 study at a university in The Netherlands reported that many women felt laws were not implemented meaning that supporting breastfeeding was not a priority. Laws should be enforced, but there was no monitoring and compliance mechanism in place.

Rather than fighting for their rights, often women reported finding their own solutions because they didn't want to be perceived as "less useful" by employers and also had no energy or time to "start this fight".

Three studies reported mixed data on their experiences of returning to work or study. Women reported the lack of protection in their workplace leading to them breastfeeding in secret or stopping altogether. In one study, women reported that despite their company having a breastfeeding policy, the implementation of that policy varied from regional office to regional office and was largely dependent on their supervisor's and colleague's attitudes towards breastfeeding in the workplace.

Economic evidence

This was a qualitative review question, therefore economic evidence was not relevant and thus no economic evidence searches were conducted.

The committee's discussion and interpretation of the evidence

The outcomes that matter most

To answer the question of factors that facilitate or impede women who wish to continue breastfeeding returning to work or study, the review was designed to include qualitative data and as a result the committee could not specify in advance the data that would be found. Instead, they identified the following main themes to guide the review, although the list was not exhaustive and the committee were aware that additional themes could be identified:

- Emotional difficulties
- Support from partners and other family members
- Support from colleagues and employers
- Peer support
- Physical challenges (for example, time constraints, lack of workplace facilities)
- Distance between workplace/place of study and childcare setting
- Convenient and flexible childcare
- Workplace and study place breastfeeding policies or flexible working arrangement
- Length of maternity leave
- Co-operation of child care (for example, storage of milk)
- Nurseries and independent child minders
- Workplace facilities
- Workplace training
- Emotional and technical support, advocacy, and information for the transition back to work or study (and the timing of this)
- Home working
- Shared parental leave

- Risk assessments

Data were not identified for the themes: convenient and flexible childcare, cooperation of childcare, nurseries and independent child minders, shared parental leave, and risk assessments.

Some data were identified that created additional themes other than those initially anticipated by the committee: establishing a feeding plan, open communication, societal stigma, external policies, and internal policies.

The quality of the evidence

The evidence was assessed using GRADE-CERQual methodology and the overall confidence in the findings for the qualitative review ranged from high to low, with most of the evidence being moderate quality.

The review findings were downgraded because of methodological limitations of the included studies, including, for example concerns with the relationship between researcher and participants, and the rigour of data analysis. Some findings were also downgraded for lack of adequacy because together, the relevant studies did not offer rich data. Finally, some findings were downgraded for limited relevance because evidence came from different contexts to the review question.

Benefits and harms

Overall, the committee thought that the qualitative evidence from the women's perspective was rich and informative, particularly in terms of identifying the various barriers to continuing breastfeeding after returning to work or study. The evidence corresponded with their knowledge and experience. The committee noted the lack of evidence from the perspective of those involved in facilitating the continuation of breastfeeding (such as healthcare professionals, managers, employers, parents, and carers).

There was evidence from several themes and subthemes about the difficult feelings and experiences about breastfeeding when returning to work or study, particularly because of pressures and stigma from other people, which sometimes led to women stopping breastfeeding altogether (B.2.2 Duality of being a good mother/good employee [moderate confidence], B.2.3 Feeling embarrassed [low confidence], B.2.5 Shame when washing breast pump [high confidence], B.6 Societal stigma [moderate confidence]). The committee thought it is important for healthcare professionals and breastfeeding peer supporters to not only reassure those who are breastfeeding that they do not need to stop when they return to work or education, but also provide advice on how they can practically manage this. Whilst acknowledging that continuing breastfeeding can be challenging emotionally, physically and practically, the committee agreed that through discussions and support systems, there are ways in which breastfeeding while working or studying can be made easier.

There was evidence about the importance of open communication and support from employers, managers and supervisors to continue breastfeeding (A.5 Support from others [moderate confidence], A.4 Open communication [high confidence]) and the lack of communication and support (B.4 Open Communication [moderate confidence], B.11.2 Workplace/university protection [low confidence]). Women also chose not to disclose to their managers that they were still breastfeeding because of fear of judgment or criticism (B.2.3 Feeling embarrassed [low confidence]). The committee agreed that an early and open conversation with the employer or education provider could support any adjustments required and serve as an opportunity to discuss practical information about the particular setting's policies or facilities that enable breastfeeding or pumping. They therefore agreed that healthcare professionals or peer supporters should advise those who breastfeed of their legal rights and encourage them to inform their employer or education provider about continuing breastfeeding well in advance of returning to work or study and advise that it may

be helpful to involve human resources or student services in these discussions, if appropriate.

In preparation for these discussions and for returning to work or education, the committee agreed that healthcare professionals and breastfeeding peer supporters can support people to continue breastfeeding through discussion and by encouraging them to think about what support they may need from their employer or education provider to enable them to continue breastfeeding. Based on the evidence and their expertise, the committee agreed several discussion points.

As previously noted, the evidence reported on the difficult feelings and experiences about breastfeeding when returning to work or study, particularly because of pressures and stigma from other people (B.2.2 Duality of being a good mother/good employee [moderate confidence], B.2.3 Feeling embarrassed [low confidence], B.2.5 Shame when washing breast pump [high confidence], B.6 Societal stigma [moderate confidence]). The committee discussed that some people may be determined to continue breastfeeding while others are not sure, and these feelings may be derived from the societal pressures or stigma as highlighted in the evidence. The committee agreed that to ensure a person's views, preferences, perceived challenges and potential solutions about continuing breastfeeding are protected and not influenced by a perceived lack of support or stigma, discussion should be conducted with the parents returning to work or education.

The committee noted that there was no evidence found on shared parental leave. They were aware from their knowledge and experience that take up of the shared parental leave policy has been low in the United Kingdom and information on when this leave can be taken can be limited or confusing. However, this is a relevant option for many families and the committee agreed it was important to mention this. The evidence showed that an established feeding plan or routine facilitated continuation of breastfeeding when returning to work or study (A.1 Establishing a feeding plan [low confidence]) whilst lack of this made it difficult (B.1 Establishing a feeding plan [moderate confidence]). The committee agreed that it would be helpful to discuss potential shared parental leave and its timing, so that perhaps this is only taken once breastfeeding is well established.

The evidence also reported on the barriers related to the level of flexibility/rigidity of the workplace (B.5.1 Pressure from supervisors [moderate confidence], B.8.1 Employment contract [high confidence], B.8.2 Flexibility on return to work/study [low confidence], B.8.5 Work schedule [moderate confidence]). For example, many women perceived the lack of flexibility within their workplace as the main barrier to continued breastfeeding. The committee discussed that flexible work arrangements, such as working from home or hybrid working, assisted breastfeeding because it facilitated proximity to the baby and expressing breastmilk, or breaks to facilitate breastfeeding or expressing breastmilk could be more easily organised. However, they were also aware of inequalities that could arise because many jobs do not offer flexible working. Further inequalities included differences in maternity pay packages which could lead to people returning to work before breastfeeding is fully established. Based on the evidence and their expertise, the committee recommended discussing the options and opportunities in terms of the timing to return to work or study. This could include the possibility of extension of leave, options around flexible working or learning and remote working or studying.

Furthermore, discussions should include the practical support employers and education providers may be able to provide, such as an area to express breastmilk that is private, safe and hygienic, with appropriate facilities to store the expressed milk (fridge or storage space) as well as additional breaks to do this. The importance of these issues came up in the evidence through various themes and subthemes (B.8.4 Time during work to breastfeed/pump [low confidence], B.9.1 Accessibility of space [high confidence], B.9.2 Cleanliness of space [low confidence], B.9.3 Comfort of space [high confidence], B.9.4 Having no space [moderate confidence], B.9.5 Location of the room [high confidence], B.9.6

Privacy [low confidence], B.9.7 Storage of breast milk [high confidence]). The committee discussed that while providing a space to breastfeed or express or additional breaks to do so are not legal requirements for employers, there is a legal requirement to provide a space of rest to employees if such is needed and employers should not make a breastfeeding employee feel unfairly treated because they are breastfeeding. However, even if not a legal requirement, providing appropriate space and breaks to breastfeed and express milk is best practice and should be encouraged.

The committee also highlighted that people should be advised that the [Equality Act 2010](#) states that it is legal to breastfeed in public places anywhere in the UK, and that it is unlawful for businesses to discriminate against anyone who is breastfeeding a child of any age. The evidence showed how some women felt that others in the workplace might think that breastfeeding is unprofessional and that attitudes of colleagues made them feel that breastfeeding is not acceptable in the workplace (B2.1 Breastfeeding is unprofessional [moderate confidence], B.6 Societal stigma [moderate confidence], B.2.3 Feeling embarrassed [low confidence]). There was also evidence about women wanting legislative protection to continue breastfeeding (B.10.1 Legislative protection [high confidence]). The evidence also highlighted women wanted to be informed about their entitlements and available facilities to continue breastfeeding (A.3 Knowledge of policies [moderate confidence]) and when there were policies and facilities that supported their breastfeeding, they felt it was a positive environment (A.6 Workplace/university policies [moderate confidence]). However, evidence from several studies reported that both women and their employers were often unaware of their workplace or university's policies and facilities related to breastfeeding (B3.2 Knowledge of policies [low confidence]). The committee thought that it would be important to discuss with those planning their return to work or study about the legal requirements employers have and guidance that they should follow. Based on the committee's expertise, they listed [Health and Safety Executive \(HSE\) guidance](#) for employers about protecting pregnant workers and new mothers and [ACAS advice](#) on accommodating breastfeeding employees in the workplace.

The committee also thought that discussing practical aspects such as how to express breastmilk by hand or with a pump can be useful, including how to safely store the expressed milk. The need to express milk at work or place of study would depend on the age of the child and duration of separation, not all would need to express and could still continue to breastfeed. However, the committee highlighted that whether or not there is need to express milk should be discussed, as well as the facilities at the workplace for enabling this (such as private space to express and storage for the expressed milk). The evidence reported on the difficulties women experienced with safe storing of expressed breastmilk (B.9.7 Storage of breast milk [high confidence]).

The evidence also reported on the location of childcare being an important consideration, and how having the childcare facility near workplace or campus was a key factor in continuing breastfeeding (B.7 Access to childcare [moderate confidence]). Therefore, the committee agreed that childcare options and practical benefits of having childcare near to the place of work or education should be discussed. Another aspect to consider when considering childcare options is if the childcare setting has facilities for providing expressed breast milk to the child, including safe storage, if this is relevant.

The evidence showed how having role models and peers was considered helpful in continuing to breastfeed after returning to work or education (A.2 Role modelling for others [moderate confidence], A.5 Support from others [moderate confidence], A.5.1 Partner/peer support [moderate confidence]). Women also reported strong feelings of isolation when returning to study because they felt different and did not know anyone else in campus who breastfed (B2.4 Feeling isolated). Based on the evidence and their expertise, the committee thought that people should be made aware of available resources for further advice and support, such as the National breastfeeding helpline, peer support options and local or national support groups.

The committee also decided to make a recommendation for employers, human resource teams, senior leadership staff and managers, and staff in education settings so that they could improve the work or education environment for those who breastfeed. They agreed to highlight the Health and Safety Executive (HSE) guidance for employers about protecting pregnant workers and new mothers and ACAS advice on returning to work after maternity leave, so that the legal requirement and other guidance for employers are followed. As discussed, evidence showed that many of the barriers to continue breastfeeding related to the level of flexibility/rigidity of the workplace (B.5.1 Pressure from supervisors [moderate confidence], B.8.1 Employment contract [high confidence], B.8.2 Flexibility on return to work/study [low confidence], B.8.5 Work schedule [moderate confidence]) so the committee agreed that workplaces and education settings should take into account flexible, hybrid and home working options to facilitate those who breastfeed. They should also take into account other ways that the settings can support people to breastfeed or express breastmilk, such as providing a private space, fridge and storage space, and additional breaks. The need and impact of this was clear from the qualitative themes (B.8.4 Time during work to breastfeed/pump [low confidence], B.9.1 Accessibility of space [high confidence], B.9.2 Cleanliness of space [low confidence], B.9.3 Comfort of space [high confidence], B.9.4 Having no space [moderate confidence], Subtheme B.9.5 Location of the room [high confidence], B.9.6 Privacy [low confidence], B.9.7 Storage of breast milk [high confidence]). The evidence also showed that those working in inflexible, unpredictable or inconsistent jobs experienced particular difficulties in accessing facilities or having time during the workday to breastfeed or express. This led to implications for milk supply issues (B.8.1 Employment contract [high confidence]). The evidence also suggested that larger organisations may be better equipped to offer breastfeeding/expressing spaces and storage than smaller organisations (B.8.3 Size of company [moderate confidence]).

The committee also discussed that some organisations, particularly larger ones, may already have breastfeeding policies for employees and students but recommended that all settings should think about developing one. The evidence showed that the 'workplace culture' had an impact on their experience and the lack of 'breastfeeding culture' within the workplace made them feel uneasy about breastfeeding (B.5.2 Workplace culture [low confidence]). The committee agreed that settings should consider appointing a designated breastfeeding lead so that the work culture and practices could be improved.

The evidence showed that despite an organisation having a breastfeeding policy, the implementation of that policy varied and was largely dependent on individual people's attitudes towards breastfeeding in the workplace (B.11.2 Workplace/university protection [low confidence]). Evidence from one study reported on study participants feeling that relevant legal requirements were not implemented making them feel that supporting breastfeeding was not a priority (B.11.1 Workplace/university not upholding legal policies [moderate confidence]). The evidence also reported on the importance of training and education for managers and other employees about breastfeeding and policies about it (B.3.1 Increase awareness of breastfeeding policies [moderate confidence], B3.2 Knowledge of policies [low confidence]). The evidence also suggested that male-dominated workplaces were often felt by women to be particularly uncomfortable environments to breastfeed (B.5.3 Workplace demographic [moderate confidence]). The committee agreed based on the evidence and their expertise that settings should give training for all employees about policies and legislation around breastfeeding. They also agreed settings should facilitate support to those who breastfeed through ambassadors, champions or advocates as well as from peers. The committee discussed that most workplaces are unlikely to already have these in place but would have someone who might be able to take on such a role. For example, equality, diversity, and inclusion representatives, who are becoming more common. In cases where the human resources department is required to conduct a risk assessment before return to work, the committee considered this a good opportunity to discuss policies and give information about workplace facilities for breastfeeding or pumping and storage. However, the committee were aware that this is industry specific and might not happen in different work sectors. The committee accounted for their own potential biases as they largely worked in

academia or healthcare settings, and the biases of the included studies which were also conducted in similar settings.

Overall, the committee agreed that employers and education providers have an important role to play in facilitating continuation of breastfeeding by exploring how their setting, policies and arrangements can better support those returning to work after having a baby.

The review protocol did not consider single and multiple births separately; therefore, the committee did not make specific recommendations for multiple births.

Cost effectiveness and resource use

This was a qualitative review question, therefore economic evidence was not relevant.

Recommendations are expected to lead to a small-to-moderate increase in health professional time to discuss with women and people who are breastfeeding their baby, although some of these discussions are already part of current practice and may happen during scheduled appointments. This translates into a small increase in costs but is likely to lead to benefits to women and people who are breastfeeding and their babies resulting from reassurance and better information about choices, better future planning, and ability to maintain breastfeeding after return to work/education. Maintaining breastfeeding after return to work/education may, in turn, lead to important benefits to the woman and breastfeeding person and their baby, and cost-savings to the healthcare system, relating to outcomes positively associated with increased maintenance rates of breastfeeding. For example, breastfeeding has been shown to lower the incidence of infections in babies and mortality due to sudden infant death syndrome, as well as the incidence of certain cancers (such as breast and ovarian cancer) in those who breastfeed. It may also reduce the incidence of diabetes and obesity in breastfeeding people and future childhood overweight and obesity in breastfed babies.

Recommendations may lead to a small increase in costs for employers and educational settings, depending on measures already in place, but they are expected to lead to improved outcomes for women and people who are breastfeeding and their babies following development of measures and policies that facilitate breastfeeding, as well as better practical and emotional support for breastfeeding women and people and their babies in these settings.

Other factors the committee took into account

For this review question, the population in the evidence was women and no evidence was identified or reviewed for trans men or non-binary people. The protocol and literature searches were not designed to specifically look for evidence on trans men or non-binary people but they were also not excluded. However, there is a small chance evidence on them may not have been captured, if such evidence exists. In discussing the evidence, the committee considered whether the recommendations could apply to a broader population, and used gender inclusive language to promote equity, respect and effective communication with everyone. Healthcare professionals should use their clinical judgement when implementing the recommendations, taking into account each person's circumstances, needs and preferences, and ensuring all people are treated with dignity and respect throughout their care.

Recommendations supported by this evidence review

This evidence review supports recommendations 1.3.11 to 1.3.14.

References – included studies

Qualitative

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Appendices

Appendix A Review protocols

Review protocol for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Table 4: Review protocol

Field	Content
PROSPERO registration number	Not applicable
Review title	The facilitators and barriers to help women returning to work and study to continue breastfeeding
Review question	What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?
Objective	To determine the factors which promote or present barriers to continue breastfeeding for women who wish to on returning to work and study
Searches	<p>The following databases will be searched:</p> <ul style="list-style-type: none"> • CINAHL • Cochrane Central Register of Controlled Trials (CENTRAL) • Cochrane Database of Systematic Reviews (CDSR) • Embase • MEDLINE & MEDLINE In-Process • Epistemonikos • International Health Technology Assessment (INAHTA) database • PsycInfo • AMED <p>Searches will be restricted by:</p>

Field	Content
	<ul style="list-style-type: none"> • 1995 • English language only • Human studies only <p>Other searches:</p> <ul style="list-style-type: none"> • Inclusion lists of systematic reviews <p>The full search strategies for MEDLINE database will be published in the final review. For each search, the principal database search strategy is quality assured by a second information scientist using an adaptation of the PRESS 2015 Guideline Evidence-Based Checklist.</p>
Condition or domain being studied	Breastfeeding and formula feeding
Population	<ul style="list-style-type: none"> • Breastfeeding women, parents and carers of babies and children from birth to 5 years who wish to continue breastfeeding when returning to work or study • Anyone involved in facilitating the continuation of breastfeeding when returning to work or education
Phenomenon of interest	<p>Factors that facilitate or impede women who wish to continue breastfeeding returning to work and study.</p> <p>Themes will be identified from the available literature. The committee identified the following potential themes (however, they are aware that not all of these themes may be found in the literature and that additional themes may be identified):</p> <ul style="list-style-type: none"> • Emotional difficulties • Support from partners and other family members • Support from colleagues and employers • Peer support • Physical challenges (for example, time constraints, lack of workplace facilities)

Field	Content
	<ul style="list-style-type: none"> • Distance between workplace/place of study and childcare setting • Convenient and flexible childcare • Workplace and study place breastfeeding policies or flexible working arrangement • Length of maternity leave • Co-operation of child care (for example, storage of milk) • Nurseries and independent child minders • Workplace facilities • Workplace training • Emotional and technical support, advocacy, and information for the transition back to work or study (and the timing of this) • Home working • Shared parental leave • Risk assessments
Comparator	Not applicable as this is a qualitative review
Types of study to be included	<ul style="list-style-type: none"> • Systematic reviews of qualitative studies • Studies reporting data gathered through semi-structured and structured interviews, focus groups, observations. • Surveys conducted using open ended questions and a qualitative analysis of responses <p>Note: Mixed methods studies will be included but only qualitative data will be extracted and risk of bias assessed.</p> <p>Systematic reviews that include evidence from both high-income countries (as defined under 'setting' below) and non-high income countries, as defined by the World Bank, will only be included if the source of themes and evidence from high-income countries (as defined under 'setting' below) can be clearly established.</p>
Other exclusion criteria	<u>Population:</u>

Field	Content
	<ul style="list-style-type: none"> • Preterm and low-birth-weight babies (defined by the World Health Organization as a birth weight less than 2,500 g) <p><i>If any study or systematic review includes <1/3 of the excluded population, it will be considered for inclusion but, if included, the evidence will be downgraded for indirectness.</i></p> <p><u>Setting:</u> Countries other than high-income European countries, Canada, Australia and New Zealand</p> <p><u>Methodological details and language:</u></p> <ul style="list-style-type: none"> • Studies that do not include methodological details will not be included as they do not provide sufficient information to evaluate risk of bias/ study quality • Studies using quantitative methods only (including surveys that report only quantitative data). • Conference abstracts will not be included because these do not typically have sufficient information to allow full critical appraisal. • Non-English language studies
Context	The population of this guideline may overlap with the population of women included in other NICE guidelines (such as postnatal care, antenatal care, intrapartum care, pregnancy and complex social factors or obesity prevention).
Primary outcomes (critical outcomes)	Outcomes, not applicable as this is a qualitative review. For anticipated themes, see row 7 above. 'Phenomenon of interest'.
Secondary outcomes (important outcomes)	Outcomes, not applicable as this is a qualitative review. For anticipated themes, see row 7 above. 'Phenomenon of interest'.
Data extraction (selection and coding)	<ul style="list-style-type: none"> • All references identified by the searches and from other sources will be uploaded into EPPI and de-duplicated. Titles and abstracts of the retrieved citations will be screened to identify studies that potentially meet the inclusion criteria outlined in the review protocol. • Duplicate screening will not be undertaken for this question.

