

*"Esta es la versión revisada por pares del siguiente artículo: [CITA COMPLETA], que se publicó en su forma final en [Enlace al artículo final usando el DOI]. Este artículo puede usarse con fines no comerciales de acuerdo con los Términos de Wiley. y condiciones de uso de las versiones autoarchivadas. Este artículo no puede mejorarse, enriquecerse ni transformarse de otro modo en un trabajo derivado, sin el permiso expreso de Wiley o por los derechos legales establecidos en la legislación aplicable. Los avisos de derechos de autor no deben eliminarse, oscurecerse ni modificarse. El artículo debe estar vinculado a la versión de registro de Wiley en Wiley Online Library y se debe prohibir cualquier incrustación, encuadre o puesta a disposición del artículo o sus páginas por parte de terceros desde plataformas, servicios y sitios web distintos de Wiley Online Library".*

# Female employees' perception of breastfeeding-friendly support in a public university in Spain

Fatima Leon-Larios  | Elena Pinero-Pinto | Socorro Arnedillo-Sanchez |  
Cecilia Ruiz-Ferron | Rosa Casado-Mejia | Marisa Benitez-Lugo

Faculty of Nursing, Physiotherapy and Podiatry, University of Seville, Seville, Spain

## Correspondence

Fatima Leon-Larios, Faculty of Nursing, Physiotherapy and Podiatry, University of Seville, Seville, Spain.  
Email: fatimaleon@us.es

## Funding information

Equality Unit of University of Seville, Grant/Award Number: 17102/2016

## Abstract

**Objective:** To explore women's experience with continuing breastfeeding when they returned to work.

**Design and Sample:** A cross-sectional study was conducted. Participants were female employees at the University of Seville who gave birth in the last 10 years while working at University.

**Measures:** A questionnaire in Spanish was used to collect information on sociodemographic variables, employment characteristics, continued breastfeeding behavior after returning to work and the dimensions of the validated scale the Workplace Breastfeeding Support Scale (WBSS).

**Results:** A total of 197 women responded, consisting of 53.8% faculty and 46.2% administrative staff. Almost all the women had breastfed their children (92.9%). The proportion of women who continued to breastfeed after they returned to work was 51.3%. The main reason given for interrupting lactation was the challenge of reconciling family and work (53.1%). Faculty members took more breaks for breastfeeding ( $p = 0.002$ ) and were able to arrange their breaks more easily ( $p < 0.001$ ). Since it was easier for them to find a quiet place to pump breast milk ( $p = 0.025$ ), they were more likely to continue breastfeeding after returning to work than were administrative staff (59.8% vs. 41.1%,  $p < 0.009$ ).

**Conclusion:** A designated lactation space and amenities should be provided in order to extend the duration of breastfeeding.

## KEYWORDS

barrier, breastfeeding, lactation, support, workplace

## 1 | BACKGROUND

The benefits of breastfeeding are widely known by the scientific community. The World Health Organization (WHO) recommends exclusive breastfeeding of a child for the first 6 months of life, given its substantial benefits for both children and mothers and continued partial breastfeeding of a child up to 2 years old (WHO/UNICEF, 2003). Breastfeeding is a major public health priority at national and international levels (Weber, Janson, Nolan, Wen, & Rissel, 2011),

being the preventive intervention that has the single greatest potential impact on child mortality (Jones, Steketee, Black, Bhutta, & Morris, 2003).

One of the World Health Assembly nutrition targets for 2025 is to increase the rate of exclusive breastfeeding in the first 6 months up to at least 50% (WHO, 2017). Currently, the rate of mothers in Spain who continue to breastfeed after 6 months varies, depending on the region (Río et al., 2012). There is no official registry on breastfeeding in the country, so it is very difficult to ascertain the

rates of women breastfeeding. Data from national statistics published in 2014 showed that the estimated prevalence of breastfeeding in infants was 71% at 6 weeks, 66.5% at 3 months and 46.9% at 6 months after birth (Comité de lactancia materna, 2017). A long duration of breastfeeding is viewed as a good predictor of health in nations worldwide, so this practice should be encouraged by public policy (Biks, Berhane, Worku, & Gete, 2015). According to WHO, in the 2006–2012 period, an estimated 25% of newborns in the WHO European region were exclusively breastfed for the first 6 months, compared with 49% of infants born in 2011 (Centers for disease control & prevention, 2013). This difference can be attributed to social and cultural factors, which do have an impact on breastfeeding rates (Wolf, 2003).