Field	Content
	<ul style="list-style-type: none"> • Full versions of the selected studies will be obtained for assessment. Studies that fail to meet the inclusion criteria once the full version has been checked will be excluded at this stage. Each study excluded after checking the full version will be listed, along with the reason for its exclusion. • A standardised form will be used to extract data from studies, including study reference, research question, theoretical approach, data collection and analysis methods used, participant characteristics, second-order themes, and relevant first-order themes (that is, supporting quotes). One reviewer will extract relevant data into a standardised form, and this will be quality assessed by a senior reviewer.
Risk of bias (quality) assessment	<p>Quality assessment of individual studies will be performed using the following checklists:</p> <ul style="list-style-type: none"> • CASP for systematic reviews of qualitative studies • CASP checklist for qualitative studies <p>The quality assessment will be performed by one reviewer and this will be quality assessed by a senior reviewer.</p>
Strategy for data synthesis	<p>Qualitative review:</p> <p>The GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative research; Lewin 2015) approach will be used to summarise the confidence in qualitative evidence. The overall confidence in evidence about each theme or sub-theme will be rated on four dimensions: methodological limitations, applicability, coherence and adequacy of data.</p> <p>Methodological limitations refer to the extent to which there were problems in the design or conduct of the studies and will be assessed with the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies or systematic reviews of qualitative studies. Applicability of evidence will be assessed by determining the extent to which the body of evidence from the primary studies are applicable to the context of the review question. Coherence of findings will be assessed by examining the clarity of the data. Adequacy of data will be assessed by looking at the degree of richness and quantity of findings.</p>
Analysis of subgroups	<p>As this is a qualitative review subgroup analysis is not possible. However, the review will include information regarding differences in views held between certain groups (for</p>

Field	Content																					
	example, disadvantaged groups and people affected by potential health inequalities) or in certain settings wherever possible (that is, if information in relation to this are reported by the included studies themselves).																					
Type and method of review	<input type="checkbox"/> Intervention <input type="checkbox"/> Diagnostic <input type="checkbox"/> Prognostic <input checked="" type="checkbox"/> Qualitative <input type="checkbox"/> Epidemiologic <input type="checkbox"/> Service Delivery <input type="checkbox"/> Other (please specify)																					
Language	English																					
Country	England																					
Anticipated or actual start date	Not applicable																					
Anticipated completion date	Not applicable																					
Stage of review at time of this submission	<table> <tr> <th>Review stage</th><th>Started</th><th>Completed</th></tr> <tr> <td>Preliminary searches</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>Piloting of the study selection process</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>Formal screening of search results against eligibility criteria</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>Data extraction</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>Risk of bias (quality) assessment</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>Data analysis</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> </table>	Review stage	Started	Completed	Preliminary searches	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Piloting of the study selection process	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Formal screening of search results against eligibility criteria	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Data extraction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Risk of bias (quality) assessment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Data analysis	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Review stage	Started	Completed																				
Preliminary searches	<input type="checkbox"/>	<input checked="" type="checkbox"/>																				
Piloting of the study selection process	<input type="checkbox"/>	<input checked="" type="checkbox"/>																				
Formal screening of search results against eligibility criteria	<input type="checkbox"/>	<input checked="" type="checkbox"/>																				
Data extraction	<input type="checkbox"/>	<input checked="" type="checkbox"/>																				
Risk of bias (quality) assessment	<input type="checkbox"/>	<input checked="" type="checkbox"/>																				
Data analysis	<input type="checkbox"/>	<input checked="" type="checkbox"/>																				
Named contact	5a. Named contact National Guideline Alliance																					

Field	Content
	<p>5b. Named contact e-mail mandcnutrition@nice.org.uk</p> <p>5c. Organisational affiliation of the review National Institute for Health and Care Excellence (NICE) and National Guideline Alliance (NGA)</p>
Review team members	<p>From the National Guideline Alliance:</p> <ul style="list-style-type: none"> • NGA Senior Systematic Reviewer • NGA Systematic Reviewer
Funding sources/sponsor	This systematic review is being completed by the National Guideline Alliance which receives funding from NICE.
Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of interest will be considered by the guideline committee Chair and a senior member of the development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.
Collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual . Members of the guideline committee are available on the NICE website: https://www.nice.org.uk/guidance/indevelopment/gid-ng10191
Other registration details	None

Field	Content
Reference/URL for published protocol	TBC
Dissemination plans	NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as: notifying registered stakeholders of publication publicising the guideline through NICE's newsletter and alerts issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE.
Keywords	Breastfeeding, employment, education
Details of existing review of same topic by same authors	Not applicable
Current review status	<input type="checkbox"/> Ongoing <input type="checkbox"/> Completed but not published <input checked="" type="checkbox"/> Completed and published <input type="checkbox"/> Completed, published and being updated <input type="checkbox"/> Discontinued
Additional information	None
Details of final publication	www.nice.org.uk

CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; DARE: Database of Abstracts of Reviews of Effects; GRADE: Grading of Recommendations Assessment, Development and Evaluation; NHS: National health service; NICE: National Institute for Health and Care Excellence

Appendix B Literature search strategies

Literature search strategies for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Database: Medline

Date of last search: 22/03/2022

#	Searches
1	exp Breast Feeding/ or lactation/ or Bottle Feeding/
2	(breastfeed* or breastfed* or breastmilk or lactat* or (breast adj2 (feed* or fed*))).ti,ab,kf.
3	((breast or pump* or express* or collect*) adj2 milk).ti,ab,kf.
4	(nursing adj (baby or infant* or mother* or neonate* or newborn*)).ti,ab,kf.
5	((mixed* or bottle*) adj2 (feed* or fed*)).ti,ab,kf.
6	or/1-5
7	employment/ or employment, supported/ or unemployment/ or Workplace/
8	Education, Nonprofessional/ or Education, Professional/ or Vocational Education/ or Education/ or Education, Distance/
9	Return to School/ or Schools/ or Universities/ or Teaching/
10	Work/ or Return to Work/ or Work-life Balance/
11	Women, Working/
12	(return* adj5 (education or study or studies or school or training or work* or employ* or job)).ti,ab.
13	((work* or job or paid or employ* or train* or studying or student*) adj5 (breastfeed* or mother* or maternal or wom?n or female*)).ti,ab.
14	or/7-13
15	6 and 14
16	animals/ not humans/
17	exp Animals, Laboratory/
18	exp Animal Experimentation/
19	exp Models, Animal/
20	exp Rodentia/
21	(rat or rats or rodent* or mouse or mice).ti.
22	or/16-21
23	15 not 22
24	ANTHROPOLOGY, CULTURAL/ or CLUSTER ANALYSIS/ or FOCUS GROUPS/ or GROUNDED THEORY/ or HEALTH CARE SURVEYS/ or interview.pt. or "INTERVIEWS AS TOPIC"/ or NARRATION/ or NURSING METHODOLOGY RESEARCH/ or OBSERVATION/ or "PERSONAL NARRATIVES AS TOPIC"/ or PERSONAL NARRATIVE/ or QUALITATIVE RESEARCH/ or "SURVEYS AND QUESTIONNAIRES"/ or SAMPLING STUDIES/ or TAPE RECORDING/ or VIDEODISC RECORDING/
25	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
26	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
27	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
28	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
29	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
30	or/24-29
31	Meta-Analysis/
32	Meta-Analysis as Topic/
33	(meta analy* or metanaly* or metaanaly*).ti,ab.
34	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
35	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
36	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
37	(search* adj4 literature).ab.

#	Searches
38	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
39	cochrane.jw.
40	or/31-39
41	23 and (30 or 40)
42	afghanistan/ or africa/ or africa, northern/ or africa, central/ or africa, eastern/ or "africa south of the sahara"/ or africa, southern/ or africa, western/ or albania/ or algeria/ or andorra/ or angola/ or "antigua and barbuda"/ or argentina/ or armenia/ or azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or "bosnia and herzegovina"/ or botswana/ or brazil/ or brunei/ or bulgaria/ or burkina faso/ or burundi/ or cabo verde/ or cambodia/ or cameroon/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cote d'ivoire/ or croatia/ or cuba/ or "democratic republic of the congo"/ or cyprus/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or egypt/ or el salvador/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or fiji/ or gabon/ or gambia/ or "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or independent state of samoa/ or exp india/ or indian ocean islands/ or indochina/ or indonesia/ or iran/ or iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libya/ or madagascar/ or malaysia/ or malawi/ or mali/ or malta/ or mauritania/ or mauritius/ or mekong valley/ or melanesia/ or micronesia/ or monaco/ or mongolia/ or montenegro/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nepal/ or nicaragua/ or niger/ or nigeria/ or oman/ or pakistan/ or palau/ or exp panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or qatar/ or "republic of belarus"/ or "republic of north macedonia"/ or romania/ or exp russia/ or rwanda/ or "saint kitts and nevis"/ or saint lucia/ or "saint vincent and the grenadines"/ or "sao tome and principe"/ or saudi arabia/ or serbia/ or sierra leone/ or senegal/ or seychelles/ or singapore/ or somalia/ or south africa/ or south sudan/ or sri lanka/ or sudan/ or suriname/ or syria/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or uganda/ or ukraine/ or united arab emirates/ or uruguay/ or uzbekistan/ or vanuatu/ or venezuela/ or vietnam/ or west indies/ or yemen/ or zambia/ or zimbabwe/
43	"Organisation for Economic Co-Operation and Development"/
44	australasia/ or exp australia/ or austria/ or baltic states/ or belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or exp denmark/ or estonia/ or europe/ or finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or exp japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or portugal/ or exp "republic of korea"/ or "scandinavian and nordic countries"/ or slovakia/ or slovenia/ or spain/ or sweden/ or switzerland/ or turkey/ or exp united kingdom/ or exp united states/
45	European Union/
46	Developed Countries/
47	or/43-46
48	42 not 47
49	41 not 48
50	limit 49 to English language
51	limit 50 to yr="1995 -Current"

Database: Embase

Date of last search: 22/03/2022

#	Searches
1	exp breast feeding/ or lactation/ or bottle feeding/
2	(breastfeed* or breastfed* or breastmilk or lactat* or (breast adj2 (feed* or fed*))).ti,ab,kf.
3	((breast or pump* or express* or collect*) adj2 milk).ti,ab,kf.
4	(nursing adj (baby or infant* or mother* or neonate* or newborn*)).ti,ab,kf.
5	((mixed* or bottle*) adj2 (feed* or fed*)).ti,ab,kf.
6	or/1-5
7	*employment/ or *supported employment/ or *unemployment/ or *workplace/
8	*education/ or *distance learning/ or *vocational education/
9	*return to school/ or *school/ or *college/ or *university/ or *teaching/
10	*work/ or *return to work/ or *work-life balance/
11	*female worker/
12	(return* adj5 (education or study or studies or school or training or work* or employ* or job)).ti,ab.
13	((work* or job or paid or employ* or train* or studying or student*) adj5 (breastfeed* or mother* or maternal or wom?n or female*)).ti,ab.
14	or/7-13
15	6 and 14

#	Searches
16	animal/ not human/
17	nonhuman/
18	exp Animal Experiment/
19	exp Experimental Animal/
20	animal model/
21	exp Rodent/
22	(rat or rats or rodent* or mouse or mice).ti.
23	or/16-22
24	15 not 23
25	limit 24 to (conference abstract or conference paper or conference review or conference proceeding)
26	24 not 25
27	CLUSTER ANALYSIS/ or CONTENT ANALYSIS/ or DISCOURSE ANALYSIS/ or ETHNOGRAPHY/ or GROUNDED THEORY/ or HEALTH CARE SURVEY/ or exp INTERVIEWS/ or NARRATIVE/ or NURSING METHODOLOGY RESEARCH/ or OBSERVATION/ or PERSONAL EXPERIENCE/ or PHENOMENOLOGY/ or QUALITATIVE RESEARCH/ or QUESTIONNAIRE/ or exp RECORDING/
28	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
29	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
30	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
31	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
32	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
33	or/27-32
34	systematic review/
35	meta-analysis/
36	(meta analy* or metanaly* or metaanaly*).ti,ab.
37	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
38	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
39	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
40	(search* adj4 literature).ab.
41	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
42	((pool* or combined) adj2 (data or trials or studies or results)).ab.
43	cochrane.jw.
44	or/34-43
45	26 and (33 or 44)
46	afghanistan/ or africa/ or "africa south of the sahara"/ or albania/ or algeria/ or andorra/ or angola/ or argentina/ or "antigua and barbuda"/ or armenia/ or exp azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belarus/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or exp "bosnia and herzegovina"/ or botswana/ or exp brazil/ or brunei darussalam/ or bulgaria/ or burkina faso/ or burundi/ or cambodia/ or cameroon/ or cape verde/ or central africa/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cook islands/ or cote d'ivoire/ or croatia/ or cuba/ or cyprus/ or democratic republic congo/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or el salvador/ or egypt/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or exp "federated states of micronesia"/ or fiji/ or gabon/ or gambia/ or exp "georgia (republic)" or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or exp india/ or exp indonesia/ or iran/ or exp iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kiribati/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libyan arab jamahiriya/ or madagascar/ or malawi/ or exp malaysia/ or maldives/ or mali/ or malta/ or mauritania/ or mauritius/ or melanesia/ or moldova/ or monaco/ or mongolia/ or "montenegro (republic)" or morocco/ or mozambique/ or myanmar/ or namibia/ or nauru/ or nepal/ or nicaragua/ or niger/ or nigeria/ or niue/ or north africa/ or oman/ or exp pakistan/ or palau/ or palestine/ or panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or polynesia/ or qatar/ or "republic of north macedonia"/ or romania/ or exp russian federation/ or rwanda/ or sahel/ or "saint kitts and nevis"/ or "saint lucia"/ or "saint vincent and the grenadines"/ or saudi arabia/ or senegal/ or exp serbia/ or seychelles/ or sierra leone/ or singapore/ or "sao tome and principe"/ or solomon islands/ or exp somalia/ or south africa/ or south asia/ or south sudan/ or exp southeast asia/ or sri lanka/ or sudan/ or suriname/ or syrian arab republic/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or tuvalu/ or uganda/ or exp ukraine/ or exp united arab emirates/ or uruguay/ or exp uzbekistan/ or vanuatu/ or venezuela/ or viet nam/ or western sahara/ or yemen/ or zambia/ or zimbabwe/
47	"organisation for economic co-operation and development"/

#	Searches
48	exp australia/ or "australia and new zealand"/ or austria/ or baltic states/ or exp belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or denmark/ or estonia/ or europe/ or exp finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or exp mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or exp portugal/ or scandinavia/ or sweden/ or slovakia/ or slovenia/ or south korea/ or exp spain/ or switzerland/ or exp united kingdom/ or "turkey (republic)"/ or exp united states/ or western europe/
49	european union/
50	developed country/
51	or/47-50
52	46 not 51
53	45 not 52
54	limit 53 to (English language and yr="1995 -Current")

Database: Cochrane Database of Systematic Reviews, Issue 03 of 12, March 2022 and Cochrane Central Register of Controlled Trials, Issue 03 of 12, March 2022

Date of last search: 22/03/2022

#	Searches
#1	MeSH descriptor: [Breast Feeding] explode all trees
#2	MeSH descriptor: [Lactation] this term only
#3	MeSH descriptor: [Bottle Feeding] this term only
#4	(breastfeed* or breastfed* or breastmilk or lactat* or (breast near/2 (feed* or fed*))) :ti,ab,kw
#5	((breast or pump* or express* or collect*) near/2 milk) :ti,ab,kw
#6	(nursing near (baby or infant* or mother* or neonate* or newborn*)) :ti,ab,kw
#7	((mixed* or bottle*) near/2 (feed* or fed*)) :ti,ab,kw
#8	{OR #1-#7}
#9	MeSH descriptor: [Employment] this term only
#10	MeSH descriptor: [Employment, Supported] this term only
#11	MeSH descriptor: [Unemployment] this term only
#12	MeSH descriptor: [Workplace] this term only
#13	MeSH descriptor: [Education, Nonprofessional] this term only
#14	MeSH descriptor: [Education, Professional] explode all trees
#15	MeSH descriptor: [Vocational Education] this term only
#16	MeSH descriptor: [Education] this term only
#17	MeSH descriptor: [Education, Distance] this term only
#18	MeSH descriptor: [Return to School] this term only
#19	MeSH descriptor: [Schools] this term only
#20	MeSH descriptor: [Universities] this term only
#21	MeSH descriptor: [Teaching] this term only
#22	MeSH descriptor: [Work] this term only
#23	MeSH descriptor: [Return to Work] this term only
#24	MeSH descriptor: [Work-Life Balance] this term only
#25	MeSH descriptor: [Women, Working] this term only
#26	(return* near/5 (education or study or studies or school or training or work* or employ* or job)) :ti,ab
#27	((work* or job or paid or employ* or train* or studying or student*) near/5 (breastfeed* or mother* or maternal or wom?n or female*)) :ti,ab
#28	{OR #9-#27}
#29	#8 AND #28
#30	conference:pt or (clinicaltrials or trialsearch):so
#31	#29 NOT #30 with Cochrane Library publication date Between Jan 1995 and Mar 2022, in Cochrane Reviews, Cochrane Protocols, Trials, Clinical Answers, Editorials, Special Collections

Database: CINAHL (Cumulative Index to Nursing and Allied Health Literature)

Date of last search: 22/03/2022

#	Searches
S1	(MH "Breast Feeding+")
S2	(MH "Lactation")
S3	(MH "Bottle Feeding")
S4	TI ((breastfeed* or breastfed* or breastmilk or lactat* or (breast N2 (feed* or fed*)))) OR AB ((breastfeed* or breastfed* or breastmilk or lactat* or (breast N2 (feed* or fed*))))
S5	TI (((breast or pump* or express* or collect*) N2 milk)) OR AB (((breast or pump* or express* or collect*) N2 milk))
S6	TI ((nursing N1 (baby or infant* or mother* or neonate* or newborn*))) OR AB ((nursing N1 (baby or infant* or mother* or neonate* or newborn*)))
S7	TI (((mixed* or bottle*) N2 (feed* or fed*))) OR AB (((mixed* or bottle*) N2 (feed* or fed*)))
S8	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7
S9	(MH "Employment")
S10	(MH "Employment, Supported")
S11	(MH "Unemployment")
S12	(MH "Work Environment")
S13	(MH "Education") OR (MH "Education, Nonprofessional") OR (MH "Vocational Education") OR (MH "Education, Non-Traditional+") OR (MH "Teaching")
S14	(MH "Refresher Courses")
S15	(MH "School Re-Entry")
S16	(MH "Schools")
S17	(MH "Colleges and Universities")
S18	(MH "Work")
S19	(MH "Job Re-Entry")
S20	(MH "Work-Life Balance")
S21	(MH "Women, Working+")
S22	TI ((return* adj5 (education or study or studies or school or training or work* or employ*))) OR AB ((return* adj5 (education or study or studies or school or training or work* or employ* or job)))
S23	TI ((return* N5 (education or study or studies or school or training or work* or employ*))) OR AB ((return* N5 (education or study or studies or school or training or work* or employ*)))
S24	TI (((work* or job or paid or employ* or train* or studying or student*) N2 (breastfeed* or mother* or maternal or wom?n or female*))) OR AB (((work* or paid or employ* or job or train* or studying or student*) N2 (breastfeed* or mother* or maternal or wom?n or female*)))
S25	S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24
S26	S8 AND S25
S27	S8 AND S25
S28	S8 AND S25
S29	(MH "Animals+")
S30	(MH "Human")
S31	S29 NOT S30
S32	(MH "Animals, Laboratory")
S33	(MH "Rodents+")
S34	TI (rat or rats or rodent* or mouse or mice)
S35	S31 OR S32 OR S33 OR S34
S36	S28 NOT S35
S37	(MH "Anthropology, Cultural") OR (MH "Cluster Analysis+") OR (MH "Focus Groups") OR (MH "Grounded Theory") OR (MH "Surveys") OR (MH "Interviews+") OR (MH "Narratives+") OR (MH "Nursing Practice, Research-Based") OR (MH "Observational Methods+") OR (MH "Qualitative Studies+") OR (MH "Questionnaires+") OR (MH "Sampling Methods+") OR (MH "AudioRecording") OR (MH "Videorecording")
S38	PT interview
S39	TI (qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes) OR AB (qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes)
S40	TI (ethno* or emic or etic or phenomenolog* or "grounded theory" or "constant compar*" or (thematic N4 analys*) or "theoretical sampl*" or "purposive sampl*") OR AB (ethno* or emic or etic or phenomenolog* or "grounded theory" or "constant compar*" or (thematic N4 analys*) or "theoretical sampl*" or "purposive sampl*")

#	Searches
S41	TI (hermeneutic* or heidegger* or husser* or colaizzi* or "van kaam*" or "van manen*" or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*) OR AB (hermeneutic* or heidegger* or husser* or colaizzi* or "van kaam*" or "van manen*" or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*)
S42	TI (metasynthes* or "meta synthes*" or metasummar* or "meta summar*" or metastud* or "meta stud*" or metathem* or "meta them*") OR AB (metasynthes* or "meta synthes*" or metasummar* or "meta summar*" or metastud* or "meta stud*" or metathem* or "meta them*")
S43	TI ("critical interpretive syntheses*" or (realist N1 (review* or syntheses*)) or (noblit and hare) or (meta N1 (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) N1 syntheses*)) OR AB ("critical interpretive syntheses*" or (realist N1 (review* or syntheses*)) or (noblit and hare) or (meta N1 (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) N1 syntheses*))
S44	S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43
S45	(TI (systematic* n3 review*)) or (AB (systematic* n3 review*)) or (TI (systematic* n3 bibliographic*)) or (AB (systematic* n3 bibliographic*)) or (TI (systematic* n3 literature*)) or (AB (systematic* n3 literature*)) or (TI (comprehensive* n3 literature*)) or (AB (comprehensive* n3 literature*)) or (TI (comprehensive* n3 bibliographic*)) or (AB (comprehensive* n3 bibliographic*)) or (TI (integrative n3 review)) or (AB (integrative n3 review)) or (JN "Cochrane Database of Systematic Reviews") or (TI (information n2 synthesis)) or (TI (data n2 synthesis)) or (AB (information n2 synthesis)) or (AB (data n2 synthesis)) or (TI (data n2 extract*)) or (AB (data n2 extract*)) or (TI (medline or pubmed or psycit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (AB (medline or pubmed or psycit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (MH "Systematic Review") or (MH "Meta Analysis") or (TI (meta-analy* or metaanaly*)) or (AB (meta-analy* or metaanaly*))
S46	S36 AND (S44 OR S45)
S47	S36 AND (S44 OR S45) INCLUDING LIMITS (DATE & GEOGRAPHIC REGIONS)
	Limiters - Published Date: 19950101-20220331
	Limiters - Published Date: 19950101-20220331

Database: PsycINFO

Date of last search: 22/03/2022

#	Searches
1	breast feeding/ or lactation/ or bottle feeding/
2	(breastfeed* or breastfed* or breastmilk or lactat* or (breast adj2 (feed* or fed*))).ti,ab,id.
3	((breast or pump* or express* or collect*) adj2 milk).ti,ab,id.
4	(nursing adj (baby or infant* or mother* or neonate* or newborn*)).ti,ab,id.
5	((mixed* or bottle*) adj2 (feed* or fed*)).ti,ab,id.
6	or/1-5
7	employment status/ or reemployment/ or unemployment/ or supported employment/ or working conditions/
8	education/ or distance education/ or paraprofessional education/ or Vocational Education/ or professional development/ or reentry students/ or schools/ or colleges/ or teaching/
9	working conditions/ or occupations/ or work-life balance/
10	working women/
11	(return* adj5 (education or study or studies or school or training or work* or employ* or job)).ti,ab.
12	((work* or job or paid or employ* or train* or studying or student*) adj5 (breastfeed* or mother* or maternal or wom?n or female*)).ti,ab.
13	or/7-12
14	6 and 13
15	animal.po.
16	(rat or rats or rodent* or mouse or mice).ti.
17	15 or 16
18	14 not 17
19	(meta analysis or "systematic review").md.
20	META ANALYSIS/
21	SYSTEMATIC REVIEW/
22	(meta analy* or metanaly* or metaanaly*).ti,ab.
23	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
24	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
25	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
26	(search* adj4 literature).ab.

#	Searches
27	cochrane.jw.
28	((pool* or combined) adj2 (data or trials or studies or results)).ab.
29	(medline or pubmed or cochrane or embase or psychlit or psyclit or cinahl or science citation index or bids or cancerlit).ab.
30	or/19-29
31	"EXPERIENCES (EVENTS)"/ or CLUSTER ANALYSIS/ or FOCUS GROUP/ or CONTENT ANALYSIS/ or DISCOURSE ANALYSIS/ or ETHNOGRAPHY/ or GROUNDED THEORY/ or INTERVIEWERS/ or INTERVIEWING/ or INTERVIEWS/ or NARRATIVES/ or OBSERVATION METHODS/ or PHENOMENOLOGY/ or QUALITATIVE METHODS/ or QUESTIONNAIRES/ or QUESTIONING/ or exp SURVEYS/ or TAPE RECORDERS/
32	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
33	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
34	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
35	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
36	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
37	or/31-36
38	18 and (30 or 37)
39	limit 38 to (English language and yr="1995 -Current")

Database: AMED**Date of last search: 22/03/2022**

#	Searches
1	breast feeding/
2	(breastfeed* or breastfed* or breastmilk or lactation or lactating or (breast adj2 (feed* or fed*))).ti,ab.
3	((breast or pump* or express* or collect*) adj2 milk).ti,ab.
4	(nursing adj (baby or infant* or mother* or neonate* or newborn*)).ti,ab.
5	((mixed* or bottle*) adj2 (feed* or fed*)).ti,ab.
6	or/1-5
7	Employment/ or Employment supported/ or Unemployment/ or Workplace/
8	education/ or education nonprofessional/ or education professional/
9	schools/ or universities/ or teaching/
10	(return* adj5 (education or study or studies or school or training or work* or employ* or job)).ti,ab.
11	((work* or job or paid or employ* or train* or studying or student*) adj5 (breastfeed* or mother* or maternal or wom?n or female*)).ti,ab.
12	or/7-11
13	6 and 12
14	limit 13 to (English and yr="1995 -Current")

Database: Epistemonikos**Date of last search: 22/03/2022**

#	Searches
1	(advanced_title_en:(breastfeeding AND returning to work) OR advanced_abstract_en:(breastfeeding AND returning to work)) [Filters: protocol=no, min_year=1995, max_year=2022]
2	(advanced_title_en:(breastfeeding AND return to study) OR advanced_abstract_en:(breastfeeding AND return to study)) [Filters: protocol=no, min_year=1995, max_year=2022]
3	(advanced_title_en:(breastfeeding AND employment) OR advanced_abstract_en:(breastfeeding AND employment)) [Filters: protocol=no, min_year=1995, max_year=2022]
4	1 or 2 or 3

Database: INAHTA International HTA database

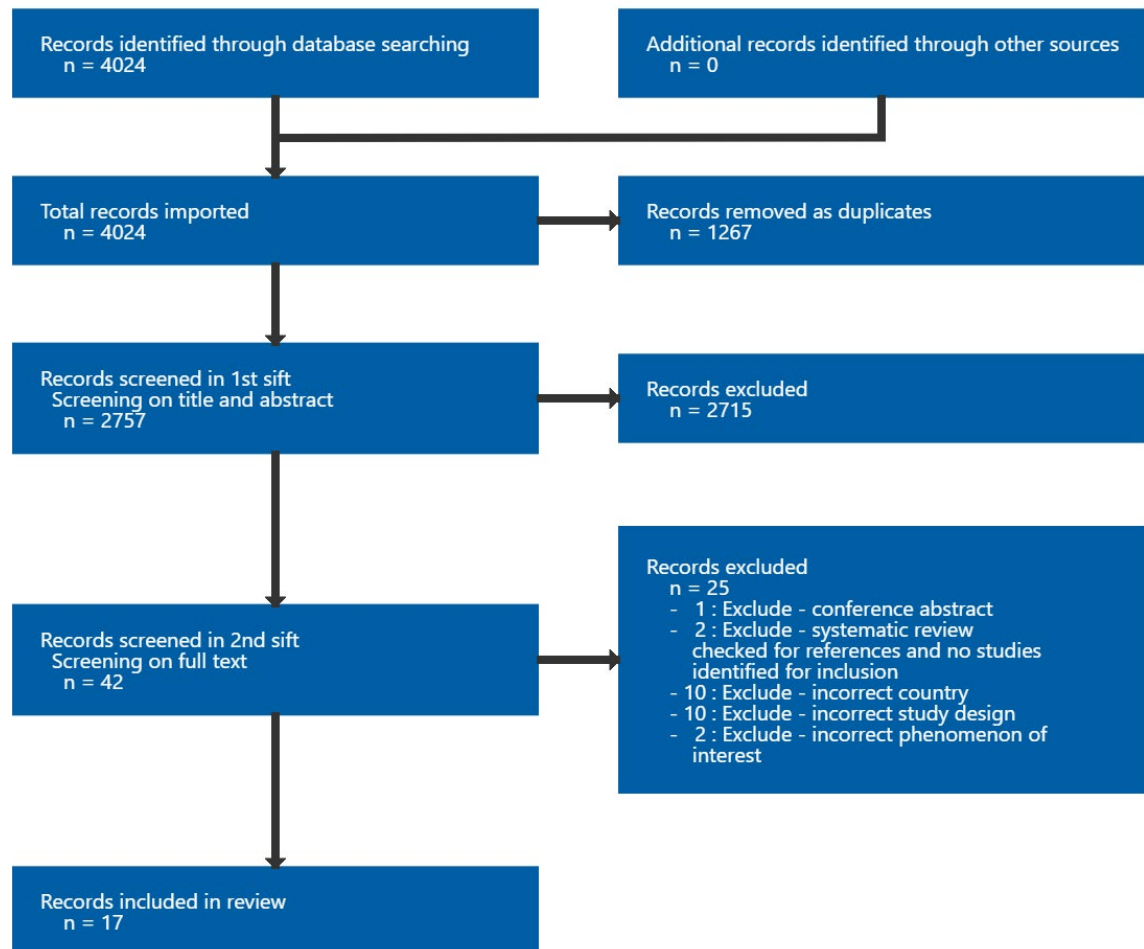
Date of last search: 22/03/2022

#	Searches
1	"Breast Feeding"[mhe]
2	"Lactation"[mh]
3	"Bottle Feeding"[mh]
4	((breastfeed* or breastfed* or breastmilk or lactat*)) [Title] OR ((breastfeed* or breastfed* or breastmilk or lactat*)) [abs]
5	((milk or breastmilk) and (express* or pump*)) [Title] OR ((milk or breastmilk) and (express* or pump*)) [abs]
7	#1 OR #2 OR #3 OR #4 OR #5
7	"Employment"[mh]
8	"Employment, Supported"[mh]
9	"Unemployment"[mh]
10	"Workplace"[mh]
11	"Education"[mh]
12	"Education, Professional"[mh]
13	"Education, Nonprofessional"[mh]
14	"Education, Distance"[mh]
15	"Vocational Education"[mh]
16	"Return to School"[mh]
17	"Schools"[mh]
18	"Universities"[mh]
19	"Teaching"[mh]
20	"Work"[mh]
21	"Return to Work"[mh]
22	"Work-Life Balance"[mh]
23	"Women, Working"[mh]
24	((return and (work or job or employ* or school or training or study or studies or education))) [Title] OR ((return and (work or job or employ* or school or training or study or studies or education))) [abs]
25	((breastfeeding and (work or job or employ* or study))) [Title] OR ((breastfeeding and (work or job or employ* or study))) [abs]
26	#7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25
27	#7 AND #26 with date limit 1995 - 2022

Appendix C Qualitative evidence study selection

Study selection for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Figure 3: Study selection flow chart



Appendix D Evidence tables

Evidence tables for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Table 5: Evidence tables

Alianmoghaddam, 2018

Bibliographic Reference Alianmoghaddam, N.; Phibbs, S.; Benn, C.; Reasons for Stopping Exclusive Breastfeeding Between Three and Six Months: A Qualitative Study; Journal of Pediatric Nursing; 2018; vol. 39; 37-43

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	New Zealand
Setting	Setting Interviews were conducted at the participant's homes. Aim To understand why exclusive breastfeeding stops between three and six months after birth.
Data collection and analysis	Data collection Face-to-face interviews were collected 4-6 weeks after birth. Data analysis The interviews were recorded digitally and transcribed verbatim. Thematic analysis was completed using manual coding techniques. Interview material was analysed using Aronson's four-stage thematic analysis methods.

Recruitment strategy	The research participants were recruited from the lower North Island of New Zealand through research advertisements placed in public places and on social media.
Study dates	September 2013 to July 2014
Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=30 women
Participant characteristics	<p>Age, years, n</p> <p><25: 2</p> <p>25-35: 18</p> <p>>35: 10</p> <p>Ethnicity, n</p> <p>New Zealander of European descent: 21</p> <p>European: 3</p> <p>Maori or Maori/Pakeha: 3</p> <p>Asian: 1</p> <p>Middle Eastern: 2</p>
Results	<p>The Good Employee/Good Mother Dilemma</p> <p>Mothers discussed some perceived challenges for returning to work, such as the nature of the job, lack of support from the manager and colleagues, and the workplace not having breastfeeding friendly environment. Although some workplaces supported breastfeeding, the responsibility fell on the woman to organise this. Some participants reported support from their</p>

significant others, their employer and colleagues, whereas others reported that the nature of their job is a major barrier to continuing breastfeeding when they return to work.

"Unfortunately, I think my specific manager, while initially she might be supportive, I think the reality would soon make her not supportive. I think she wouldn't because it [breastfeeding] would take time and I also think that she would be concerned at setting a precedent, so if she thought if I let her do it, then everyone will want to do it...I guess that the main thing would be if there was a place for me to do it [expressing breast milk] at work because there's not really. I don't know if there is actually a physical room that I could use." [(Brianna)] [Quote: p.39]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Relevant

Al-Imari, 2019

Bibliographic Reference

Al-Imari, L.; Hum, S.; Krueger, P.; Dunn, S.; Breastfeeding During Family Medicine Residency; Family Medicine; 2019; vol. 51 (no. 7); 587-592

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Canada
Setting	<p>Setting</p> <p>Online pilot study</p> <p>Aim</p>

	To explore the breastfeeding experiences of doctors returning to work.
Data collection and analysis	<p>Data collection</p> <p>Free text questionnaire responses. Cross-sectional survey. Comments were reviewed and linked to themes by two investigators independently, and then collectively for consensus.</p> <p>Data analysis</p> <p>Thematic analysis. Data was linked to themes by two investigators independently, and then collectively for consensus.</p>
Recruitment strategy	Not reported
Study dates	February to March 2017
Sources of funding	Not reported
Inclusion criteria	<ul style="list-style-type: none"> Females who gave birth from 2010 through 2016 and returned to residency after maternity leave
Exclusion criteria	Not reported
Sample size	N=56 women
Participant characteristics	<p>Age, years, n (%)</p> <p><25: 1 (1.8)</p> <p>25-29: 25 (44.6)</p> <p>30-34: 26 (46.4)</p> <p>35-40: 4 (7.1)</p> <p>Ethnicity, n</p> <p>NR</p>

Results	<p>Author's themes:</p> <ol style="list-style-type: none"> 1. Program policy 2. Physical means to continue breastfeeding 3. Accommodating work schedule 4. Educational and other supports <p>Program policy</p> <p>Support from policies, support from supervisors to discuss workplace facilities for pumping/breastfeeding, and having helpful workplace policies in place (such as, daycare at work or extended maternity leave).</p> <p><i>“Although I was able to breastfeed for the duration that I wanted to, I feel that an official policy would have been beneficial to facilitate discussions around breastfeeding with the rotation supervisors.”</i></p> <p><i>“Reach out to mothers prior to return to work to inform them of breastfeeding policies and ask what their plans/wishes are.”</i></p> <p><i>“I perceived many more barriers re: pumping and storing breastmilk that I ultimately switched to formula sooner than I may have otherwise done had I taken a longer leave. (4 month maternity leave).” [Quotes: p.589]</i></p> <p>Physical means to continue breastfeeding</p> <p>Participants considered adequate space to pump/breastfeed to be a facilitator to maintain breastfeeding (for example, a private space (not a bathroom) with hospital-grade pumps, sink, refrigerator, computer and telephone).</p> <p><i>“I even had difficulty in the family medicine clinic where I used a clinic room. This was not ideal as there was the possibility of being viewed due to cameras for supervision.” [Quote: p.589]</i></p> <p>Accommodating work schedule</p> <p>If there were scheduled breaks (in that, not in place of meal breaks) for pumping or breastfeeding, participants thought this could help to maintain milk supply and facilitate breastfeeding. Flexibility in work schedule and work patterns were also reported as being a potential facilitator.</p>
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	<p><i>"It was mainly lack of time that meant I didn't pump much while at work."</i></p> <p><i>"The frequent rotation changes made it difficult to pump at work as I constantly had to receive permission from current staff. As well, working at more than one hospital meant always looking for a place to pump."</i></p> <p><i>"I found pumping under pressure i.e., time restrictions or in a stressful or uncomfortable environment was also not helpful for milk let-down."</i></p> <p><i>"I was able to return to residency on a part-time basis, so in the early days I was able to pick up my baby early from childcare to breastfeed her, then gradually she only breastfed at night so this was no longer necessary."</i> [Quotes: p.590]</p> <p>Educational and other supports</p> <p>Participants wanted more education around breastfeeding and also valued peer support, which provided emotional support.</p> <p><i>"Had there been education around breastfeeding in residency, I would have continued longer."</i></p> <p><i>"Having a group of peers to discuss/problem solve with would have been useful."</i> [Quotes: p.590]</p>
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Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns
Overall risk of bias and relevance	Relevance	Partially relevant

Burns, 2019

Bibliographic Reference

Burns, E.; Triandafilidis, Z.; Taking the path of least resistance: a qualitative analysis of return to work or study while breastfeeding; International Breastfeeding Journal; 2019; vol. 14; 15

Study Characteristics

Study type	General qualitative inquiry
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Country/ies where study was carried out	Australia
Setting	<p>Setting</p> <p>The study was conducted across ten campuses at one university in Australia.</p> <p>Aim</p> <p>To explore women's experiences of breastfeeding at university.</p>
Data collection and analysis	<p>Data collection</p> <p>The online survey asked participants about the provision of breastfeeding friendly spaces at the university using some open-ended questions. After the survey, women were invited to attend an in-depth interview about their experiences of breastfeeding at university. The interviews were semi-structured, including a small number of open-ended questions, and were conducted in a conversational style. Three interviews were conducted face-to-face, and the remaining seven were completed over the telephone. The duration of the interviews ranged from 25 min to an hour.</p> <p>Data analysis</p> <p>Audio-recorded in-depth interview data were transcribed verbatim, prior to analysis. Survey extended response data, and qualitative in-depth interviews, were analysed using thematic analysis.</p>
Recruitment strategy	Participants were recruited through a flyer that was distributed across the university campuses and online through social media.
Study dates	April to November 2017
Sources of funding	Not industry funded.
Inclusion criteria	<ul style="list-style-type: none"> • Women who were a staff member or student at the university; • Women who were breastfeeding at the time of the study or had combined breastfeeding and return to work or study in the past 2 years

Exclusion criteria	Not reported
Sample size	N=10 women
Participant characteristics	Not reported
Results	<p>Author's themes:</p> <ol style="list-style-type: none"> 1. University as a positive and progressive environment for breastfeeding 2. Maternity leave, flexible work arrangements, and campus childcare 3. Having the support of tutors, supervisors, managers, and colleagues 4. Importance of proactive support for breastfeeding 5. Finding private and safe spaces for breastfeeding 6. Assessing designated breastfeeding spaces on campus 7. Car parks, corridors, and classrooms 8. Having access to an office 9. Feeling self-conscious and unprofessional 10. Doing the wrong thing 11. Developing resilience to judgement <p>University as a positive and progressive environment for breastfeeding</p> <p>Participants described the university as a positive environment for breastfeeding for both students and staff. Information on the university website was useful and supportive. Compared to other working environments, the university was described by staff as progressive.</p> <p><i>"The university has made it very easy for me to be a working mum...the facilities and the policies do really support the combination of work and family, or study and family."</i></p> <p><i>"It seemed like it was a supportive environment. I just went, 'Wow, okay. This place obviously has some structure in there that they're supportive of this'".</i></p> <p><i>"in my first job, my manager said, 'Oh, can't you do it in the toilet?'" or the following: "After coming from an organisation [which] requested I express in a storeroom with no power point, I was pleased to know that policies and support existed at [this university]". [Quotes: p.3]</i></p>

Maternity leave, flexible work arrangements, and campus childcare

Participants found policies that assisted with breastfeeding, maternity leave, flexible work arrangements, and campus childcare to be useful. Permanent university staff members had benefits that “made a big difference”, such as returning to work until the infant turned 12 months old. Flexibility with work schedule was key when it came to working and breastfeeding or expressing. Some people reported having on-campus childcare, which was a huge benefit for returning to work. These benefits only extended to permanent staff as those on casual/temporary contracts did not receive the same entitlements.

“You can dictate the hours of availability, to a certain extent, that you can teach. That certainly helped...”

“The university childcare centres are very supportive and encouraging of breastfeeding. When my child was transitioning into care, she did not take a bottle. The centre would ring me whenever my daughter needed a feed and was refusing a bottle — I would attend the centre, where they would make a comfortable chair available, and I would feed my child. I never felt out of place or uncomfortable.” [OLS]

“Being casual means I have no rights . . . two weeks into the start of semester, so two weeks of delivering lectures, I just had to stop breastfeeding. I couldn't do it, because of the stress and being out and not just able to feed . . . my supply went from being pretty shit, to be just abysmal, so I stopped.” [IV 6] [Quotes: p.4]

Having the support of tutors, supervisors, managers, and colleagues

Having the support of tutors, supervisors, managers, and colleagues was an important factor in women's breastfeeding experiences. For those who did not have this support, breastfeeding was a great challenge. For instance, several women spoke about their difficulty discussing breastfeeding with male supervisors.

“I've had a really wonderful opportunity to be surrounded by people who have supported me”.

“I have been very lucky to breastfeed and have positive teachers who have happily allowed me to bring my baby to class. This has had a huge impact on my breastfeeding and parenting experiences these past nine months.” [OLS]

“With a male, or a different manager who I didn't know so well, it could have been quite stressful, but I guess those things happen when you're juggling returning to work and babies.” [Quotes: p.4]

Importance of proactive support for breastfeeding

Proactive support (such as, initiating conversation) from supervisors was valued by women. Those without openly supportive supervisors or managers, had to take the lead in initiating conversations about breastfeeding. Once women had raised the issue of breastfeeding supervisors and managers tended to be supportive. Women also spoke about the importance of ongoing education for managers and other workplace employees, to increase awareness about the importance of breastfeeding, and to take the onus off women to generate the support they need to breastfeed.

"She probably initiated the conversation, which just made all the difference because I just felt completely at ease and comfortable"

"As a student, I'm not sure where you would access this kind of information about parenting facilities or your rights in relation to breastfeeding during class. I don't recall ever seeing anything that was publicly available." [IV7]

"It would be good if those in supervisory roles were made aware of these needs and opportunities and actively supported them — instead of requiring mothers to take the proactive role in requesting them." [Quotes: p.5]

Finding private and safe spaces for breastfeeding

Staff and students at the university spoke about the importance of having a private space in which to breastfeed and express milk and the need for internal locking doors in order for them to feel safe while breastfeeding and expressing. Whilst having parenting rooms was good, co-locating breastfeeding facilities in spaces where men, with children, could also enter, stopped women from using that space for breastfeeding. This was most acutely felt by women who had a cultural or religious expectation to be fully covered when in the company of men.

"There's something about expressing that you feel like . . . if somebody walks in on you breastfeeding, you feel like I'm with my child [but] there's something quite mechanical about expressing. I don't think it's as socially acceptable. It's not. It's a really private act." [IV 9]

"It was getting annoying that the parents room was open to fathers which I understand but there's not enough privacy for a woman to breastfeed as I am a scarved Muslim woman and don't expose my body to anyone." [Quotes: p.5]

Assessing designated breastfeeding spaces on campus

Many women were unaware of facilities on the university's campuses and those who were aware of the facilities reported difficulties locating or accessing the spaces. Most women who were able to access these spaces were dissatisfied with the facilities, describing them as "small and not very private", and lacking features such as power plugs, a sink or fridge.

"On campus there is no place for breastfeeding, no place to store pumped milk"

"The sign is small and easy to walk past, [and] not realise it is there." [Quotes p.5]

Car parks, corridors, and classrooms

A lack of awareness about available facilities, an inability to access, or a dissatisfaction with designated spaces, led women to breastfeed in disabled toilets, staff rooms, and outdoor areas.

"I could not find private spaces. I have expressed in my car on hot days. I have found it very stressful." [Quote: p.6]

Having access to an office

Having access to a private office created a positive work environment for breastfeeding women, enabling the expression of milk or breastfeeding.

"I feel like really fortunate, because a lot of other women wouldn't have that facility available to them" [professional staff member]. [Quote: p.6]

Having a safe place to store breast milk

Safety was important when storing breast milk. All women reported difficulties in accessing safe places to store their breast milk, however, these difficulties were more prominent for students and casual staff members. Even when casual staff did have access to a fridge they were concerned about the high usage of the fridge, and, how safe it was to store their milk there. Concerns about storing expressed milk in a shared fridge, which was also used for other people's lunches, was also off-putting for some participants.