Many women are employed during their childbearing period, and employment is perceived as a possible barrier to continued breastfeeding beyond the allowed maternity leave. The percentage of employed mothers in Spain was approximately 46.53% in 2015 (Ministerio de Empleo y seguridad Social, 2016). Some studies have indicated that mothers who work outside the home have similar rates of breastfeeding after giving birth compared to those who do not. However, other researchers have attributed the cessation of breastfeeding to return to work (Attanasio, Kozhimannil, McGovern, Gjerdingen, & Johnson, 2013; Hamada, Chala, Barkat, & Lakhdar, 2017). Other authors have identified the duration of maternity leave as a determinant of the length of breastfeeding, which decreases considerably upon a woman's return to work (Monteiro, Buccini, Venâncio, & da Costa, 2017). The legally required maternity leave in Spain is currently 16 weeks of paid leave, of which 6 weeks must be taken after the birth.

The challenge for employed University mothers is to continue breastfeeding after returning to work. They find insufficient break time, inadequate facilities for breast pumping, and an inability to store milk as the main barriers. Spanish laws support lactation rooms in public environments; however, there are few public universities with lactation rooms in Spain. As some studies have pointed out, having breastfeeding-friendly policies and providing lactation rooms and breast pumping breaks for female employees may help to increase continued breastfeeding by mothers after their return to work (Desmond & Meaney, 2016; Tsai, 2013). The benefits to employers of such policies and practices include the following: greater employee satisfaction and loyalty, less absenteeism, a higher rate of return to work, greater performance, decreased loss of skilled employees due to maternity and a more positive corporate image (Comité de lactancia materna, 2017; Winegar & Johnson, 2017).

Previous studies have shown that the maintenance of breastfeeding is directly related to lactation support programs (Anstey et al., 2018; Lennon, Bakewell, & Willis, 2018; Nobari, Jiang, Wang, & Whaley, 2017). A breastfeeding-friendly workplace has been positively related to the continuation of breastfeeding after a return to work (Jantzer, Anderson, & Kuehl, 2018). Previous studies have revealed that mothers who have access to their infants to breastfeed them during the workday breastfeed longer than other mothers (Weber et al., 2011). Nevertheless, the rates in European countries

are far from compliant with the WHO recommendations (Bagci Bosi, Eriksen, Sobko, Wijnhoven, & Breda, 2015).

In this study, we conducted a web-based survey of mothers employed at the University of Seville, Spain. The aim of this research was to explore the breastfeeding practice of working mothers after their return to work. We examined the need for lactation rooms expressed by women who are employed at the University. We also assessed whether the level of organizational support is optimal for breastfeeding at work, and which factors contribute positively or negatively to continued breastfeeding after a return to work.

## 2 | METHODS

### 2.1 | Design and sample

This was a retrospective cross-sectional study conducted from January to March 2017. A web-based survey created using Google Drive™ was sent by email to female employees who had delivered an infant in the preceding 10 years and were employed at the University of Seville in 2017. A retrospective approach was used to determine whether women felt supported by their workplace to continue breastfeeding.

The research setting was the University of Seville. The University has 6,652 employees (4,120 faculty members and 2,532 administrative staff), of whom 37.67% are female faculty and 48% are female administrative staff (Anuario Estadístico Universidad de Sevilla, 2015). The questionnaire was distributed by email to 556 female employees who had taken maternity leave in the preceding 10 years. These mothers were recruited from a database provided by the Equality Unit at the University of Seville. All women were employed at the University at the time the study was carried out. This questionnaire explored sociodemographic variables, employment characteristics, continued breastfeeding behavior after returning to work, employee perception of the breastfeeding policy, and level of organizational support available.