". . . it was safe in that space. It was accessible, I knew no one was going to go in and steal it or was going to mix it up with anyone else's because I was the only breastfeeding mum in that room." [IV 6]

"A fridge to store my expressed milk would have been nice, however, given it is a public space I would feel hesitant to leave my milk in a public fridge that others have access to." [OLS]

"But then I had to store my breast milk in the fridge or freezer, where everybody's lunches are kept ... There's no separate facility for any of that, and so I hid them in bags so that people didn't necessarily know what was going on because I felt a little bit embarrassed about having them in with food." [IV 3] [Quotes: p. 7]

Feeling self-conscious and unprofessional

Many staff and students spoke about feeling uncomfortable breastfeeding at university because they felt that breastfeeding was "unprofessional". This was particularly the case if women had to breastfeed around colleagues. Women also reported issues about workwear being incompatible with breastfeeding and the challenges that 'appearing' professional had with breastfeeding. If women were expressing at work, they often felt embarrassed when washing up breast expression equipment at work. Whilst participants acknowledged that no one deliberately made them feel uncomfortable, the lack of a supportive, visible and accepted breastfeeding culture made participants feel that they were behaving inappropriately.

"I felt conscious of making other students/staff uncomfortable at times."

"I'm in my professional work clothes where they're not...like they're not breastfeeding clothes, and so I'd have to undress half way down."

"I always felt really weird standing there in front of someone with my breast pump rinsing it out. What I would do is rinse it out and just let it air dry, but then sterilize it at home every night. That was just my personal awkward thing because I don't know, it was some sort of visual thing that I thought people were seeing the pump that sits on my breast. It just felt funny. No one ever said anything. No one ever made me feel uncomfortable about it." [Quotes: p.7&8]

Doing the wrong thing

Feelings of guilt about taking time out to breastfeed were also a feature of women's experiences of returning to work at university. Designated lactation breaks were available to staff, however some women felt that these were perceived negatively by other staff members. To overcome perceived attitudes about unprofessional behaviour women tried to enhance their outputs by combining the time spent expressing milk with completing work tasks, either by doing these simultaneously, or by staying back at the end of the day.

"When you're breastfeeding, you feel like you're doing the wrong thing. When you're at work, you feel like you need to be working and you feel guilty that you're taking time away to do something that is kind of a break." [IV 5]

"Some staff held resentment towards me for taking [lactation] breaks."

"I actually used to take my computer into the room and work at the same time, because I had a hands-free pump and would literally do my emails and things at that same time. It turned out, I ended up doing that same habit [using pump while working] here and I couldn't produce enough milk. My milk supply slowed up and I couldn't feed anymore for that lunchtime feed that I was doing. It was difficult, but I think it's just one of those things." [IV 5] [Quotes: p.8]

Developing resilience to judgement

Several women spoke about the difficulty of breastfeeding at university, given that breastfeeding is still an unusual practice to observe in the public sphere. Women understood that they had the right to breastfeed but felt that it was still not an acceptable and normal thing for a woman to do on campus.

"I understand that, legally, I have the right to breastfeed or have the right to a safe space to express breast milk, I understand all the legal considerations, but I can't help but feel, at times, that, you know, breastfeeding has not become the societal norm yet. And so, I do feel that even though nobody has directly judged me, I do feel like there would be judgment there." [IV 4]

"because it's not normalised, because not everybody is doing it on campus, you do feel like a bit of an outsider..."

"I'm also at the stage now where I'm sort of like I have a much tougher skin and I'm not concerned about what other people are thinking about me pumping breast milk and washing things in sinks, and all of that." [IV 4] [Quotes: p.8 & 9]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Desmond, 2016**Bibliographic Reference**

Desmond, D.; Meaney, S.; A qualitative study investigating the barriers to returning to work for breastfeeding mothers in Ireland; International Breastfeeding Journal; 2016; vol. 11; 16

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Ireland
Setting	<p>Setting</p> <p>Fifteen interviews were carried out over the telephone and one interview was conducted face-to- face.</p> <p>Aim</p> <p>To explore women's experiences of breastfeeding after their return to work.</p>
Data collection and analysis	<p>Data collection</p> <p>Interviews conducted were between 15 and 56 min in duration and were recorded using a dictaphone.</p> <p>Data analysis</p> <p>Each interview was transcribed verbatim by the primary author. Thematic analysis was used as the method for data analysis.</p>
Recruitment strategy	Women were contacted initially through a breastfeeding support website and a private lactation consultant. Additional women were recruited through snowballing. This involved women who participated in the study telling other women they knew who had also returned to work while breastfeeding and those women then volunteering to participate in the study.
Study dates	April to June 2014
Sources of funding	Not industry funded
Inclusion criteria	<ul style="list-style-type: none"> Women who had continued to breastfeed after their return to work in Ireland

Exclusion criteria	Not reported
Sample size	N=16 women
Participant characteristics	<p>Age, years, n</p> <p><25: 1</p> <p>25-35: 9</p> <p>>35: 6</p>
Results	<p>Author's themes</p> <ol style="list-style-type: none"> 1. Culture 2. Supports and information provision 3. Return to work 4. Feeding in the workplace <p>Culture</p> <p>Many women did not disclose they were still breastfeeding to managers or colleagues for fear they would be subject to judgement or criticism for continuing to breastfeed after their return to work. Some women felt that Irish culture was not accepting of breastfeeding due to misconceptions and misinformation and that normalising breastfeeding would go a long way towards making society more open to the practice.</p> <p><i>"P: Definitely the feeding in public, so, when, when I was breastfeeding (Baby), I bought a poncho, that was specifically designed to put over the baby while you're feeding because I was genuinely really uncomfortable feeding in public. I felt like men would look away and they would be really embarrassed and I, kind of, got sick of having to leave the room every time we had family and friends around because, you know, I'd be missing out on all the banter while I'm upstairs feeding" (Age 33, breastfed for 12 months).</i></p> <p><i>"H: "This country really needs to change its attitude towards breastfeeding, it really does, you know the health factors and everything, and I don't know why it's hidden, you have to feel embarrassed and hide it" (Age 36, currently breastfeeding). [Quotes: p.4]</i></p>

Supports and information provision

Peer support was very helpful, especially when family support was lacking. Partners and husbands were repeatedly reported as being the greatest support for the mother.

"H: I do think you need your husbands or partners support, if you don't have their support on it, you won't stick with it, because there are such tough times with the growth spurts and they happen so quickly and they go on for so long, I mean at 8 days I thought I'd never get out of the chair, and it was great that he was there, he could bring me water and sandwiches and food and take her to change a nappy and then bring her back again. Nothing can prepare you for that, no matter how much research you do, no doubt, you do need partner support" (Age 36, currently breastfeeding). [Quote: p.5]

Return to work

Women were worried about getting their child into a feeding routine and reported the pressure to get their babies onto a bottle before their return to work. Some women reported taking unpaid leave and returning to work after the statutory maternity leave so their babies had been introduced to solid foods. Upon return to work, women felt they had to alter their expressing schedule rather than work providing the flexibility. Women also reported difficulties with the lack of facilities to express and places to store breastmilk when at work. They also spoke of the lack of time available to them to express milk during their working day. Some thought of it as very time consuming and said the amount of preparation including the sterilisation of equipment and surface areas made the process a chore.

"E: It annoys me, it annoyed me that I felt under pressure to get her on bottles, I felt really pressurised a month before I was going back, I remember I felt under pressure the month before, because she still was very finicky with the bottles, very finicky, I felt pressure yeah, I felt it, I knew it, I knew it in my own heart and soul she was in trouble if she would not take the bottles, trying to explain that to my employer, saying, I can't come back to work because I'm breastfeeding, I feel, I'm an alien to him basically, I just, like he's a man in his, what? Late 50s maybe, I just don't think he'd understand" (Age 34, currently breastfeeding).

"P: I think it's definitely, it has to be a personal choice. I'm not sure there's anything you can do to, you know, like, several of my friends would've said they would like to continue but it's not possible at their work. So, one of my friends is a teacher. And there was just nowhere in her school that she could have some privacy to pump" (Age 33, breastfed for 12 months). [Quotes: p.6]

Feeding in the workplace

	<p>Some women reported negative experiences when breastfeeding at work, particularly from colleagues. Participants reported that having legislation in place that protected breastfeeding women would make them feel more comfortable about approaching employers for adequate facilities and breaks.</p> <p><i>"E: I couldn't like, it literally would not have been worth my while to go back on, I mean losing the hours until 10 o'clock killed me as well, every hour counts at the end of the day you know, it did you know like, but I didn't have a choice in doing it, yeah, because I couldn't afford to take the 16 weeks [unpaid leave], there was no way" (Age 34, currently breastfeeding).</i></p> <p><i>"B: I suppose it is a lot of stress then going 'God I have to go and pump now' so in terms of legislation I think two things, I think ideally maternity leave being longer. The reason why I'm going back earlier this time is, because the state pays so little. But this time round, financially, I'm gonna find it hard to even take the 6 months to be honest so my plan is to do a day or two a week, maybe when the baby is around 4 months" (Age 34, breastfed for 20 months)</i></p> <p><i>"I: Legal protection for women to feed after their return to work, I work in a private company and they have no obligation to allow me to take breaks to pump or feed (Baby) if it was a legal right I would be much more confident in saying it to my boss, I am taking the break I am entitled to feed my child, if it's the law you have full protection, if it is just up to the company you are at their mercy, and they have all the control, but if it's your legal right you have protection. Just one more thing, the maternity leave is not long enough here, the baby is still feeding constantly when you have to go back to work so it is not possible to feed for 6 months" (Age 34, breastfed for 2 years). [Quotes: p.7]</i></p>
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Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Gatrell, 2007

Bibliographic Reference	Gatrell, C. J.; Secrets and lies: Breastfeeding and professional paid work; Social Science & Medicine; 2007; vol. 65 (no. 2); 393-404
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Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	<p>Setting</p> <p>Not reported</p> <p>Aim</p> <p>To explore the differences in health information regarding breastfeeding.</p>
Data collection and analysis	<p>Data collection</p> <p>Semi-structured interviews were used. Interviews lasted 4 h on average.</p> <p>Data analysis</p> <p>During the analysis, themes from each interview were highlighted by thematic analysis.</p>
Recruitment strategy	Mothers were recruited through snowballing.
Study dates	1999 to 2002
Sources of funding	Not reported
Inclusion criteria	<ul style="list-style-type: none"> • Women who had at least one pre-school child; • Women who held a first degree as a minimum qualification; • Women who were employed in a professional and/or managerial capacity; • Women who were living with the father of her child at the time of the interview.
Exclusion criteria	Not reported
Sample size	N=20 women
Participant characteristics	Not reported

Results	<p>Author's themes</p> <ol style="list-style-type: none"> 1. Breastfeeding and the return to employment 2. 'Veiling' the tired and leaky body 3. Feeding babies from the breast 4. Expressing milk at work <p>Breastfeeding and the return to employment</p> <p>Participants felt they had to hide breastfeeding at work (or stop altogether) because of the views of colleagues or supervisors. Women assumed that the lack of workplace facilities symbolised employers' desire to deter mothers from breastfeeding or expressing milk at work.</p> <p><i>"Breastfeeding? In school? Putting breastmilk in the staff fridge? You're joking. You can smell the testosterone when you walk in the door and you have to fit in, which obviously you can't do if you're breastfeeding. I hated giving up and [baby] cried because she wanted me, but I had to get back to work and the Head was not best pleased with me anyway, being off on maternity leave. So I needed to work at fitting back in, so breastfeeding was out of the question." (Lianne) [Quote: p.399]</i></p> <p>'Veiling' the tired and leaky body</p> <p>Many participants stopped breastfeeding within 1 month of returning to work because of the various barriers the workplace posed. Furthermore, people felt fatigued from having to conceal breastfeeding in workplace and some also felt worried that their tired, lactating body might give colleagues the impression that they were unhealthy, and consequently unreliable.</p> <p><i>"I got... depression... because my daughter couldn't move on to a bottle and I didn't really want her to. She was crying all day while we were going through that. So I was still breastfeeding... and there are just no facilities here for expressing milk, you just have to hide somewhere. And I just couldn't [keep going] because as well as hiding you so are tired when you are breastfeeding, and I didn't feel I could be [seen to be] tired at work... . For people who are breastfeeding there is such a need for places to breastfeed or express at work." (Diana) [Quote: p.399]</i></p> <p>Feeding babies from the breast</p> <p>Women reported the difficulty of balancing being present in the office but also being able to express breastmilk. When they received support from their colleagues, this process was much easier.</p>
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"There was just nowhere I could go at work so I was coming home at lunch-times to feed [baby] until he was a year old. That was hard to manage because my work had changed and I found that very stressful. And ...it was obviously worrying that he wasn't getting fed ... like your worst nightmare. My line-manager certainly didn't get permission from above to allow me [to breastfeed]— they said; 'No. It shouldn't be allowed'. But he just said 'well, you just go ahead and do it'. And it was just luck as to how sympathetic [he was] which it shouldn't be down to at all." (Penny) [Quote: p.401]

Expressing milk at work

Participants reported that there were no facilities to express breastmilk in private other than bathrooms.

"I went back to work... when she was three weeks old, and [had] all the joys of expressing milk in unfamiliar places and looking for fridges in places that I didn't know. And what I find amazing looking back at it, is that I just got on with it. Like I can imagine being squeamish about it and thinking 'Oh God how on earth can you express milk for your baby in a toilet? But I didn't want to feed her anything else... so that's what I did, and I was still doing it 18 months later." (Estelle) [Quote: p.401]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns
Overall risk of bias and relevance	Relevance	Relevant

Gilmour, 2013

Bibliographic Reference

Gilmour, C.; Monk, H.; Hall, H.; Breastfeeding mothers returning to work: experiences of women at one university in Victoria, Australia; Breastfeeding Review; 2013; vol. 21 (no. 2); 23-30

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Australia

Setting	<p>Setting</p> <p>Focus groups were conducted in person in meeting rooms on two campuses, except one interview which happened over the phone.</p> <p>Aim</p> <p>To explore women's experiences of returning to work.</p>
Data collection and analysis	<p>Data collection</p> <p>Women were invited to attend one of several focus groups. Three 1-hour focus groups were held with 4-8 mothers attending each group, which were facilitated by 2 researchers. With the consent of the participants, the focus groups and interviews were audiotaped and later transcribed verbatim.</p> <p>Data analysis</p> <p>The interviews were conducted by one of the researchers and thematic analysis of the data was completed by two researchers individually and then in a shared process with the third researcher.</p>
Recruitment strategy	Women were recruited through advertisements in the university eNews services. Invitations were distributed to all staff working with infants up to the age of 12 months.
Study dates	Not reported
Sources of funding	Not industry funded.
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=18 women
Participant characteristics	<p>Age, years, n</p> <p>31-35: 15/18</p> <p>Note: data for 3 participants is unavailable</p>

	<p>Profession, n</p> <p>Academics: 13/18</p> <p>Administrators: 3/18</p> <p>PhD student: 1/18</p> <p>Undergraduate student: 1/18</p>
Results	<p>Author's theme</p> <ol style="list-style-type: none"> 1. Proximity- workplace/childcare/family 2. Flexibility- workplace/childcare/family 3. Communication <p>Proximity- workplace/childcare/family</p> <p>Proximity to and availability of childcare had an impact on breastfeeding or providing expressed breastmilk. Some mothers found it difficult to come to the childcare centre because of problems with parking on their return to work. For those who were expressing milk at work, the need for privacy and a safe space was reported. Although there was policy information about breastfeeding breaks available on the university intranet, there was a lack of knowledge and communication and many people were unaware of its existence. Even if there were some dedicated feeding rooms around different parts of the university campuses, many of the women were unaware of them or found they were too difficult to get into.</p> <p><i>"I had planned to put [name] into the childcare centre here on campus but it closed. So, at the last minute we were rushing around trying to figure out what family members could look after him. He would have been weaned anyway, but the plan was for him to be nearby when I returned to work" [FG2]</i></p> <p><i>"...the feeding room that's just opened near my building and that's you know, fine for people that sort of work within our school... but if you're sort of on the other side of the campus it's a bit inconvenient to... trek over to the other side just for this specialised room." [Phone interview] [Quotes: p.26 &27]</i></p> <p>Flexibility- workplace/childcare/family</p>

Many of the mothers discussed the stress they felt with managing workload, childcare drop offs and feeding or expressing, and needed flexibility at work to accommodate these tasks. Although the university allowed a pause in studies during pregnancy, there was still pressure (internal or external) to get a course of study completed.

"As soon as I found out I was pregnant with [name of child] I put him down on the waiting list at the creche because I just knew sort of with the experience of it I had with my first child it would be much less stressful to have them in child care rather than trying to organise times with nannas and work around them and all that sort of stuff." [Phone interview]

"I was doing my PhD at the time. Before that, I was doing sessional and casual work, but I basically stopped that when I was pregnant 'cause I was too exhausted. And I think I got 6 weeks leave when I had her, but my supervisor said 'Don't take leave. Just get the damn thing finished.'" [FG1] [Quotes: p.27 & 28]

Communication

Communication was an important factor in facilitating a flexible workplace and supportive childcare that are conducive to successful breastfeeding on return to work. Communication needs to go both ways and should begin when planning for return to work.

"... finally I got the courage to say, 'Can we have a breastfeeding room please?' And she's like, 'Yes, that's a fabulous idea' and then we got one.... it's a private room [but] because everything in new buildings now would be kind of glass and open plan, it's hard to get an office that is private. This room was the only room that has a solid door, everything else is glass" [FG3] [Quote: p.28]

No supporting quote.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Hauck, 2016

Bibliographic Reference Hauck, Y. L.; Blixt, I.; Hildingsson, I.; Gallagher, L.; Rubertsson, C.; Thomson, B.; Lewis, L.; Australian, Irish and Swedish women's perceptions of what assisted them to breastfeed for six months: exploratory design using critical incident technique; BMC Public Health; 2016; vol. 16 (no. 1); 1067

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Australia, Ireland, Sweden
Setting	<p>Setting</p> <p>Participant's home</p> <p>Aim</p> <p>To explore perceptions of what women found helpful to continue breastfeeding.</p>
Data collection and analysis	<p>Data collection</p> <p>Telephone interviews. Women were asked one open ended question and their response was recorded with the woman's verbal permission. A guide was used to facilitate data collection.</p> <p>Data analysis</p> <p>Content analysis was used to establish themes.</p>
Recruitment strategy	<p>In Australia, recruitment occurred through adverts in local newsletters that were freely available to participants. The adverts ran in March and April 2014, and participants confirmed interest through email or telephone.</p> <p>In Sweden and Ireland, recruitment was through social media, social network Facebook and internet forums for parents. Data were collected between October 2015 and January 2016.</p> <p>Snowball sampling was also used in all countries as mothers were encouraged to share study details with other women they knew who had recently breastfed for at least six months.</p>

Study dates	March 2014 to January 2016
Sources of funding	Not industry funded.
Inclusion criteria	<ul style="list-style-type: none"> • Women who breastfed a recent child for a minimum of six months; • Women who were still breastfeeding or those who have stopped within the past 12 months.
Exclusion criteria	Not reported
Sample size	N=356 women
Participant characteristics	<p>Mean (SD) age, years, [Range]</p> <p>Australian women: 33.5 (4.92) [22-49]</p> <p>Irish women: 34.9 (4.01) [24-43]</p> <p>Swedish women: 33.5 (5.61) [20-51]</p>
Results	<p>Author's theme</p> <p>1. Work environment</p> <p>Work environment</p> <p>Participants reported facilitators for continuing breastfeeding after returning to work, for example being able to stay at home, having financial support with access to maternity leave, or having a supportive or flexible work environment.</p> <p><i>"I think I would have had problems with combining it with working – it's maybe not everyone who can do both (Swe29)".</i></p> <p><i>"I went back to work earlier before and I really regret giving up so soon. This time I took the leave and the unpaid bit so it's much easier to keep the feeding going (Irish18)". [Quotes: p.6]</i></p>

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Hentges, 2021**Bibliographic Reference**

Hentges, M.; Pilot, E.; Making it "work": mothers' perceptions of workplace breastfeeding and pumping at Dutch universities; International Breastfeeding Journal; 2021; vol. 16 (no. 1); 87

Study Characteristics

Study type	Phenomenological
Country/ies where study was carried out	The Netherlands
Setting	<p>Setting</p> <p>Interviews were conducted online.</p> <p>Aim</p> <p>To identify the experiences of women returning to the workplace about breastfeeding.</p>
Data collection and analysis	<p>Data collection</p> <p>Data were collected through single, semi-structured online interviews conducted in English. On average, expert interviews lasted 64 min and employee interviews lasted 44 min.</p> <p>Data analysis</p> <p>Recorded interviews were transcribed verbatim. Data from experts and mothers were pooled and analysed together. Interviews were manually coded using thematic analysis.</p>
Recruitment strategy	Purposive and snowball sampling.

Study dates	March to May 2020
Sources of funding	Not industry funded
Inclusion criteria	<ul style="list-style-type: none"> • Healthy mothers of healthy children; • Native Dutch or non-Dutch women; • Not on maternity leave; • Currently breastfeeding or had breastfed or pumped at work within the past 5 years; • Full time and part time employees; • Good command of English.
Exclusion criteria	Not reported
Sample size	N=13 women
Participant characteristics	<p>Mean age, years</p> <p>34</p> <p>Occupation, n</p> <p>Post-doctoral researcher: 2/13</p> <p>PhD student: 2/13</p> <p>Teaching fellow: 2/13</p> <p>Lactation consultant: 2/13</p> <p>Assistant professor: 4/13</p> <p>Author/yoga teacher: 1/13</p>
Results	<p>Author's themes:</p> <ol style="list-style-type: none"> 1. Availability and accessibility of lactation rooms 2. Lactation room quality 3. Cleaning pumping equipment and storing breast milk

4. Social perceptions of breastfeeding
5. Characteristics of social work environments
6. Communication
7. Childcare
8. Flexibility of working hours
9. Workload and output expectations
10. Being a mother and an employee
11. Knowledge of policies and legal rights
12. Exercising rights
13. Maternity leave

Availability and accessibility of lactation rooms

Lack of facilities at work impacted mothers' experiences and their ability to continue breastfeeding. Even if they were available, there were problems with their availability and accessibility. Employees had to book time slots in advance, which was difficult when meetings unexpectedly lasted longer and there were other breastfeeding employees with similar pumping routines. Women reported having to use meeting or storage rooms instead, however these locations were unsuitable because of a lack of facilities, cold climate, or privacy issues.

"We have to share the room with all the other mothers. .. but also it's a meditational, relaxational room, so the other users want to use it as well.... it's really busy at the same time, because the mothers want to use it in the morning and during lunch and at the end of the afternoon. And when your meeting is overtime and then- then you really come into trouble with the- with the schedule of the pumping room. So that's really difficult." (10A).

"It was a bit frustrating always to find a room, you know, you always had to go to talk to the- to the receptionist... It would have been nice that you know, ok, I can go there, I can close it, I can relax. .. I really was fed up with all the hassle and I decided, ok, I just quit, I'll stop, I don't want it anymore." (7A). [Quotes: p.4]

Lactation room quality

Given distant locations, some mothers stored their bottles in the department's fridge, reduced their lactation breaks, and many chose to or had no other option than pumping in their office, which related to poor quality of lactation rooms. Women wanted spaces with electricity, a sink, fridge and cupboard, but this was rarely supplied.

"It [room] just looks horrible. Like it's an old hospital bed, it's got neon lighting, it's very cramped, there was a chair there that had some white stains on it, probably milk from some mothers.. .. it's quite important to be relaxed, and so it was really not a relaxing environment at all." (2A).

"It wasn't possible to clean. .. the table that I was using.... I then took a little bottle of water that I could use to clean the table, which is also not the most hygiene. .. the stains that were on the table that I made, they've been there all the time, so I never saw- saw some cleaning activity signs there." (7A). [Quotes: p.6]

Cleaning pumping equipment and storing breast milk

Many women reported having to use communal sinks for washing pumps and also communal fridges for storing breastmilk. Often the fridges were full and unclean, and sometimes breastfeeding equipment went missing. Many women reported feeling uncomfortable breastfeeding or having breastfeeding equipment around male colleagues.

"Everyone can kind of access it and it feels very private. Like it's your own body fluid, and it's the feeding for your baby. And the idea that someone touches it, it's already kind of weird." (6A)

"It wasn't possible to clean. .. the table that I was using.... I then took a little bottle of water that I could use to clean the table, which is also not the most hygiene. .. the stains that were on the table that I made, they've been there all the time, so I never saw- saw some cleaning activity signs there." (7A)

"I can imagine that people don't think it's hygienic to rinse your stuff.. .. it might be the same as rinsing blood in your - in your kitchen that you're sharing, right?. .. even though, of course, that's- that's clean stuff." (7A) [Quotes: p.6]

Social perceptions of breastfeeding

Although some women found breastfeeding and pumping easy, others had problems such as pain, pressure on breasts, or not expressing as much milk as through breastfeeding, particularly under time pressures. Women felt that their social environment, particularly men, might not be aware of how physically and mentally intense breastfeeding/expressing can be. Some experienced that (public) breastfeeding was not normalised, saying that the Dutch society was not "pro-breastfeeding".

"We have the idea that it's very natural and very simple, that it's easy to do.. .. it's hard in the beginning, it's really a skill that you have to learn.. .. it takes so much energy. .. you're producing the food of an entire, quickly growing human being." (1E).

“The way they kind of responded to it, like by ensuring that they were ok with it, kind of made me feel weird. People were like, ‘Ah, you’re such a role model.’ But it made me feel very uncomfortable, ‘cause it made me feel like it was not normal. They are giving me permission for something I thought I didn’t need permission.” (6A).

“It should not be a social dogma or social problem saying that breastfeeding is something not as a work part. It’s a part of daily life and it should be taken along accordingly.” (13A). [Quotes: p.6 & 7]

Characteristics of social work environments

Women reported they perceived less encouragement for breastfeeding/expressing when in male-dominated environments, causing them to feel more uncomfortable and stressed.

“My head of department was an older male that I felt a bit distanced from so maybe that’s also not someone that I would ask about breastfeeding. I think if my head of department would have been someone that I related more or someone that I felt more comfortable with, I might have discussed this.” (2A). [Quote: p.7]

Communication

Women felt more comfortable discussing their plans or problems with colleagues who were empathetic because they felt “vulnerable” after pregnancy. This also included concerns about job security, negotiating terms with employers, and perceptions of them 'complaining' about lack of facilities. Women didn't want to feel like the 'black sheep of the department' or alienated because of their needs. It was unclear whom they could speak to for support, as sometimes they had no point of contact when returning to work to support breastfeeding/expressing.

“Everyone kind of said, ‘Ok, no, this is how it is and we accepted it’, which maybe also led to me accepting it instead of going to HR [Human Resources] and saying like, ‘Ok, this is my right,. .. why can I not make use of this right?’. .. You don’t want to be the only person complaining if others aren’t.” (2A).

“Sometimes I have to say that, well, I have to leave the meeting at this time slot because I have to pump. And he’s [superior], he’s. .. not that supportive.. .. He makes kind of strange comments, ‘Well, I can’t help you with that’. .. but he accepts it. .. but yeah. Not encouraged.” (10A). [Quotes: p.7 & 8]

Childcare

Women spoke about the problems with childcare in terms of availability and accessibility. Some mothers and all experts regarded on campus childcare beneficial for breastfeeding, particularly for bottle refusers, although having the child nearby could distract from work:

“.. if it [day-care] would be at my workplace it would be easier to feed her, but also it would give more distraction, I think.” (12A). [Quote: p.8]

Flexibility of working hours

The majority of women perceived the organisation and nature of their work as a main barrier to continued breastfeeding because creating time for breastfeeding, especially where fixed schedules overlapped with lactation breaks, was difficult.

“It became really difficult. Because I had a block of two hours. .. after each other. .. then you have these 15 minutes breaks and then you have to make them larger. .. I don’t wanna tell my students that I’m pumping milk, that’s weird.. .. the whole [pumping] schedule became off.” (8A [Quote: p.8]

Workload and output expectations

Women reported that after any work adjustments for breastfeeding or returning to work after maternity leave, workloads and output remained the same.

“You still have to do the- the same amount of work. .. if that would be adjusted, then I think that would make it much easier for, yeah, for mothers who do want to breastfeed. To also continue to do that.” (2A). [Quote: p.8]

Being a mother and an employee

Juggling work and motherhood was described as “difficult” or “horrible”, and associated with feeling of guilt or insecurity. Women also felt internal pressure about being the best mother they could.

“During pregnancy, you know, you have to prove that you are not sick, and when you’re a mother you have to work like you don’t have any kids.” (1E).

“The kind of rhetoric like a woman should be kind of earth mother, being home with their child, and. .. the critic that you have this highly educated woman who is then only a child-bearing woman so it’s constant all these values.” (6A) [Quotes: p.9]

Knowledge of policies and legal rights

Women were unaware of their rights to breastfeed/express in the workplace and employers did not readily provide this information. Instead, women informed themselves by looking at information online and via breastfeeding colleagues, friends or lactation specialists. Women reported wanting to have information about facilities and policies before returning to work.

“About the legal hours or so, they were not even aware... I’m quite sure that most employers, at least at the university, don’t know what your rights are, or they don’t find it important. .. you have to search for yourself and you don’t receive any information.” (5A)

“They [universities] should encourage to use it and not just give the information out when you ask for it, but they should be quite open and let everybody know that this is the situation and you can use this kind of time and you have this facility, so you can. ...make use of it.” (13A). [Quotes: p.9]

Exercising rights

Women felt that breastfeeding support was not a priority for employers and felt as though there was a gap between what was promised by law and on university websites, and what was practically provided. Women tried to find their own solutions rather than defending or fighting for their rights.

“They [universities] all know the numbers but, yeah, it’s so strange that they don’t practice what they preach.” (10A).

“We have all these laws, but there is no one checking. And it’s all up to the individual woman... if you have these laws, you have to comply to them. And you have to have measures to- to check.” (1E). [Quotes: p.10]

Maternity leave

All participants felt that maternity leave was too short for breastfeeding and perceived this as the primary barrier to continued breastfeeding.

"It's very sudden going back to work. .. for some, it [birth] was really a big health, major event. Physical-wise, maybe mental health-wise, maybe both, that you have to recover from quite quickly in the time that you have to breastfeed, which is taking lots of energy, in which you don't sleep much. .. , it's asking a lot." (8A) [Quote: p.10]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Iglesias-Rosado, 2021

Bibliographic Reference Iglesias-Rosado, B.; Leon-Larios, F.; Breastfeeding experiences of Latina migrants living in Spain: a qualitative descriptive study; International Breastfeeding Journal; 2021; vol. 16 (no. 1); 76

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Spain
Setting	<p>Setting</p> <p>Interviews were conducted online</p> <p>Aim</p> <p>To explore breastfeeding experiences of migrants.</p>
Data collection and analysis	Data collection

	<p>In-depth semi-structured interviews were conducted until data saturation was reached. The interviews were conducted in Spanish by the first author.</p> <p>Data analysis</p> <p>Interviews were recorded and transcribed by the same researcher. The interviews were analysed using an inductive content analysis. The transcribed interviews were examined using a thematic analysis to identify their meanings. The interviews lasted between 20 and 70 min.</p>
Recruitment strategy	Participants were selected using a non-probability “snowball” sampling procedure.
Study dates	November 2019 to June 2020
Sources of funding	Not industry funded.
Inclusion criteria	<ul style="list-style-type: none"> • Latina women who had given birth in Spain; • Experience of breastfeeding in the host country for at least 2 months over the last 5 years; • Involvement in breastfeeding support groups, both face-to-face or online; • Consent to participate in the study
Exclusion criteria	Not reported
Sample size	N=19 women
Participant characteristics	<p>Age, years, n</p> <p><25: 1/19</p> <p>25-35: 7/19</p> <p>>35: 11/19</p>
Results	<p>Author's theme</p> <p>1. Working conditions</p> <p>Working conditions</p>

	<p>Working conditions were the main obstacle to breastfeeding because there were no places to express and store breastmilk nor was there enough time for pumping while at work.</p> <p><i>“ . . . if they express their milk, where do they store it. . . the majority . . . resort to formula.” (MML-5). “ . . . you have that pressure . . . either you stop working to breastfeed or you continue to work so that you can get food for everyone.” (MML-9) [Quote: p.3]</i></p>
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Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Partially relevant

Jackson, 2021

Bibliographic Reference

Jackson, J. E.; Hallam, J. L.; 'It's quite a taboo subject': an investigation of mother's experiences of breastfeeding beyond infancy and the challenges they face; Women & Health; 2021; vol. 61 (no. 6); 572-580

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	<p>Setting</p> <p>The majority were conducted face to face, on university premises or in the mother's home. Five interviews were conducted on the telephone.</p>

	Aim
	To explore what motivates women to continue breastfeeding.
Data collection and analysis	<p>Data collection</p> <p>Semi-structured interviews were used to collect data. All interviews were facilitated by the first author, and lasted between 27 and 52 minutes.</p> <p>Data analysis</p> <p>Each interview was transcribed verbatim which were was analysed using a theory driven, realist thematic analysis.</p>
Recruitment strategy	Participants were recruited from advertisement in online-breastfeeding groups
Study dates	April and June 2018
Sources of funding	Not reported
Inclusion criteria	<ul style="list-style-type: none"> • Aged 18 or over; • Currently breastfeeding; • Have experience of breastfeeding at one child over the age of 12 months.
Exclusion criteria	Not reported
Sample size	N=24 women
Participant characteristics	Average age (years): 35.5
Results	<p>Author's themes:</p> <ol style="list-style-type: none"> 1. Importance of breastfeeding beyond infancy 2. The challenge of returning to work <p>Importance of breastfeeding beyond infancy</p>

	<p>Returning to work was difficult for the mothers as they reported missing their child(ren), and they perceived breastfeeding offered a central form of support during this time.</p> <p><i>"It's been really nice with both because I have gone back to work after maternity leave both times although things have got a little complicated recently and it has been a really wonderful way of reconnecting and resting."</i> (Amy) [Quote: p.575]</p> <p>The challenge of returning to work</p> <p>Despite being well-informed of their rights, women found it difficult to ask for the time needed to express in the workplace, especially in male dominated environments. Women felt stressed by the male gaze , and considered this central to limiting their ability to express whilst at work. This sexualization of breasts presented a major obstacle for women. There were also a lack of facilities for expressing in the workplace with many being asked to express in toilets.</p> <p><i>"Yes, it's quite a taboo subject, you know, when I first went back, I was . . . there was a complete change of role and I'm having to speak to male staff, just to say "Look, can I just go to my room and express please?" There was sort of a tut and a general air of "Oh . . . " (Dianne) [Quote: p.576]</i></p>
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Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns
Overall risk of bias and relevance	Relevance	Partially relevant

Kosmala-Anderson, 2006

Bibliographic Reference	Kosmala-Anderson, J.; Wallace, L. M.; Breastfeeding works: the role of employers in supporting women who wish to breastfeed and work in four organizations in England; Journal of Public Health; 2006; vol. 28 (no. 3); 183-91
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Study Characteristics

Study type	General qualitative inquiry
	Questionnaire with some free text questions

Country/ies where study was carried out	United Kingdom
Setting	<p>Setting</p> <p>Women's workplace</p> <p>Aim</p> <p>To determine the experience and views of employees concerning breastfeeding support at work.</p>
Data collection and analysis	<p>Data collection</p> <p>Free text questionnaire responses</p> <p>Data analyses</p> <p>Not reported</p>
Recruitment strategy	Permission for access to staff was sought from each organization. A senior member of staff in each organization undertook to distribute the survey to eligible staff.
Study dates	Not reported
Sources of funding	Not reported
Inclusion criteria	<ul style="list-style-type: none"> • Employed by one of four public service employers; • Women who were planning to go on maternity leave in the next 6 months, on maternity leave or within 6 months of return from maternity leave.
Exclusion criteria	Not reported
Sample size	N=44 women
Participant characteristics	Median age range: 30 to 35 years
Results	Author's themes

1. Information and facilities offered by the employer about the availability of breastfeeding support on return to work
2. Factors influencing the decision about returning to work after having a baby
3. Organizational support for breastfeeding
4. The best and the worse aspect of experience of the current employer that affected breastfeeding

Information and facilities offered by the employer about the availability of breastfeeding support on return to work

Provision of facilities to support expression and storage and rest breaks to maintain breastfeeding was important for most mothers. Some mentioned that if the facilities had been available, they would maintain breastfeeding after returning to work.

'I used to sneak into my boss's office and quickly express hoping nobody would come in'.

'I was not aware of this availability, this would have encouraged me to continue breastfeeding'. [Quotes: p.188]

Factors influencing the decision about returning to work after having a baby

Support offered by employers regarding breastfeeding was important factor when considering the decision about returning to work after having a baby.

'I felt pressured into returning early from my first spell of maternity leave so was unable to feed after that – it just wasn't an option according to my boss. The nursery at the hospital is very expensive and so I've decided not to return to work after this spell of maternity leave'. [Quote: p.188]

Organizational support for breastfeeding

Women wanted employers to provide more to support and information about how breastfeeding can be managed at work. Women felt this should be given before maternity/paternity leave. Health promotion information about the benefits of breastfeeding were welcomed by many participants, but very few were interested in knowing about formula feeding and the role fathers could take in supporting breastfeeding.

'More information provided earlier on to ensure an informed choice'. [Quote: p.189]

The best and the worse aspect of experience of the current employer that affected breastfeeding

Participants wanted support from their employer (such as access to lactation rooms, breaks for storing and expressing milk), and mentioned flexible work hours after returning from maternity leave. The most often mentioned worst experience was the apparent lack of interest, information and support from their employer.

"I took eight months maternity leave and was able to breastfeed my babies for this long. Flexible working hours on return allowed me to continue one out of three feeds a day, either before work or on return home."

'I had to sort out a lot of things myself – a room, fridge etc. Surprise was shown that I was planning to breastfeed for longer than six months – I got the feeling that they expected me to only be expressing at work for a couple of weeks until my son reached 6 months. Women should be encouraged to breastfeed for as long as they/baby wants!'

'As the rooms offered to me to express milk were not private or were not suitable, this meant that I stopped breastfeeding/ offering expressed breast milk on my return to work. The lack of facilities to express milk was the only reason that I moved to formula milk for my daughter'. Another added... 'My husband used to collect my milk in his lunch hour to take it home to the fridge as there was no storage facilities either'. [Quotes: p.188 & 189]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Serious concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Llorente-Pulido, 2021

Bibliographic Reference	Llorente-Pulido, S.; Custodio, E.; Lopez-Gimenez, M. R.; Sanz-Barbero, B.; Otero-Garcia, L.; Barriers and Facilitators for Exclusive Breastfeeding in Women's Biopsychosocial Spheres According to Primary Care Midwives in Tenerife (Canary Islands, Spain); International Journal of Environmental Research & Public Health [Electronic Resource]; 2021; vol. 18 (no. 7); 06
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Study Characteristics

Study type	General qualitative inquiry
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Country/ies where study was carried out	Spain
Setting	<p>Setting</p> <p>Three interviews in person, one by phone call and 16 by video call.</p> <p>Aim</p> <p>To determine factors that are detrimental to breastfeeding.</p>
Data collection and analysis	<p>Data collection</p> <p>In-depth semi-structured interviews, carried out in Spanish, were transcribed verbatim.</p> <p>Data analysis</p> <p>The transcripts of the interviews were analysed using a content analysis.</p>
Recruitment strategy	A convenience snowball sampling technique.
Study dates	November 2018 to February 2020
Sources of funding	Not industry funded.
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=20 women
Participant characteristics	<p>Age, years, n</p> <p><30: 2/20</p> <p>30-40: 8/20</p> <p>>40: 10/20</p>

Results	<p>Author's themes:</p> <p>1. Labour Factors That Harm Breastfeeding (BF)</p> <p>Labour Factors That Harm Breastfeeding (BF)</p> <p>Midwives considered that it was difficult for women to maintain exclusive BF (EBF) due to the lack of support at work and reconciling it with family life. This was based on individuals and related to their profession. Midwives perceive that insecure working conditions may mean that people returned to work early and this hindered EBF and the upbringing of the infant. Furthermore, midwives reported that the inability to express milk during the working day caused discomfort and problems that forced women to give up BF prematurely. Midwives indicated that conditions were inadequate in the workplace for breastfeeding/expressing, and women had to use their rest time for it. Midwives reported that women do not even have a dedicated space for it, and milk is usually expressed in bathrooms or remote places, where they feel uncomfortable.</p> <p><i>"...women with important positions do not even have half an hour of rest, but must always be available. This is causing them a lot of anxiety in returning to work, so they decide to bottle-feed." (E15)</i></p> <p><i>"... The population that I attended had very difficult work contracts, if they did not come back within 6 weeks, they no longer had a job. The commitment to their job and job insecurity, had a great influence on that too..." (E3)</i></p> <p><i>"...especially the main problem is that not all jobs allow you to go and express your milk."</i></p> <p><i>"...Look, I have to stop this because throughout the day I could not go at any time to express milk and my breasts hurt, I could not stand it." (E14)</i></p> <p><i>"...There are women who use the half hour they have for breakfast to express milk or there are times when they feel strange or are embarrassed. Sometimes they cry in the bathroom." (E17) [Quotes: p.10]</i></p>
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Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Relevant

Payne, 2008**Bibliographic Reference**

Payne, D.; James, L.; Make or break. Mothers' experiences of returning to paid employment and breastfeeding: a New Zealand study; Breastfeeding Review; 2008; vol. 16 (no. 2); 21-7

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	New Zealand
Setting	<p>Setting</p> <p>Participants were interviewed at a place of their choosing.</p> <p>Aim</p> <p>To describe mothers' experiences of returning employment and breastfeeding.</p>
Data collection and analysis	<p>Data collection</p> <p>The interviews, which lasted an average of 90 minutes, were unstructured, open-ended, in-depth and interactive. All the interviews and focus groups were audiotaped, and transcribed.</p> <p>Data analysis</p> <p>Emerging themes that either enabled or hindered the women's breastfeeding and return to paid employment were then identified and analysed by thematic analysis.</p>
Recruitment strategy	Flyers and posters, both hard and electronic versions, advertising the study were sent to six different workplaces. In addition, women who had heard about the study, either from friends or in local community newspapers, directly contacted the principal researcher to express an interest in participating in the study.
Study dates	July 2003 and July 2005
Sources of funding	Not industry funded.

Inclusion criteria	<ul style="list-style-type: none"> • Women were able to converse in English; • Women had had a baby within two years prior to the interview.
Exclusion criteria	Not reported
Sample size	N=34 women
Participant characteristics	Age range: from early 20s to late 30s
Results	<p>Author's themes:</p> <ol style="list-style-type: none"> 1. Support 2. The presence or absence of space 3. Time <p>Support</p> <p>The support of co-workers was also recognised as important by the mothers who decided to continue breastfeeding on their return to paid employment. For example, the shared experience of other female co-workers who had continued to breastfeed had created a kind of norm, which allowed them to combine breastfeeding and work. However, when expressing mothers' absences were highly visible to all around them, particularly their superiors, and it was seen to be a distraction from their job. Several women noted that when their colleagues were predominantly male, the support for breastfeeding seemed less.</p> <p><i>"My workplace, they're very pro breastfeeding and I have a wonderful team of nurses of whom a lot of them have been breastfeeding mothers, all very understanding and incredibly supportive. So I feel very lucky. My manager is also very supportive. So I work in a great team really." (Dianne)</i></p> <p><i>"Who does she think she is, going off and feeding her baby?" It's not like you are going to be five minutes, is it? It takes a bit of time. Just feeling that you are not really entitled to have that time to do it." (Janice) [Quotes: p.23 & 24]</i></p> <p>The presence or absence of space</p> <p>Some participants were able to take their infants to work with them and had their own office, which was very helpful for continuing breastfeeding. Most women had childcare nearby or could see their child throughout the working day to</p>

breastfeed their infant. However, majority of women had to find a space in the office and they mostly found that facilities were not supportive.