### 2.2 | Measures

This study used a reliable and validated instrument, that is, the Workplace Breastfeeding Support Scale (WBSS), to assess a mother's perception of the support for breastfeeding in the workplace (Bai, Peng, & Fly, 2008). Content validity was established by an expert panel review. This study explored the predictors of continuing breastfeeding after returning to employment. Demographic variables were analyzed, including the following: employment characteristics (worksites, etc.), nationality, age, parity, education, marital status, position at the University, intention to breastfeed, time of lactation, childbirth experience, attendance at antenatal classes, participation in lactation support groups, and intention to breastfeed at the end of maternity leave.

This instrument was originally developed in English. For this research, the instrument was translated into Spanish by three independent bilingual experts in the field of breastfeeding. Subsequently,

three additional experts translated it into English. The final survey was assessed after a review of the literature and agreed upon by five experts in the field of breastfeeding. The results of the survey indicate, from a mother's perspective, the degree of workplace breastfeeding support that she receives once she returns to work.

The WBSS-derived survey contains 18 items grouped into the following four categories: technical support, environmental support, facility support, and peer support. The reliability of the WBSS was found to be acceptable with Cronbach's  $\alpha = 0.77$  and  $r = 0.86$ ; a Kaiser-Meyer-Olkin test was 0.71. This survey uses a 7-point Likert scale, where 1 is the lowest, and 7 is the highest score; a score of 1 indicate "strongly disagree" and a score of 7 "strongly agree." Respondents who continued breastfeeding upon their return to their employment were directed to an additional questionnaire based on WBSS.

Information about the study was provided to all participants, and if they qualified for the study, they were required to provide informed consent by signing a separate document. Approval of the University's institutional review board was obtained prior to collecting data.

### 2.3 | Ethical considerations

Female employees who met the inclusion criteria could participate by responding to the survey using the link to Google Drive™ provided by email. Informed consent was received from all participants who were notified of the aims and purposes of the study. This research was funded by the Equality Unit of the University of Seville (Grant 17102/2016) and approved by the ethical review board.

### 2.4 | Analytic strategy

All analysis was performed using SPSS 20, IBM, Armonk, NY, United States of America. We calculated the mean and standard deviation of demographic characteristics, and expressed some with percentages and absolute frequencies. Skewed data (length of breastfeeding) were expressed as median and interquartile ranges. Continuous variables were compared using the Student's  $t$  test, and the Mann-Whitney  $U$  test was used to compare skewed continuous data. Quantitative variables were compared using a Pearson Chi-square test and Fisher exact test, and categorical variables were compared using the Chi-square test for categorical variables and the Student's  $t$  test for continuous variables. A  $p$ -value of less than 0.05 was considered statistically significant; 95% confidence intervals were calculated.

## 3 | RESULTS

### 3.1 | Sociodemographic characteristics

A total of 197 out of 556 eligible women responded to the questionnaire online (a 35.4% response rate). The demographic characteristics of the participants recruited are shown in Table 1. The mean

**TABLE 1** Demographic characteristics ( $N = 197$ )

Education, $n$ (%)	Value
College graduate	173 (87.8%)
High school	24 (12.2%)
Relationship, $n$ (%)	
With partner	183 (92.9%)
Without partner	14 (7.1%)
Parity, mean (SD)	2.01 (0.71)
Nationality, $n$ (%)	
Spanish	192 (97.5%)
Other countries: Italy, Switzerland, France, and USA	5 (2.5%)
Maternal age, mean (SD)	42.2 (4.68)
Position at University, $n$ (%)	
Education	106 (53.8%)
Administrative	91 (46.2%)

(SD) age of the respondents was 42.2 years (4.68) when they took the survey, and 97.5% of them ( $n = 192$ ) were Spanish. Most participants had an undergraduate college degree or more advanced higher education (87.8%;  $n = 173$ ); 53.8% ( $n = 106$ ) were employed at the University as faculty; and 46.2% ( $n = 91$ ) as administrative staff. Almost all respondents (92.9%;  $n = 183$ ) were involved in a relationship.