"We had set up the cot, behind me, and had the buggy ready as she got a little bit more interactive, with her toys all ready. [...] So throughout the day, when I knew when the timing was right for her and that she was looking for a feed, I would basically just close the door and take care of what she needed." (Anita)

"There's a first aid room which is quite private. It doesn't have a lock on the door because it's a first aid room and people might be sick. But when I mentioned it, the properties manager said, "Look, just put a chair against the door or something". I noticed that after I'd been doing it for a week they'd got a green light on it, so that you could flick the switch and could see the room was in use, which was very nice." (Marion)

"I have to express milk in a shower cubicle, there's no toilet in there, I wouldn't express milk if there was a toilet in there but that's it. My office really isn't, well it's not appropriate because there's a telephone there and people come and go and it's a patient area." (Annabelle) [Quotes: p.24]

Time

In New Zealand, there are no legislated breaks for women in paid employment to breastfeed, so employed women who wished to continue to breastfeed had to either express or breastfeed their baby during their tea or meal breaks. Most of the women felt pressure to fit their activities of breastfeeding or expressing into scheduled work breaks.

"So I did express at morning tea, lunch and afternoon tea and that just meant I didn't have a morning tea and an afternoon tea and it meant that I probably ate my lunch as fast as I possibly could." (Alison) [Quote: p.24]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Rowbotham, 2022

Bibliographic Reference Rowbotham, S.; Marks, L.; Tawia, S.; Woolley, E.; Rooney, J.; Kiggins, E.; Healey, D.; Wardle, K.; Campbell, V.; Bridges, N.; Hawe, P.; Using citizen science to engage the public in monitoring workplace breastfeeding support in Australia; Health Promotion Journal of Australia; 2022; vol. 33 (no. 1); 151-161

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Australia
Setting	<p>Setting</p> <p>Online data collection</p> <p>Aim</p> <p>To explore what breastfeeding support is available at work.</p>
Data collection and analysis	<p>Data collection</p> <p>A citizen science approach. Instructions to participants were open ended to encourage capture of data that was meaningful from their perspective.</p> <p>Data analysis</p> <p>Researchers used inductive thematic analysis to code photographs and comments according to their key features.</p>
Recruitment strategy	Flyers and email newsletters.
Study dates	23rd October to 13th December 2018
Sources of funding	Not industry funded.
Inclusion criteria	<ul style="list-style-type: none"> • Anyone over the age of 18 years; • Mothers who had recently returned to work;

	<ul style="list-style-type: none"> Any community members, including men and people without children.
Exclusion criteria	Not reported
Sample size	N=37 people provided all data + 11 people who provided demographic data only
Participant characteristics	<p>Gender - n</p> <p>Male: 3/48</p> <p>Female: 45/48</p> <p>Age (years) - n</p> <p>18-29: 13/48</p> <p>30-39: 30</p> <p>40-49: 4</p> <p>50-64: 1</p>
Results	<p>Author's themes</p> <ol style="list-style-type: none"> Physical features and facilities Workplace culture Organisational and occupational characteristics <p>Physical features and facilities</p> <p>Many people thought there was no suitable space to breastfeed or express in their workplace. Having comfortable, hygienic and private spaces were key elements of the physical environment identified as supportive for combining breastfeeding and work. Of those who reported having access to a space for breastfeeding or expressing, most reported that rooms contained basic features such as a chair, table, private or communal fridge for breast milk storage, a lockable door and/or signage.</p>

Some spaces had additional features such as a sink, privacy curtain or blinds, and power points for breast pumps, with some even providing breast pumps, special nursing chairs and mobile feeding stations.

"My workplace has dedicated family rooms. These include a nursing chair, fridge, sink and fold out bed. There is one per building and we need to book however I've never had an issue" (P5. Finance; Large workplace; Female; aged 30–39; has children; has breastfed at work) "We have double electric pumps available for staff on three of the five floors at our workplace. There are fridges dedicated to breastmilk storage on most floors ... There is breastfeeding information in each room with links to different parent support services." (P95. Health; Large workplace; Female; aged 30–39; has children; has breastfed at work) [Quote: p.155]

Workplace culture

Women wanted to have a supportive employer and good communication around their return to work, and having time to breastfeed or express, for example, through paid lactation breaks and flexible working arrangements. Women also discussed the positive social experience of expressing at work, explaining how being supported led to meeting a community of women pumping in their workplace. Unavailability of lactation breaks or flexible working arrangements, poor communication around the return to work or management being unresponsive to feedback were key barriers to breastfeeding at work. Lack of support or communication from colleagues, and time pressures on lactation breaks due to balancing work responsibilities and feeding schedules were also highlighted.

"I'm a midwife so my colleagues are very supportive of the requirement for me to express during my breaks." (P12. Public service/local government; Large workplace; Female; aged 18–29; has children; has breastfed at work)

"My workplace is very much 'don't ask don't tell' when it comes to lactation. I just disappear every day for about 20 minutes and no one wants to know about what I'm doing ... I'm the only woman in my office." (P93. Primary industry; Small workplace; Female; aged 30–39; has children; has breastfed at work) [Quotes: p.157]

Organisational and occupational characteristics

There were common barriers and enablers to breastfeeding or expressing at work that reflected organisational and/or occupational characteristics. Supportive facilities appeared to be more common in medium or large workplaces and in sectors including health, public service and local government and education or research. In particular, the provision of dedicated parent rooms occurred almost exclusively in large workplaces, whereas use of communal workplace spaces such as offices or storage rooms was more common in small workplaces. By contrast there was an absence of clean, comfortable and private spaces for breastfeeding and expressing in small or medium workplaces, and in the education,

design, sales, distribution and retail sectors. Participants often acknowledged the realities of working in these types of workplaces and highlighted that a lack of facilities was not intentional but rather their employer was limited in the facilities they were able to provide.

"My workplace has dedicated rooms to express and feed, however I use my own private office which has its own fridge. My workplace is a very large place and also offers a mobile feeding station for mums who need it." (P67. Education; Large workplace; Female; aged 40-49; has children)

"I work for a very small business in a open plan office space. The only place for me to pump privately is in the storage space ... My workplace are not maliciously sending me to pump, but the reality is there are no other options available." (P119. Design; Small workplace; Female; aged 30-39; has children; has breastfed at work) [Quotes: p.158]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Wallace, 2008

Bibliographic Reference

Wallace, L.; Kosmala-Anderson, J.; Mills, S.; Law, S.; Skinner, D.; Bayley, J.; Baum, A.; Mutually exclusive? A United Kingdom survey of women's experiences of breastfeeding and working; MIDIRS Midwifery Digest; 2008; vol. 18 (no. 1); 99-103

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	Setting

	Participant's homes
	Aim
	To examine women's experiences on breastfeeding support in the workplace.
Data collection and analysis	Data collection
	Free text questionnaire responses from survey data.
	Data analysis
	Not reported
Recruitment strategy	Email groups linked to organisations concerned with maternity and breastfeeding, youth and family related websites and, using snowballing sampling methods, participants were encouraged to forward the link to other colleagues.
Study dates	24 April to 12 October 2006
Sources of funding	Not reported
Inclusion criteria	<ul style="list-style-type: none"> • Women who were pregnant; • Women on maternity leave; • Women who had returned to work after childbirth in the past six months.
Exclusion criteria	Not reported
Sample size	N=296 women
Participant characteristics	Age, years, n
	20-25: 15
	26-40: 258
	>40: 23

Results	<p>Author's themes</p> <ol style="list-style-type: none"> 1. Information and facilities offered by the employer to support breastfeeding after returning to work 2. The best and the worst experience with the current employer regarding breastfeeding after returning to work <p>Information and facilities offered by the employer to support breastfeeding after returning to work</p> <p>Most participants were not aware of any workplace policies that supported breastfeeding or any facilities available to them at work.</p> <p><i>"I had to express in the toilets as there was nowhere else private enough"</i></p> <p><i>"I am planning on expressing milk in the medical room and storing it in the staff room fridge. I haven't been told I can do this, but likewise I haven't been told I can't" [Quotes: p.101]</i></p> <p>The best and the worst experience with the current employer regarding breastfeeding after returning to work</p> <p>Employer support and flexible working conditions were greatly valued. Some women managed breastfeeding without any support from their employer and some of these women took maternity leave lasting long enough so they did not need any support at work regarding breastfeeding. Women reported challenges when there wasn't a specifically designated room for expressing and storing breast milk. Some did not receive any information relating to breastfeeding/expressing at work.</p> <p><i>"My line manager was very supportive of me taking breaks to express my milk"</i></p> <p><i>"My current employer refuses to permit me to work more flexible hours which would enable me to breastfeed. My current hours are 11 hour shifts, and breaks are erratic due to the nature of the job"</i></p> <p><i>"I stayed off on maternity leave until my daughter was on solids"</i></p> <p><i>"I am allowed to work flexibly to fit in with my baby's feeding needs and can take breaks either at work or go home to feed her"</i></p> <p><i>"I had to ask someone else to leave their room so that I could use it to express milk"</i></p>
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"I had to find out all the information myself from a midwife. The info was not offered by my employer at any stage" [Quotes: p.101 & 102]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Serious concerns
Overall risk of bias and relevance	Relevance	Relevant

Weber, 2011

Bibliographic Reference

Weber, D.; Janson, A.; Nolan, M.; Wen, L. M.; Rissel, C.; Female employees' perceptions of organisational support for breastfeeding at work: findings from an Australian health service workplace; International Breastfeeding Journal; 2011; vol. 6; 19

Study Characteristics

Study type	General qualitative inquiry
	Cross-sectional survey with some open ended answers
Country/ies where study was carried out	Australia
Setting	Setting
	Participant's home
	Aim
	To describe women's experience of support on breastfeeding when returning to work.
Data collection and analysis	Data collection

	Postal questionnaire.
	Data analysis
	Not reported
Recruitment strategy	Convenience sample.
Study dates	November to December 2009
Sources of funding	Not industry funded.
Inclusion criteria	<ul style="list-style-type: none"> Valid home addresses; Had taken maternity leave over the 20 month period from January 2008 to August 2009
Exclusion criteria	Not reported
Sample size	N=496 women
Participant characteristics	Mean age: 35 years
Results	<p>Author's theme</p> <p>1. Breastfeeding support at work</p> <p>Breastfeeding support at work</p> <p>Women felt largely unsupported by managers and their organisation to continue breastfeeding at work. Support to combine breastfeeding and work came mainly from family and partners with little perceived support from the organisation and human resources. Returning to work was one of the main reasons women stopped breastfeeding. Flexible breaks and work options, as well as access to a private room facilitated breastfeeding at work.</p> <p><i>"It was stressful worrying about needing to express regularly, especially when work was busy. I had to cover a shared office window with a pillowslip for privacy and still was nervous someone would walk in on me."</i></p>

"Flexible hours made it easier to combine the two. Very supportive boss and coworkers. Worked from home and attended work only as required" The only suitable place was a toilet (as it had privacy) but who wants to sit on a toilet for 20 minutes to express?" [Quotes: p.6]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns
Overall risk of bias and relevance	Relevance	Partially relevant

West, 2017

Bibliographic Reference

West, J. M.; Power, J.; Hayward, K.; Joy, P.; An Exploratory Thematic Analysis of the Breastfeeding Experience of Students at a Canadian University; Journal of Human Lactation; 2017; vol. 33 (no. 1); 205-213

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	Canada
Setting	<p>Setting</p> <p>The university campus</p> <p>Aim</p> <p>To explore the breastfeeding experience of students on a university campus.</p>
Data collection and analysis	Data collection

	<p>Semi-structured interviews were conducted by student researchers on the team. Interviews were approximately 30 minutes in length and were audio recorded.</p> <p>Data analysis</p> <p>Themes were identified and analysed using thematic analysis.</p>
Recruitment strategy	Campus wide email invitations, class presentations, and snowball sampling.
Study dates	Not reported
Sources of funding	No financial support was received for this study.
Inclusion criteria	<ul style="list-style-type: none"> • Current students or alumni of the university within the past 5 years; • Have breastfed or had the intention to breastfeed an infant younger than 1 year while they themselves were a student.
Exclusion criteria	Not reported
Sample size	N=8 women
Participant characteristics	<p>Age (years) - n</p> <p><25: 5/8</p> <p>>25: 3/8</p>
Results	<p>Author's themes</p> <ol style="list-style-type: none"> 1. Feelings of isolation 2. Nowhere to breastfeed 3. Challenges with pumping 4. What will others think? 5. Forced decisions <p>Feelings of isolation</p>

Women reported strong feelings of isolation upon returning to school after childbirth. Several women discussed how they felt 'different' and not 'connected' to their classmates.

"You totally feel like you're the only one."

"I didn't get to form the kind of friendships everybody else did. I didn't get to socialise at lunchtime when everybody else did because a lot of people got to know each other really well and that was because they had that break in between, spent time on campus with each other, studied, had lunch and stuff. I wasn't really involved in any of that so I think that's part of the reason I didn't get to know people as well." [Quotes: p.208]

Nowhere to breastfeed

All women discussed bringing their infant to class and the challenges or perceived challenges associated with it. Several women reported that having no place to breastfeed was a major barrier to breastfeeding when they returned to school.

"I was searching for somewhere to breastfeed him. There wasn't. So I start thinking about washrooms but my sister kept saying no! The washroom is too, very dirty and it's not a good environment for a baby. So I feed him at the car" [Quote: p.209]

Challenges with pumping

Pumping on campus brought unique challenges and all women who pumped on campus expressed strong feelings of embarrassment and discomfort in relation to pumping in undesirable conditions.

"I have to really concentrate and not be stressed out and be calm and relaxed to even get it to happen." [Quote: p.210]

What will others think?

All women expressed concerns over what other people would think in relation to breastfeeding on campus. Almost all women discussed the stigma surrounding breastfeeding, especially when it came to pumping in the washroom. Many women felt that others were wondering what they were doing in the bathroom stall for long periods of time with a breast pump that makes 'noise'.

"I do feel that in some spaces, it's more like I am making other people feel uncomfortable than I am uncomfortable". [Quote: p.210]

Forced decisions

Participants reported that they were forced to stop breastfeeding exclusively due to the barriers they faced upon return to school. They expressed strong feelings of guilt and sadness for having to stop earlier than they had intended.

"The real sacrifice that I made when I returned back to my masters was not be able to nurse her as long as I would have liked to... to let go of that, and not even wanting to. I didn't have a choice in that. It was really, really difficult." [Quote: p.210]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Appendix E Forest plots

Forest plots for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

No meta-analysis was conducted for this review question as it was a qualitative review and so there are no forest plots

Appendix F GRADE-CERQual tables

GRADE-CERQual tables for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Table 6: Evidence summary profile (GRADE-CERQual) for facilitators to help women returning to work and study to continue breastfeeding

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme A.1 Establishing a feeding plan						
1 study Wallace 2008 General qualitative inquiry with free text questionnaire responses. N=296 women.	Women who were able to establish a feeding routine before returning to work considered themselves to be 'very lucky'. Data from 1 study reported on the experience of one woman who was able to extend her maternity leave, so she could move her child onto solids and did not need any support at work when breastfeeding. "I stayed off on maternity leave until my daughter was on solids" [Quote: Wallace 2008, p.101]	Serious concerns ¹	No or very minor concerns	Moderate concerns ²	No or very minor concerns	LOW
Theme A.2 Role modelling for others						
3 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Hentges 2021 Phenomenological with semi-structured interviews. N=13 women Payne 2008	Data from 3 studies reported on some women's desire to normalise breastfeeding by increasing the visibility of it. In doing so, some women were encouraged to be open and to become an advocate and role model for other women. Others support and acknowledgement of this could make breastfeeding part of the working culture. Some women felt that women who had previously breastfed could set standards in the workplace so that it was easier for future breastfeeding women. In one study, the shared experience of breastfeeding women created a kind of norm, which allowed them to combine breastfeeding and work. Such support was valued and spoken of positively by these participants.	Moderate concerns ³	No or very minor concerns	No or very minor concerns	Minor concerns ⁴	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
General qualitative inquiry with interviews. N=34 women	Experiences with breastfeeding helped to build women's confidence with breastfeeding at university. However, students reported that breastfeeding at university required you to develop a "thick skin" so what others thought would not factor into their experience. <i>"I'm also at the stage now where I'm sort of like I have a much tougher skin and I'm not concerned about what other people are thinking about me pumping breast milk and washing things in sinks, and all of that." [IV 4]</i> [Quote: Burns 2019, p.9]					
Theme A.3 Knowledge of policies						
1 study Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.	Women reported a strong preference to be directly informed about their entitlements and available facilities upon or prior to returning. When returning to study, many women were unaware that there were facilities available on most of the university's campuses advertised as spaces designated for breastfeeding or expressing. In one case, one woman had a positive experience with information on the university's breastfeeding policy. Some women reported that assessing each woman's needs individually would be the best approach so to prevent pressure and avoid stigmatising those that could or did not wish to breastfeed. <i>"It seemed like it was a supportive environment. I just went, 'Wow, okay. This place obviously has some structure in there that they're supportive of this.'"</i> [Quote: Burns 2019, p.3]	No or very minor concerns	No or very minor concerns	Moderate concerns ²	No or very minor concerns	MODERATE
Theme A.4 Open communication						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Gilmour 2013 General qualitative inquiry with focus groups. N=18 women.	Data from 2 studies reported on the importance of having open communication that is timely, proactive, and supportive. Open communication is important facilitate flexible workspaces that are conducive to successful breastfeeding and reduce any apprehension women may feel before returning to work/study. Women noted the importance of communication being effective from both sides and valued conversations that began prior to their return. <i>"... finally I got the courage to say, 'Can we have a breastfeeding room please?' And she's like, 'Yes, that's a fabulous idea' and then we got one.... it's a private room [but] because everything in new buildings now would be kind of glass and open plan, it's hard to get an office that is private. This room was the only room that has a solid door, everything else is glass" [FG3]</i> [Quote: Gilmour 2013, p.28]	No or very minor concerns	No or very minor concerns	Minor concerns ⁵	No or very minor concerns	HIGH
Theme A.5 Support from others						
2 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Wallace 2008 General qualitative inquiry with free text questionnaire responses. N=296 women.	Data from 2 studies reported on the benefits of having the support of tutors, supervisors, managers, and colleagues breastfeeding at work and university. These supportive relationships led to positive experiences of breastfeeding and expressing in the workplace and on campus. <i>"I've had a really wonderful opportunity to be surrounded by people who have supported me".</i> [Quote: Burns 2019, p.4]	Serious concerns ¹	No or very minor concerns	No or very minor concerns	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Subtheme A.5.1 Partner/peer support						
1 study Desmond 2016 General qualitative inquiry with interviews. N=16 women.	Data from 1 study reported on the benefits of peer support, which women found very helpful, especially when family support was lacking. For other women, partners and husbands were repeatedly reported as being the greatest support. Women appreciated practical and emotional support from their partner, especially when provided during maternity leave and after return to work. <i>"I do think you need your husbands or partners support, if you don't have their support on it, you won't stick with it, because there are such tough times with the growth spurts and they happen so quickly and they go on for so long, I mean at 8 days I thought I'd never get out of the chair, and it was great that he was there, he could bring me water and sandwiches and food and take her to change a nappy and then bring her back again. Nothing can prepare you for that, no matter how much research you do, no doubt, you do need partner support."</i> [Quote: Desmond 2016, p.5]	Serious concerns ³	No or very minor concerns	No or very minor concerns	No or very minor concerns	MODERATE
Subtheme A.5.2 Workplace demographic						
3 studies Hentges 2021 Phenomenological with semi-structured interviews. N=13 women. Payne 2008	Data from 3 studies reported on different experiences, which varied depending on the gender and age of colleagues and superiors. One woman worked for a company that had multiple worksites and several different employees. She described the variation in support dependent on the location and how many women were at the site. Women in female-dominated departments where breastfeeding was normalised felt "lucky" and empowered.	Minor concerns ⁸	No or very minor concerns ⁴	No or very minor concerns	Minor concerns ⁶	HIGH

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
General qualitative inquiry with interviews. N=34 women. Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women.	<i>"My workplace, they're very pro breastfeeding and I have a wonderful team of nurses of whom a lot of them have been breastfeeding mothers, all very understanding and incredibly supportive. So I feel very lucky. My manager is also very supportive. So I work in a great team really."</i> (Dianne) [Quote: Payne 2008, p.23]					
Theme A.6 Workplace/university policies						
1 study Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.	Many women who returned to university described it as a positive environment for breastfeeding compared to other working environments. It was described by staff as progressive and as having policies and facilities that assisted them with breastfeeding, such as maternity leave, flexible work arrangements, and campus childcare. <i>"The university has made it very easy for me to be a working mum...the facilities and the policies do really support the combination of work and family, or study and family." Another woman said: "I was so proud to be a staff member and student of an institution that truly 'walked the talk' about being family friendly. I am not sure if my experience is common but it was exceptional."</i> [OLS] [Quote: Burns 2019, p.3]	No or very minor concerns	No or very minor concerns	Moderate concerns ²	No or very minor concerns	MODERATE

¹ Serious concerns about methodological limitations as per CASP qualitative checklist

² The study contributing to the theme offers some rich data

³ Moderate concerns about methodological limitations as per CASP qualitative checklist

⁴ Some evidence is from a different context to the review question (study population in Hentges 2021 includes 3 experts on workplace breastfeeding and study population in Al-Imari 2019 includes only female doctors returning to their residency programme)

⁵ The studies contributing to the theme offer moderately rich data

⁶ Some evidence is from a different context to the review question (study population in Hentges 2021 includes 3 experts on workplace breastfeeding)

Table 7: Evidence summary profile (GRADE-CERQual) for barriers to help women returning to work and study to continue breastfeeding

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme B.1 Establishing a feeding plan						
1 study Desmond 2016 General qualitative inquiry with interviews. N=16 women.	Data from 1 study reported on the difficulties women faced trying to establish a feeding routine (for example, solids or bottle feeding) for their child in time for return to work. Some women found the transition from breastfeeding on demand to trying to get the baby onto a bottle for feeding during the day very difficult. The associated emotional stress and anxiety with trying to do this was widely reported. “E: It annoys me, it annoyed me that I felt under pressure to get her on bottles, I felt really pressurised a month before I was going back, I remember I felt under pressure the month before, because she still was very finicky with the bottles, very finicky, I felt pressure yeah, I felt it, I knew it, I knew it in my own heart and soul she was in trouble if she would not take the bottles, trying to explain that to my employer, saying, I can't come back to work because I'm breastfeeding, I feel, I'm an alien to him basically, I just, like he's a man in his, what? Late 50s maybe, I just don't think he'd understand” (Age 34, currently breastfeeding). [Quote: Desmond 2016, p.6]	No or very minor concerns	No or very minor concerns	Moderate concerns ¹	No or very minor concerns	MODERATE
Theme B.2 Self-conscious emotions						
Subtheme B.2.1 Breastfeeding is unprofessional						
2 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Gatrell 2007 General qualitative inquiry with semi-	Data from 2 studies described how some women returning to work thought others might perceive them breastfeeding as 'unprofessional'. Some women felt that breastfeeding was not compatible with being in a professional sphere where one dresses and conducts themselves differently. One woman conflated breastfeeding with feeling fatigued and worried that colleagues might perceive her as unhealthy, and consequently unreliable.	Moderate concerns ²	No or very minor concerns	Minor concerns ³	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
structured interviews. N=20 women	<i>"I'm in my professional work clothes where they're not...like they're not breastfeeding clothes, and so I'd have to undress half way down."</i> [Quote: Burns 2019, p.8]					
Subtheme B.2.2 Duality of being a good mother/good employee						
1 study Hentges 2021 Phenomenological with semi-structured interviews. N=13 women	Data from 1 study reported on the internal and external pressures some women faced when returning to work, whilst trying to be a good mother and a good employee. Some women experienced the transition to work as difficult or 'horrible', which led to feelings of guilt and insecurity. Separating the role of mother and employee was difficult and this was only worsened by trying to breastfeed or pump at work. Managing this whilst also handling heavy workloads and delivering high quality outputs was challenging. Although women faced these difficulties, some women did report that they enjoyed being back at work. <i>"The kind of rhetoric like a woman should be kind of earth mother, being home with their child, and... the critic that you have this highly educated woman who is then only a child-bearing woman so it's constant all these values."</i> (6A) [Quote: Hentges 2021, p.9]	No or very minor concerns	No or very minor concerns	Moderate concerns ¹	Minor concerns ⁴	MODERATE
Subtheme B.2.3 Feeling embarrassed						
5 studies Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women. Burns 2019	Data from 5 studies reported that both women returning to work and women returning to study felt embarrassed breastfeeding at their work or their place of study. Many women chose not to disclose that they were still breastfeeding for fear they would be subject to judgement or criticism. A few discussed how they felt embarrassed when pumping in the washroom as they felt that others would wonder what they were doing for so long in the bathroom stall. Some also worried about the	Serious concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁵	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Desmond 2016 General qualitative inquiry with interviews. N=16 women.</p> <p>Wallace 2008 General qualitative inquiry with free text questionnaire responses. N=296 women.</p> <p>West 2017 General qualitative inquiry with semi-structured interviews. N=8 women.</p>	<p>'noise' the breast pump made when in they were using it in the washroom.</p> <p>In one study, a woman who was a postgraduate student spoke about being self-conscious breastfeeding in front of students she taught and feeling uncomfortable breastfeeding around colleagues. All women from this study expressed concerns over what other people would think in relation to breastfeeding on campus.</p> <p><i>"I felt conscious of making other students/staff uncomfortable at times."</i> [Quote: Burns 2019, p.7]</p>					
Subtheme B.2.4 Feeling isolated						
<p>1 study</p> <p>West 2017 General qualitative inquiry with semi-structured interviews. N=8 women.</p>	<p>Data from 1 study reported that some women felt strong feelings of isolation upon returning to study after childbirth, because they felt 'different' and disconnected to their classmates. A few women expressed feeling that they were not part of a community on campus, and all women said that they were unaware of any other women breastfeeding on campus.</p> <p><i>"You totally feel like you're the only one."</i> [Quote: West 2017, p.208]</p>	No or very minor concerns	No or very minor concerns	Moderate concerns ¹	No or very minor concerns	MODERATE
Subtheme B.2.5 Shame when washing breast pump						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Hentges 2021 Phenomenological with semi-structured interviews. N=13 women	Data from 2 studies reported on how some women felt that washing up breast expression equipment was associated with feelings of shame because they were combining work with breastfeeding. Mothers were worried about rinsing their equipment in the kitchen, not only due to hygiene concerns, but also because it exposed something personal. One woman reported feeling especially uncomfortable doing it around male colleagues for fear of making them feel uneasy. Overall, many women did not want to embarrass others, which was associated with (perceived) social norms regarding breast milk. <i>"I can imagine that people don't think it's hygienic to rinse your stuff... it might be the same as rinsing blood in your - in your kitchen that you're sharing, right? ... even though, of course, that's that's clean stuff." (7A)</i> [Quote: Hentges 2021, p.6]	No or very minor concerns	No or very minor concerns	Minor concerns ³	Minor concerns ⁴	HIGH
Theme B.3 Education						
Subtheme B.3.1 Increase awareness of breastfeeding policies						
2 studies Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women. Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.	Data from 2 studies reported on the need for ongoing education for managers and other workplace employees to increase awareness about the importance of breastfeeding. By doing this, it would lift the onus off women and generate support for breastfeeding in the workplace. Similarly, the desire for greater understanding for women breastfeeding on campus was shared by undergraduate students. <i>"Had there been education around breastfeeding in residency, I would have continued longer."</i> [Quote: Al-Imari 2019, p.590]	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁵	MODERATE
Subtheme B.3.2 Knowledge of policies						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
5 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Hentges 2021 Phenomenological with semi-structured interviews. N=13 women Kosmala-Anderson 2006 General qualitative inquiry with free text questionnaire responses. N=44 women. Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women. Wallace 2008 General qualitative inquiry with free text questionnaire responses. N=296 women.	<p>Data from 5 studies reported that women and their employers were unaware of their workplace's or university's policies on breastfeeding or what facilities were available for them to use.</p> <p>Some women reported being unsure of workplace policies, facilities available to them, or their rights, for example knowing whether it was against workplace policy to feed, or express, in the office. Often women noted that this was because employers did not actively share this information and so the responsibility fell on them to find this information (such as looking online, through National Childbirth Trust, La Leche League, Maternity Alliance, from breastfeeding colleagues, friends, or lactation specialists).</p> <p>In 1 study, 1 woman stated that despite excellent workplace breastfeeding facilities, there was a lack of communication regarding the availability of and access to these facilities, so ultimately, she could not use them. This furthered the point that providing information, such as sending photos or arranging visits to spaces beforehand, would reduce uncertainties.</p> <p><i>"As a student, I'm not sure where you would access this kind of information about parenting facilities or your rights in relation to breastfeeding during class. I don't recall ever seeing anything that was publicly available."</i> [IV7] [Quote: Burns 2019, p.5]</p> <p><i>'More information provided earlier on to ensure an informed choice'.</i> [Quote: Kosmala-Anderson 2006, p.189]</p>	Serious concerns ⁶	No or very minor concerns	No or very minor concerns	Minor concerns ⁷	LOW
Theme B.4 Open Communication						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
3 studies Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women. Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Gilmour 2013 General qualitative inquiry with focus groups. N=18 women.	<p>Data from 3 studies reported on the importance of having open communication that is timely, proactive, and supportive.</p> <p>Open communication is important facilitate flexible workspaces that are conducive to successful breastfeeding and reduce any apprehension women may feel before returning to work/study. Women noted the importance of communication being effective from both sides and valued conversations that began prior to their return.</p> <p>For women without openly supportive employers or supervisors, women had to take the active role in initiating conversations, however once they had raised the issue it was met with support.</p> <p><i>"... finally I got the courage to say, 'Can we have a breastfeeding room please?' And she's like, 'Yes, that's a fabulous idea' and then we got one.... it's a private room [but] because everything in new buildings now would be kind of glass and open plan, it's hard to get an office that is private. This room was the only room that has a solid door, everything else is glass" [FG3]</i> [Quote: Gilmour 2013, p.28]</p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁵	MODERATE
Theme B.5 Support from others						
Subtheme B.5.1 Pressure from supervisors						
1 study Gilmour 2013 General qualitative inquiry with focus groups. N=18 women.	<p>Data from 1 study reported on the challenges some women faced when returning to university. One woman reported that although her university was flexible to allow her to take an intermission in study due to pregnancy, pressure (internal or external) to finish her course of study negatively impacted her breastfeeding experience.</p> <p><i>"I was doing my PhD at the time. Before that, I was doing sessional and casual work, but I basically stopped that when I was pregnant 'cause I was too exhausted. And I think I got 6 weeks leave when I had her, but my supervisor said 'Don't take leave. Just get the damn thing finished.'" [FG1]</i></p>	No or very minor concerns	No or very minor concerns	Moderate concerns ¹	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
	[Quote: Gilmour 2013, p.28]					
Subtheme B.5.2 Workplace culture						
<p>7 studies</p> <p>Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women.</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Desmond 2016 General qualitative inquiry with interviews. N=16 women.</p> <p>Hentges 2021 Phenomenological with semi-structured interviews. N=13 women</p> <p>Kosmala-Anderson 2006</p>	<p>Data from 7 studies reported on how different workplace cultures affected the experience of breastfeeding on return to work or study. For example, some women noted the differences between public and private led workplaces, where often the latter could be less supportive. Whilst women were aware that no one was deliberately trying to make them feel uncomfortable, the lack of an accepted breastfeeding culture made them feel uneasy. In one case, one woman actively felt hostility from her colleagues when she went to express milk, where colleagues repeatedly called her mobile phone to see where she was.</p> <p>Some women discussed the financial implications of taking extra unpaid maternity leave being an issue, making their return to work particularly difficult. Women, especially first-time mothers, reported being concerned about job security and feeling nervous about negotiating flexible work arrangements. Many women didn't want to complain, particularly when no other breastfeeding employees expressed problems.</p> <p><i>"B: I suppose it is a lot of stress then going 'God I have to go and pump now' so in terms of legislation I think two things, I think ideally maternity leave being longer. The reason why I'm going back earlier this time is, because the state pays so little. But this time round, financially, I'm gonna find it hard to even take the 6 months to be honest so my plan is to do a day or two a week, maybe when the baby is around 4 months" (Age 34, breastfed for 20 months)</i></p>	Serious concerns ⁸	No or very minor concerns	No or very minor concerns	Moderate concerns ⁹	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>General qualitative inquiry with free text questionnaire responses. N=44 women.</p> <p>Wallace 2008 General qualitative inquiry with free text questionnaire responses. N=296 women.</p> <p>Weber 2011 General qualitative inquiry with free text questionnaire responses. N=496 women.</p>	[Quote: Desmond 2016, p.7]					
Subtheme B.5.3 Workplace demographic						
<p>6 studies</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Gatrell 2007 General qualitative inquiry with semi-structured interviews. N=20 women.</p> <p>Hentges 2021 Phenomenological with semi-structured interviews.</p>	<p>Data from 6 studies reported on different experiences, which varied depending on the gender and age of colleagues and superiors. For instance, several women spoke about their difficulty discussing breastfeeding with male supervisors, and one woman who worked as a teacher explained how she needed to make her body 'fit in' with the male environment at her school. Several women noted that when their colleagues were predominantly male, the support for breastfeeding seemed less. This made them feel more uncomfortable and stressed, and more inclined to stop pumping at work. Stress resulting from the male gaze was key when expressing breast milk at work, perhaps indicating that the sexualisation of breasts presented a major obstacle for women.</p> <p><i>"Breastfeeding? In school? Putting breastmilk in the staff fridge? You're joking. You can smell the testosterone when you walk in the door and you</i></p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁴	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>N=13 women.</p> <p>Jackson 2021 General qualitative inquiry with interviews. N=24 women.</p> <p>Payne 2008 General qualitative inquiry with interviews. N=34 women.</p>	<p><i>have to fit in, which obviously you can't do if you're breastfeeding. I hated giving up and [baby] cried because she wanted me, but I had to get back to work and the Head was not best pleased with me anyway, being off on maternity leave. So I needed to work at fitting back in, so breastfeeding was out of the question."</i> (Lianne) [Quote: Gatrell 2007, p.399]</p> <p><i>"My workplace, they're very pro breastfeeding and I have a wonderful team of nurses of whom a lot of them have been breastfeeding mothers, all very understanding and incredibly supportive. So I feel very lucky. My manager is also very supportive. So I work in a great team really."</i> (Dianne) [Quote: Payne 2008, p.23]</p>					
Theme B.6 Societal stigma						
<p>4 studies</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Desmond 2016 General qualitative inquiry with interviews. N=16 women.</p> <p>Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.</p> <p>Wallace 2008 General qualitative inquiry with free text</p>	<p>Data from 4 studies noted how the attitudes of colleagues and the stigma surrounding breastfeeding was an issue. This was reported by women returning to work and returning to study.</p> <p>The evidence described how several women were made to feel that breastfeeding is still not an acceptable or normal thing for a woman to do at work or on campus. Evidence suggested that women's social environment, particularly the presence of men, might not be aware of how physically and mentally intense it can be. They reported that breastfeeding felt as though it was an unusual thing to see in the public sphere. As a result, a few women felt forced to reduce the provision of breast milk. Two studies reported on how 'Irish' and 'Dutch' culture was not pro-breastfeeding, and how made these women feel as though they were doing something wrong.</p> <p>Many women felt that normalising breastfeeding was very important so that society would be more open to the practice.</p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁴	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
questionnaire responses. N=296 women.	<i>"because it's not normalised, because not everybody is doing it on campus, you do feel like a bit of an outsider..."</i> . [Quote: Burns 2019, p.8]					
Theme B.7 Access to childcare						
3 studies Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women. Gilmour 2013 General qualitative inquiry with focus groups. N=18 women. Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.	Data from 3 studies reported how having childcare near work or on campus was a key factor in maintaining ongoing breastfeeding. The type and proximity of childcare impacted on the length of the working day, travel time and the ability to breastfeed. For example, women needed to easily get to the childcare centre, so they breastfeed their child during breaks. In some cases, the proximity of childcare led to mothers reducing their work hours. Regardless of proximity of childcare the experience for women trying to breastfeed their infant either at work or by going to childcare encroached on the working day. Some mothers found it difficult to come to the childcare centre because of problems with parking on their return to work. All women suggested that going to the child to feed, occasionally bringing it to the office or working from home made infant feeding easier. <i>"I had planned to put [name] into the childcare centre here on campus but it closed. So, at the last minute we were rushing around trying to figure out what family members could look after him. He would have been weaned anyway, but the plan was for him to be nearby when I returned to work" [FG2]</i> [Quote: Gilmour 2013, p.26]	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁴	MODERATE
Study information	Description of review finding	CERQual Quality Assessment				

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme B.8 Nature of profession						
Subtheme B.8.1 Employment contract						
3 studies Alianmoghaddam 2018 General qualitative inquiry with interviews. N=30 women. Llorente-Pulido 2021 General qualitative inquiry with interviews. N=20 women. Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women.	Data from 3 studies reported that those in very inflexible, unpredictable or inconsistent jobs, experience difficulties in accessing facilities and/or setting time in the workday for breastfeeding and expressing, with implications for maintaining their milk supply. For example, one woman described the challenges she faced as a teacher when breastfeeding or expressing at work due to set break times. Another discussed that her casual employment status made her feel unable to ask her employer to accommodate breastfeeding needs. Similarly, working as a freelancer meant no suitable facilities for breastfeeding/expressing for one woman. ". . . The population that I attended had very difficult work contracts, if they did not come back within 6 weeks, they no longer had a job. The commitment to their job and job insecurity, had a great influence on that too..." (E3) [Quote: Llorente-Pulido 2021, p.10]	No or very minor concerns	No or very minor concerns	No or very minor concerns	Minor concerns ¹⁰	HIGH
Subtheme B.8.2 Flexibility on return to work/study						
6 studies Gatrell 2007 General qualitative inquiry with semi-structured interviews. N=20 women. Gilmour 2013 General qualitative inquiry with focus groups. N=18 women.	Data from 6 studies reported mixed evidence about the negative and positive experiences women had with the flexibility of their work or study arrangements upon return. Many mothers described the struggle managing workload, childcare drop offs, and feeding or expressing, which would have benefited from their workplace showing flexibility. For example, negotiating a gradual return with fewer responsibilities, colleagues taking over workloads, working from home arrangements, flexible hours, and flexible breaks.	Serious concerns ⁶	No or very minor concerns	No or very minor concerns	Minor concerns ⁷	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.</p> <p>Kosmala-Anderson General qualitative inquiry with free text questionnaire responses. N=44 women.</p> <p>Wallace 2008 General qualitative inquiry with free text questionnaire responses. N=296 women.</p> <p>West 2017 General qualitative inquiry with semi-structured interviews. N=8 women.</p>	<p>Many women perceived their workplace and the lack of flexibility as the main barrier to continued breastfeeding. In one example, a woman's employers had reluctantly accommodated her short maternity leave but closed down negotiations about part-time work and breastfeeding by threatening to demote her.</p> <p>When returning to postgraduate study, one woman expressed the pressure she experienced to publish papers. She noted that nobody expected extensive publications immediately but that it was required in an academic career. This focus on academic outputs also led to overtime and negatively impacted breastfeeding. Another woman reported that she was forced to return to school after 6 months or the school was going to give up her seat in the program. She explained that her 'only option' was to come to school.</p> <p>Overall, women valued being able to stay at home, being financially supported with access to maternity leave, or having a supportive or flexible work environment so that they could breastfeed for longer.</p> <p>Those without teaching commitments reported greater support and flexibility in their working hours. A few women reported having flexible working conditions, such as having flexible breaks.</p> <p><i>"I took eight months maternity leave and was able to breastfeed my babies for this long. Flexible working hours on return allowed me to continue one out of three feeds a day, either before work or on return home."</i> [Quote: Kosmala-Anderson 2006, p.188]</p> <p><i>"My current employer refuses to permit me to work more flexible hours which would enable me to breastfeed. My current hours are 11 hour shifts, and breaks are erratic due to the nature of the job"</i> [Quote: Wallace 2008, p.102]</p>					

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Subtheme B.8.3 Size of company						
1 study Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women.	<p>Data from 1 study suggested that size of the company affected how supportive workplace policies were. It was reported that medium or large workplaces and in sectors including health, public service and local government and education or research were most supportive of breastfeeding women returning to work. For example, dedicated breastfeeding spaces were more common in large workplaces, whereas communal spaces such as offices or storage rooms were more common in small workplaces.</p> <p>Similarly, the availability of certain furniture and equipment such as a private fridge for breast milk storage, breast pumps, power points or privacy curtains were far more common in large workplaces. Often, small or medium workplaces lacked clean, comfortable and private workplace spaces for breastfeeding and expressing. However, women noted that a lack of facilities was mostly because their employer was limited in what they were able to provide.</p> <p><i>"I work for a very small business in a open plan office space. The only place for me to pump privately is in the storage space ... My workplace are not maliciously sending me to pump, but the reality is there are no other options available."</i> (P119. Design; Small workplace; Female; aged 30-39; has children; has breastfed at work) [Quote: Rowbotham 2022, p.158]</p>	No or very minor concerns	No or very minor concerns	Moderate concerns ¹	No or very minor concerns	MODERATE
Subtheme B.8.4 Time during work to breastfeed/pump						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>9 studies</p> <p>Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women.</p> <p>Alianmoghaddam 2018 General qualitative inquiry with interviews. N=30 women.</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Desmond 2016 General qualitative inquiry with interviews. N=16 women.</p> <p>Gatrell 2007 General qualitative inquiry with semi-structured interviews. N=20 women.</p> <p>Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.</p>	<p>Data from 9 studies reported that women felt there was not enough time during work or in their university schedule to breastfeed or pump. The main issue being that there are no scheduled breaks for breastfeeding, which often meant women had to use their lunch breaks for this purpose. This rigid schedule made it difficult to maintain milk supply, ultimately preventing women from breastfeeding.</p> <p>Some women reported having feelings of guilt about taking time out to breastfeed and in the few situations where designated breastfeeding breaks were scheduled, women felt they were perceived negatively and as unprofessional by their colleagues. To overcome these attitudes some overcompensated by combining the time spent expressing milk with completing work tasks, either by doing these simultaneously, or by staying back at the end of the day. Some women described the lengthy process of washing and sterilizing pumping equipment, which was described as a 'chore' during their working hours.</p> <p>From 1 study based in New Zealand, women stated that because there are no legislated breaks for women in paid employment to breastfeed, they had to use their lunch or tea breaks. Most felt pressure to fit this into scheduled work breaks and felt like they missed out on their lunch/tea break being a time of relaxation where they could socialise with colleagues. Instead, their tea breaks being a time of isolation and another kind of work.</p> <p>When it came to return to study, although a few women considered academic work to be flexible, there were still difficulties creating time for breastfeeding, especially where fixed schedules overlapped with lactation breaks. On average, women reported spending approximately 30 minutes per lactation break, two or three times daily. This meant that some women reduced their frequency, postponed, skipped sessions, or</p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Moderate concerns ¹¹	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>Kosmala-Anderson 2006 General qualitative inquiry with free text questionnaire responses. N=44 women.</p> <p>Llorente-Pulido 2021 General qualitative inquiry with interviews. N=20 women.</p> <p>Payne 2008 General qualitative inquiry with interviews. N=34 women.</p>	<p>ceased pumping due to time issues, which could obstruct breastfeeding at home.</p> <p><i>"It was mainly lack of time that meant I didn't pump much while at work."</i></p> <p><i>"I found pumping under pressure i.e., time restrictions or in a stressful or uncomfortable environment was also not helpful for milk let-down."</i></p> <p>[Quotes: Al-Imari 2019, p.590]</p>					
Subtheme B.8.5 Work schedule						
<p>2 studies</p> <p>Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women.</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p>	<p>Only barriers were identified for this theme.</p> <p>Data from 2 studies reported that women desired a flexible work schedule to help them to continue breastfeeding after returning to work. Women who worked in healthcare settings wanted to limit frequent rotation changes and allow for lighter duty rotations upon return to work.</p> <p>Other women wanted to have an option for part-time return to work. This affected casual staff more so as they did not have access to full maternity leave rights and were often employed on short-term contracts.</p> <p><i>"The frequent rotation changes made it difficult to pump at work as I constantly had to receive permission from current staff. As well, working at more than one hospital meant always looking for a place to pump."</i></p> <p>[Quote: Al-Imari 2019, p.590]</p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ⁵	MODERATE
Theme B.9 Physical space						
Subtheme B.9.1 Accessibility of space						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women. Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.	<p>Data from 2 studies reported the difficulties some women experienced accessing breastfeeding spaces where they were available. For example, at one university some students reported designated breastfeeding spaces were locked during regular business hours.</p> <p>In one workplace, some employees had to book time slots in advance, which was difficult when meetings unexpectedly lasted longer and there were other breastfeeding employees with similar pumping routines. In these situations, multiple women pumped together, or mothers had to wait for the previous person, who was then pressured to finish. In another case, women had to rely on secretaries for access to breastfeeding spaces, which was perceived as discouraging, making one mother feel “watched”. Describing the accessibility as a “nuisance”, one woman stopped pumping at work.</p> <p><i>“We have to share the room with all the other mothers. ... but also it’s a meditational, relaxational room, so the other users want to use it as well. ... it’s really busy at the same time, because the mothers want to use it in the morning and during lunch and at the end of the afternoon. And when your meeting is overtime and then- then you really come into trouble with the- with the schedule of the pumping room. So that’s really difficult.” (10A).</i></p> <p>[Quote: Hentges 2021, p.4]</p>	No or very minor concerns	No or very minor concerns	Minor concerns ³	Minor concerns ⁴	HIGH
Subtheme B.9.2 Cleanliness of space						
3 studies Hentges 2021 Phenomenological with semi-structured interviews. N=13 women. Kosmala-Anderson 2006	<p>Data from 2 studies reported that where there were breastfeeding spaces, some women found these to be unclean and unsuitable for use.</p> <p>In one study, women reported that electricity, a sink, fridge, and cupboard were favourable, but rarely supplied. In some cases, women did not feel confident to express milk at work because of poor facilities.</p>	Serious concerns ⁶	No or very minor concerns	No or very minor concerns	Moderate concerns ¹²	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>General qualitative inquiry with free text questionnaire responses. N=44 women.</p> <p>Llorente-Pulido 2021 General qualitative inquiry with interviews. N=20 women.</p>	<p><i>"It wasn't possible to clean. ... the table that I was using.... I then took a little bottle of water that I could use to clean the table, which is also not the most hygiene. ... the stains that were on the table that I made, they've been there all the time, so I never saw- saw some cleaning activity signs there."</i> (7A)</p> <p>[Quote: Hentges 2021, p.6]</p>					
Subtheme B.9.3 Comfort of space						
<p>4 studies</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Gilmour 2013 General qualitative inquiry with focus groups. N=18 women.</p> <p>Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.</p> <p>Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women.</p>	<p>Data from 2 studies reported that some women who were able to access breastfeeding spaces were dissatisfied with them, describing them as "small and not very private", and lacking features such as power plugs, a sink or fridge.</p> <p>Most women were dissatisfied with the interior and some designated spaces were storage rooms or classrooms with old office furniture. Women wanted homelike atmospheres through couches, plants, music or reading material.</p> <p>Some women were satisfied with the way the rooms were, claiming that rooms did not need to be "special", although all agreed they must be safe, private, clean, and easily accessible.</p> <p>Of those who reported having access to a space for breastfeeding or expressing, most reported that rooms contained basic features such as a chair, table, private or communal fridge for breast milk storage, a lockable door and/or signage. Some spaces had additional features such as a sink, privacy curtain or blinds, and power points for breast pumps, with some even providing breast pumps, special nursing chairs and mobile feeding stations.</p> <p><i>"My workplace has dedicated family rooms. These include a nursing chair, fridge, sink and fold out bed. There is one per building and we need to book however I've never had an issue"</i> (P5. Finance; Large workplace; Female; aged 30–39; has children; has breastfed at work)</p>	No or very minor concerns	No or very minor concerns	No or very minor concerns	Minor concerns ⁴	HIGH