### 3.2 | Obstetric characteristics

Among the respondents, 79.7% ( $n = 157$ ) had normal pregnancies. For those that had high-risk pregnancies, the main reasons were gestational diabetes (4.6%;  $n = 9$ ), preeclampsia (3.6%;  $n = 7$ ), threat of abortion in the first trimester 3.6% ( $n = 7$ ), and other (7.6%;  $n = 15$ ). Regarding the type of delivery, 63.5% ( $n = 125$ ) of respondents had a spontaneous vaginal delivery, 11.7% ( $n = 23$ ) had an instrumental delivery (vacuum or forceps), and 24.9% ( $n = 49$ ) had a delivery by cesarean section. The average weight of respondents' newborns was 3,263 g (7.19 lb). When we asked women to score and evaluate their overall birth experience, the average (SD) score was 3.99 (1.08) out of 5 points, on a scale ranging from 1 (very bad experience) to 5 (very good experience).

### 3.3 | Breastfeeding attitude

During the pregnancy, a large percentage of women attended antenatal lessons provided by a midwife [82.7% ( $n = 163$ )]. Most participants (98%;  $n = 193$ ) had made a lactation decision during pregnancy. Finally, 92.9% ( $n = 183$ ) of the women breastfed their children for a median duration (P25, P75)<sup>1</sup> of 7 (5,14) months, although 5.1% ( $n = 10$ ) did not breastfeed all their offspring. Only 7.1% ( $n = 14$ ) reported not breastfeeding after birth, with the main reason given

<sup>1</sup>The interquartile range (distance from the 25th to 75th percentiles).

being work-life balance. Participants who expressed that they would have liked some health professional to encourage them to breastfeed were 88.3% ( $n = 174$ ). The proportion of women who participated in support groups for breastfeeding was 8.1% ( $n = 16$ ). Participants who attended antenatal education ( $p = 0.667$ ) or participated in a lactation support group ( $p = 0.358$ ) did not breastfeed for a longer time than those who did not attend or participate.

Among the participants, 48.7% ( $n = 96$ ) did not continue lactation when they returned to work. Causes for interrupting lactation were attributed to the following: the difficulty in combining breastfeeding and work (53.1%;  $n = 51$ ), insufficient breast milk (36.5%;  $n = 35$ ), and the introduction of complementary feeding (10.4%;  $n = 10$ ). The principal support for breastfeeding was familial (71.2%;  $n = 126$ ), health care providers (13.7%;  $n = 27$ ), and the women themselves (13.6%;  $n = 24$ ).

### 3.4 | Regulation and work policies

Under Spanish law, female employees of public universities have 16 weeks of maternity leave. Depending on the institution, some women may receive an extra 4 weeks. Women who breastfeed are entitled to a 1-hour leave from their workday until the child is 16 months old. This period may be accumulated as lactation time and added to the maternity leave until the baby is 12 months old. This is the case for the University of Seville. The average maternity leave ( $SD$ ) was 5.61 (3.38) months, and some women added annual leave to this period. Participants who were aware of the breastfeeding policy at the University comprised 45.7% ( $n = 90$ ) of the total, with no differences found between faculty and administrative staff ( $p = 0.295$ ). A total of 24.4% ( $n = 48$ ) of the participants confirmed that their supervisor was aware of the breastfeeding policies. The supervisor was a woman in 35% of the cases. A significant difference was identified when supervisors were women, as they were more familiar with the breastfeeding policies and regulations ( $p < 0.000$ ) than male supervisors. We found that 21.3% ( $n = 42$ ) of women decided to work part-time after their maternity leave.

### 3.5 | The WBSS

We asked participants who reported continuing to breastfeed after their maternity leave to respond to the WBSS. A total of 101 women (51.3%) responded to the scale, of which 64 women were faculty and 37 were administrative staff. The average ( $SD$ ) score for each item in the survey is shown in Table 2. We observed that the lower scores were assigned to technical support, in women did not have access to a refrigerator to store their expressed breast milk [ $M$  ( $SD$ ) = 3.10 (2.52)] or to a breast pump [ $M$  ( $SD$ ) = (1.19 (0.64)]. Similarly, a space to express milk was indicated as lacking, due to unavailability [ $M$  ( $SD$ ) = 2.67 (2.03)]. Coworker support was not perceived as a problem, and the women felt that their coworkers were supportive. Women who believed they had sufficient maternity

**TABLE 2** Scores on dimensions of workplace breastfeeding support scale ( $n = 101$ )

Dimension	M	SD
<b>Break time</b>		
My breaks are frequent enough for breastfeeding or pumping breast milk	3.63	2.05
My breaks are long enough for breastfeeding or pumping breast milk	3.66	2.13
I could adjust my break schedule in order to breastfeed or pump breast milk	3.95	2.17
I feel comfortable taking several breaks during working hours to pump breast milk	2.93	1.99
I have supportive coworkers who cover for me when I need to pump my milk	3.55	2.18
I would feel comfortable asking for accommodation to help me breastfeed or pump breast milk at work	4.52	2.11
<b>Environment</b>		
Breastfeeding is common in my workplace	2.03	1.59
My coworkers agree that breastfeeding is better for baby's health than formula feeding	4.66	1.74
My supervisor says things that make me think he/she supports breastfeeding	4.01	1.79
My coworkers do not make fun of me when I sometimes leak milk through my clothes.	5.14	1.96
I can easily find a quiet place other than the bathroom at work to pump breast milk	2.67	2.03
My coworkers listen to me talk about my breastfeeding experience	4.2	1.81
<b>Technical support</b>		
My workplace has a refrigerator that I can use to store my milk	3.10	2.52
My workplace has a breast pump for nursing mothers to use	1.19	0.64
My workplace has an on-site day care	2.43	2.31
<b>Workplace policy</b>		
My job could be at risk (e.g., lose my job or get fewer scheduled hours) if I breastfed or pumped breast milk at work	2.65	2.08
I would have enough maternity leave (paid and/or unpaid time off) to get breastfeeding started before going back to work	4.58	2.32
I am certain my company has written policies for employees that are breastfeeding or pumping breast milk	3.47	1.92

Note. All scales ranged from 1 to 7 with higher scores indicating greater agreement.

leave to get breastfeeding started before going back to work [ $M$  ( $SD$ ) = 4.58 (2.32)].

Responses from faculty and administrative staff differed significantly on items related to access to breastfeeding breaks and the level of comfort breastfeeding at work, as Table 3 shows. The faculty group had more breaks for breastfeeding