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
	<p>[Quote: Rowbotham 2022, p.155]</p> <p><i>"It [room] just looks horrible. Like it's an old hospital bed, it's got neon lighting, it's very cramped, there was a chair there that had some white stains on it, probably milk from some mothers.. .. it's quite important to be relaxed, and so it was really not a relaxing environment at all."</i> (2A).</p> <p>[Quote: Hentges 2021, p.6]</p>					
Subtheme B.9.4 Having no space						
<p>9 studies</p> <p>Burns 2019</p> <p>General qualitative inquiry with free text questionnaire responses.</p> <p>N=10 women.</p> <p>Desmond 2016</p> <p>General qualitative inquiry with interviews.</p> <p>N=16 women.</p> <p>Gatrell 2007</p> <p>General qualitative inquiry with semi-structured interviews.</p> <p>N=20 women.</p> <p>Gilmour 2013</p> <p>General qualitative inquiry with focus groups.</p> <p>N=18 women.</p> <p>Jackson 2021</p> <p>General qualitative inquiry with interviews.</p>	<p>Data from 9 studies reported that there were no designated spaces to breastfeed or pump at work or on the university campus. Women had to find appropriate spaces within and without their workplace's help. For example, disabled washrooms, vacant staff rooms, spare offices or meeting rooms, shower cubicles, outdoor areas, and their cars.</p> <p>Some women were happy to breastfeed anywhere, but most women wanted somewhere they felt comfortable to breastfeed. Overall, most women were unhappy that the only available space to feed or pump was washrooms.</p> <p>Several women reported that having no place to breastfeed was a major barrier to breastfeeding when they returned to university. All women who pumped on campus expressed strong feelings of embarrassment and discomfort in relation to pumping in undesirable conditions.</p> <p><i>"I could not find private spaces. I have expressed in my car on hot days. I have found it very stressful."</i> [OLS]</p> <p>[Quote: Burns 2019, p.6]</p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Minor concerns ¹³	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>N=24 women.</p> <p>Kosmala-Anderson 2006 General qualitative inquiry with free text questionnaire responses. N=44 women.</p> <p>Payne 2008 General qualitative inquiry with interviews. N=34 women.</p> <p>Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women.</p> <p>West 2017 General qualitative inquiry with semi-structured interviews. N=8 women.</p>						
Subtheme B.9.5 Location of the room						
<p>2 studies</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Gilmour 2013 General qualitative inquiry with focus groups.</p>	<p>Data from 2 studies reported that some women had difficulties locating or accessing breastfeeding or pumping spaces. In large spaces, such as university campuses, women expressed their frustration in trying to navigate the environment.</p> <p><i>"...the feeding room that's just opened near my building and that's you know, fine for people that sort of work within our school... but if you're sort of on the other side of the campus it's a bit inconvenient to... trek over to the other side just for this specialised room."</i> [Phone interview] [Quotes: Gilmour 2013, p.27]</p>	No or very minor limitations	No or very minor limitations	Minor concerns ³	No or very minor limitations	HIGH

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N=18 women.						
Subtheme B.9.6 Privacy						
<p>5 studies</p> <p>Alianmoghaddam 2018</p> <p>General qualitative inquiry with interviews.</p> <p>N=30 women.</p> <p>Burns 2019</p> <p>General qualitative inquiry with free text questionnaire responses.</p> <p>N=10 women.</p> <p>Payne 2008</p> <p>General qualitative inquiry with interviews.</p> <p>N=34 women.</p> <p>Wallace 2008</p> <p>General qualitative inquiry with free text questionnaire responses.</p> <p>N=296 women.</p> <p>Weber 2011</p> <p>General qualitative inquiry with free text questionnaire responses.</p> <p>N=496 women.</p>	<p>Data from 5 studies reported that women wanted to feel safe when breastfeeding or pumping at work or university and, for this, required more privacy.</p> <p>At university, staff and students discussed the importance of having a private space in which to breastfeed and express milk. For example, the need for internal locking doors or being able to avoid being seen by men. Some women felt that co-locating breastfeeding facilities in spaces where men, with children, could also enter, deterred women from using that space for breastfeeding. This was most acutely felt by women who had a cultural or religious expectation to be fully covered when in the company of men.</p> <p>The solution to this privacy problem, in most cases, seemed to be having access to a private office. This created a positive work environment for breastfeeding women. However, this is not always available for most women returning to work or study.</p> <p><i>"It was stressful worrying about needing to express regularly, especially when work was busy. I had to cover a shared office window with a pillowslip for privacy and still was nervous someone would walk in on me."</i></p> <p>[Quote: Weber 2011, p.6]</p>	Serious concerns ⁶	No or very minor concerns	No or very minor concerns	Minor concerns ¹⁴	LOW
Subtheme B.9.7 Storage of breast milk						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
<p>6 studies</p> <p>Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women.</p> <p>Burns 2019 General qualitative inquiry with free text questionnaire responses. N=10 women.</p> <p>Desmond 2016 General qualitative inquiry with interviews. N=16 women.</p> <p>Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.</p> <p>Iglesias-Rosado 2021 General qualitative inquiry with interviews. N=19 women.</p> <p>Rowbotham 2022 General qualitative inquiry with 'Citizen science method'. N=37 women.</p>	<p>Data from 6 studies reported on the difficulties women faced when storing breast milk at work or at their place of study. Generally, women wanted somewhere safe to store breast milk, which seemed to be challenging in the workplace or university. One study reported that these difficulties affected students and casual staff members disproportionately.</p> <p>Some women felt embarrassed storing expressed milk in a shared fridge, which was also used for other people's lunches. This also led to some concerns about the milk being contaminated or 'going off'. Often women reported that shared fridges were very full and most considered them unclean.</p> <p>Even more challenging, was the storage of expressed milk when there was no facility to store the milk in the workplace. Women reported having to bring ice packs and cooler bags to store their milk. However, several women reported having to tip breast milk out due to an inability to keep milk at a safe temperature.</p> <p><i>"I perceived many more barriers re: pumping and storing breastmilk that I ultimately switched to formula sooner than I may have otherwise done had I taken a longer leave. (4 month maternity leave)."</i></p> <p>[Quote: Al-Imari 2019, p.589]</p>	Minor concerns ¹⁵	No or very minor concerns	No or very minor concerns	Minor concerns ¹⁶	HIGH
Theme B.10 External policies						
Subtheme B.10.1 Legislative protection						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Desmond 2016 General qualitative inquiry with interviews. N=16 women. Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.	<p>Data from 2 studies reported that women wanted legislative protection to continue after 26 weeks post-delivery as it would increase their confidence when approaching employers about providing adequate facilities and breaks to support breastfeeding or pumping upon returning to work or study.</p> <p>In one study based in The Netherlands, all women felt maternity leave was too short for breastfeeding and considered this as the primary barrier to continued breastfeeding.</p> <p><i>"It's very sudden going back to work. .. for some, it [birth] was really a big health, major event. Physical-wise, maybe mental health-wise, maybe both, that you have to recover from quite quickly in the time that you have to breastfeed, which is taking lots of energy, in which you don't sleep much. .. , it's asking a lot." (8A)</i> [Quote: Hentges 2021, p.10]</p>	No or very minor concerns	No or very minor concerns	Minor concerns ³	Minor concerns ⁴	HIGH
Theme B.11 Internal policies						
Subtheme B.11.1 Workplace/university not upholding legal policies						
1 study Hentges 2021 Phenomenological with semi-structured interviews. N=13 women.	<p>Data from 1 study at a university in The Netherlands reported that many women felt laws were not implemented meaning that supporting breastfeeding was not a priority. Laws should be enforced, but there was no monitoring and compliance mechanism in place.</p> <p>Rather than fighting for their rights, often women reported finding their own solutions because they didn't want to be perceived as "less useful" by employers and also had no energy or time to "start this fight".</p> <p><i>"They [universities] all know the numbers but, yeah, it's so strange that they don't practice what they preach." (10A)</i> [Quote: Hentges 2021, p.10]</p>	No or very minor concerns	No or very minor concerns	Moderate concerns ¹	Minor concerns ⁴	MODERATE
Subtheme B.11.2 Workplace/university protection						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
3 studies Al-Imari 2019 General qualitative inquiry with free text questionnaire responses. N=56 women. Gatrell 2007 General qualitative inquiry with semi-structured interviews. N=20 women. Payne 2006 General qualitative inquiry with interviews. N=34 women.	<p>Data from 3 studies reported mixed data on their experiences of returning to work or study. Women reported the lack of protection in their workplace leading to them breastfeeding in secret or stopping altogether. In one study, women reported that despite their company having a breastfeeding policy, the implementation of that policy varied from regional office to regional office and was largely dependent on their supervisor's and colleague's attitudes towards breastfeeding in the workplace.</p> <p>Conversely, many women who returned to university described it as a positive environment for breastfeeding compared to other working environments. It was described by staff as progressive and as having policies and facilities that assisted them with breastfeeding, such as maternity leave, flexible work arrangements, and campus childcare.</p> <p><i>"Although I was able to breastfeed for the duration that I wanted to, I feel that an official policy would have been beneficial to facilitate discussions around breastfeeding with the rotation supervisors."</i></p> <p>[Quote: Al-Imari 2019, p.589]</p>	Moderate concerns ²	No or very minor concerns	No or very minor concerns	Moderate concerns ⁵	LOW

¹ The study contributing to the theme offers some rich data

² Moderate concerns about methodological limitations as per CASP qualitative checklist

³ The studies contributing to theme offer moderately rich data

⁴ Some evidence is from a different context to the review question (study population in Hentges 2021 includes 3 experts on workplace breastfeeding)

⁵ Some evidence is from a different context to the review question (study population in Al-Imari 2019 includes only female doctors returning to their residency programme)

⁶ Serious concerns about methodological limitations as per CASP qualitative checklist

⁷ Some evidence is from a different context to the review question (study population in Hentges 2021 includes 3 experts on workplace breastfeeding and 66% of the study population in Kosmala-Anderson 2006 worked part-time)

⁸ Serious concerns about methodological limitations as per CASP qualitative checklist

⁹ Some evidence is from a different context to the review question (study population in Al-Imari 2019 includes only female doctors returning to their residency programme, study population in Hentges 2021 includes 3 experts on workplace breastfeeding, 66% of the study population in Kosmala-Anderson 2006 worked part-time, study population in Weber 2011 includes only healthcare/allied healthcare staff)

¹⁰ Some evidence is from a different context to the review question (study population in Llorente-Pulido 2021 includes only primary care midwives)

¹¹ Some evidence is from a different context to the review question (study population in Al-Imari 2019 includes only female doctors returning to their residency programme, study population in Hentges 2021 includes 3 experts on workplace breastfeeding, 66% of the study population in Kosmala-Anderson 2006 worked part-time, and study population in Llorente-Pulido 2021 includes only primary care midwives)

¹² Some evidence is from a different context to the review question (study population in Hentges 2021 includes 3 experts on workplace breastfeeding, 66% of the study population in Kosmala-Anderson 2006 worked part-time, study population in Weber 2011 includes only healthcare/allied healthcare staff)

¹³ Some evidence is from a different context to the review question (66% of the study population in Kosmala-Anderson 2006 worked part-time)

¹⁴ Some evidence is from a different context to the review question (study population in Weber 2011 includes only healthcare/allied healthcare staff)

¹⁵ Minor concerns about methodological limitations as per CASP qualitative checklist

¹⁶ Some evidence is from a different context to the review question (study population in Hentges 2021 includes 3 experts on workplace breastfeeding and study population in Al-Imari 2019 includes only female doctors returning to their residency programme)

Appendix G Economic evidence study selection

Study selection for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

This was a qualitative review question, therefore economic evidence was not relevant and thus no economic evidence searches were conducted.

Appendix H Economic evidence tables

Economic evidence tables for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

This was a qualitative review question, therefore economic evidence was not relevant.

Appendix I Economic model

Economic model for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

No economic analysis was conducted for this review question.

Appendix J Excluded studies

Excluded studies for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

Excluded qualitative studies

Table 8: Excluded studies and reasons for their exclusion

Study	Code [Reason]
(2017) "I breastfed my daughter in the Australian parliament because she was hungry". Community Practitioner 90(6): 12-13	- Ineligible study design <i>Narrative study</i>
Abdulwadud, O. A. and Snow, M. E. (2012) Interventions in the workplace to support breastfeeding for women in employment. Cochrane Database of Systematic Reviews	- Ineligible study design <i>Systematic review of RCTs and quasi-RCTs</i>
Blair-Stevens, T. and Cork, S. (2008) "Who wants to eat in a toilet?" A social marketing approach to breast-feeding in public places and at work. Journal of Family Health Care 18(5): 167-70	- Ineligible phenomenon of interest <i>Study reports recommendations for facilitating breastfeeding rather than providing views of breastfeeding women, parents and carers of infants from birth to 5 years</i>
Dinour, L. M.; Pope, G. A.; Bai, Y. K. (2015) Breast milk pumping beliefs, supports, and barriers on a university campus. Journal of Human Lactation 31(1): 156-65	- Ineligible country <i>Study conducted in the US</i>
Flower, K. B., Willoughby, M., Cadigan, R. J. et al. (2008) Understanding breastfeeding initiation and continuation in rural communities: a combined qualitative/quantitative approach. Maternal & Child Health Journal 12(3): 402-14	- Ineligible phenomenon of interest <i>Study reported data on reasons for not initiating or continuing breastfeeding.</i>
Fraser, Melanie (2018) Law of lactation breaks in the UK: Employers' perspectives. Social experiences of breastfeeding: Building bridges between research, policy and practice: 171-186	- Ineligible study design <i>Narrative book chapter</i>
Froh, E. B. and Spatz, D. L. (2016) Navigating Return to Work and Breastfeeding in a Hospital with a Comprehensive Employee Lactation Program. Journal of Human Lactation 32(4): 689-694	- Ineligible country <i>Study conducted in the US</i>
Holmes, A. V., Chin, N. P., Kaczorowski, J. et al. (2009) A barrier to exclusive breastfeeding for WIC enrollees: limited use of exclusive	- Ineligible country <i>Study conducted in the US</i>

Study	Code [Reason]
breastfeeding food package for mothers. Breastfeeding Medicine: The Official Journal of the Academy of Breastfeeding Medicine 4(1): 25-30	
James, J. (1999) Working & breastfeeding: a contemporary workplace dilemma. Journal - Australian College of Midwives 12(4): 8-11	- Ineligible study design <i>Narrative study</i>
Jones, E.; Jones, P.; Spencer, A. (2004) Breastfeeding and returning to work. Practising Midwife 7(11): 17-22	- Ineligible study design <i>Randomised controlled trial</i>
Langford, C.; Gowan, M.; Haj, M. (2021) Breastfeeding Experiences of Baccalaureate Nursing Students: A Qualitative Study. Journal of Human Lactation 37(4): 689-696	- Ineligible country <i>Study conducted in the US</i>
Marsden, Amy and Abayomi, Julie (2012) Attitudes of employees working in public places toward breastfeeding. British Journal of Midwifery 20(4): 271-277	- Ineligible population <i>Study investigated views and attitudes of employees working in public places about breastfeeding</i>
Monk, Hilary and Hall, Helen (2017) New mothers transitioning to employment: Impact on infant feeding practices. Studying babies and toddlers: Relationships in cultural contexts: 63-80	- Ineligible study design <i>Book chapter</i>
Newhook, J. T., Ludlow, V., Newhook, L. A. et al. (2013) Infant-feeding among low-income women: the social context that shapes their perspectives and experiences. Canadian Journal of Nursing Research 45(3): 28-49	- Ineligible phenomenon of interest <i>Study investigated how to better understand the social context that shapes their infant-feeding perspectives and experiences</i>
Rojjanasrirat, W. (2004) Working women's breastfeeding experiences. MCN, American Journal of Maternal Child Nursing 29(4): 222-7; quiz 228	- Ineligible country <i>Study conducted in the US</i>
Rojjanasrirat, W. (2000) The effects of a nursing intervention on breastfeeding duration among primiparous mothers planning to return to work. Dissertation/ thesis: 226p	- Ineligible study design <i>Observational study design (pre-post test control group design)</i>
Rose, L. M. (2012) Legally public but privately practiced: segregating the lactating body. Health Communication 27(1): 49-57	- Ineligible country <i>Study conducted in the US</i>

Study	Code [Reason]
Scott, V. C., Taylor, Y. J., Basquin, C. et al. (2019) Impact of Key Workplace Breastfeeding Support Characteristics on Job Satisfaction, Breastfeeding Duration, and Exclusive Breastfeeding Among Health Care Employees. Breastfeeding Medicine: The Official Journal of the Academy of Breastfeeding Medicine 14(6): 416-423	- Ineligible study design <i>Cross-sectional study</i>
Snyder, K., Hansen, K., Brown, S. et al. (2018) Workplace Breastfeeding Support Varies by Employment Type: The Service Workplace Disadvantage. Breastfeeding Medicine: The Official Journal of the Academy of Breastfeeding Medicine 13(1): 23-27	- Ineligible country <i>Study conducted in the US</i>
Stewart-Glenn, J. (2008) Knowledge, perceptions, and attitudes of managers, coworkers, and employed breastfeeding mothers. AAOHN Journal 56(10): 423-9; quiz 430	- Ineligible country <i>Study conducted in the US</i>
Stewart-Glenn, Jennifer (2014) "I've Accomplished Something Here" The Lived Experience of Employed Breastfeeding Mothers: A Phenomenological Analysis. Journal of Pediatric Healthcare 28(6): e52-3	- Conference abstract
Sturtevant, C.; Huebner, C.; Waite, W. (2021) An Evaluation of On-Campus Lactation Spaces for Student-Parents. Journal of Human Lactation 37(1): 173-182	- Ineligible country <i>Study conducted in the US</i>
Taylor, H. (2021) Enablers and barriers to workplace breastfeeding in the Armed Forces: a systematic review. BMJ Military Health 16: 16	- Systematic review. Included studies checked for eligibility. No studies identified for inclusion.
Vilar-Compte, M., Hernandez-Cordero, S., Ancira-Moreno, M. et al. (2021) Breastfeeding at the workplace: a systematic review of interventions to improve workplace environments to facilitate breastfeeding among working women. International Journal for Equity in Health 20(1): 110	- Systematic review. Included studies checked for eligibility. No studies identified for inclusion.
Wyatt, S. N. (2002) Challenges of the working breastfeeding mother. Workplace solutions. AAOHN Journal 50(2): 61-6	- Ineligible study design <i>Narrative study</i>

Excluded economic studies

This was a qualitative review question, therefore economic evidence was not relevant.

Appendix K Research recommendations – full details

Research recommendations for review question: What are the facilitators and barriers to help women returning to work and study to continue breastfeeding?

No research recommendations were made for this review question.