**TABLE 3** A comparison between perceptions of faculty and administrative staff about workplace support ( $n = 101$ )

Dimension	Faculty $n = 64$		Administrative staff $n = 37$		$p$
	M	SD	M	SD	
<b>Break time</b>					
My breaks are frequent enough for breastfeeding or pumping breast milk	4.11	2.04	2.81	1.80	0.002
My breaks are long enough for breastfeeding or pumping breast milk	4.13	2.12	2.86	1.93	0.004
I could adjust my break schedule in order to breastfeed or pump breast milk	4.75	2.11	2.57	1.48	0.000
I feel comfortable taking several breaks during work hours to pump breast milk	3.36	2.12	2.19	1.49	0.004
I have supportive coworkers who cover for me when I need to pump my milk	3.7	2.25	3.3	2.08	0.372
I would feel comfortable asking for accommodations to help me breastfeed or pump breast milk at work	4.41	2.11	4.73	2.11	0.461
<b>Environment</b>					
Breastfeeding is common at my workplace	2.09	1.66	1.92	1.5	0.598
My coworkers agree that breastfeeding is better for the baby's health than formula feeding	4.69	1.75	4.62	1.75	0.856
My supervisor says things that make me think he/she supports breastfeeding	4.13	1.81	3.81	1.77	0.4
My coworkers do not make fun of me when I sometimes leak milk through my clothes	5.2	2	5.03	1.90	0.667
I can easily find a quiet place other than the bathroom at work to pump breast milk	3.02	2.25	2.08	1.42	0.025
My coworkers listen to me talk about my breastfeeding experience	4.09	1.8	4.38	1.86	0.451
<b>Technical support</b>					
My workplace has a refrigerator that I can use to store my milk.	3.31	2.62	2.73	2.33	0.266
My workplace has a breast pump for nursing mothers to use	1.13	0.55	1.3	0.77	0.196
My workplace has an on-site day care	2.86	2.56	1.68	1.56	0.012
<b>Workplace policy</b>					
My job could be at risk (e.g., lose my job or get fewer scheduled hours) if I breastfed or pumped breast milk at work	2.31	1.91	3.24	2.25	0.03
I would have enough maternity leave (paid and/or unpaid time off) to get breastfeeding started before going back to work	4.69	2.33	4.41	2.33	0.560
I am certain my company has written policies for employees that are breastfeeding or pumping breast milk	3.73	1.91	3	1.88	0.065

Note. All scales score ranged from 1 to 7 with higher scores indicating more agreement.

( $p = 0.002$ ) and those breaks were of a more sufficient duration ( $p = 0.004$ ). Furthermore, the faculty group could adjust their breaks easily ( $p < 0.001$ ) and felt more comfortable because of that flexibility ( $p = 0.004$ ). Faculty women found it easier to find a quiet place to express milk ( $p = 0.025$ ) and felt that their job would not be at risk if they breastfed at work ( $p = 0.03$ ).

### 3.6 | Bivariate analysis of factors related to maintenance of breastfeeding

A delayed return to work was not a good predictor of continued breastfeeding. Women who had a lengthy maternity leave did not continue breastfeeding for a longer period beyond their leave than women who had a shorter leave [ $M$  ( $SD$ ) = 5.13 (1.50) vs. 6.26

(4.76),  $p = 0.03$ ], so we cannot conclude that a longer maternity leave contributes to a longer breastfeeding period after return to work.

The age of the mother was not related to continuing breastfeeding at work. The mean (*SD*) age of women who breastfed after returning to work was 41.99 (4.94) years compared with 42.43 (4.39) years for women who did not ( $p > 0.05$ ).

Women who returned to work on a part-time basis were not more likely to continue breastfeeding than those who did not [21.1% ( $n = 23$ ) compared with 24.3% ( $n = 19$ ),  $p > 0.05$ ]. We observed that a slightly higher percentage of administrative staff returned to work part-time.

Furthermore, when comparing administrative employees to faculty, we observed that faculty were more likely to continue breastfeeding [59.8% ( $n = 64$ ) compared with 41.1% ( $n = 37$ ),  $p < 0.009$ ].

## 4 | DISCUSSION

The breastfeeding rates seen in our study are similar to the national statistics in Spain. The results revealed that the rate of breastfeeding after returning to work decreased considerably. In our study, 98% of women had a high intention to breastfeed, although only 92.9% initiated breastfeeding after giving birth for an average duration of 7 months. After returning to work, only 50.3% of respondents continued breastfeeding. This result is in line with the 49.8% that was found by Tsai (2014) and the 49% at 12 weeks after birth that was determined by Dagher, McGovern, Schold, and Randall (2016), but our findings indicate a higher rate than the 40% found by Weber et al. (2011).

The findings of this study contribute to identifying the barriers to and highlighting the importance of a breastfeeding-friendly workplace. As in other studies, one reason given for ceasing breastfeeding was an inadequate breast milk supply (Desmond & Meaney, 2016). However, we found that the main reason given by female employees at the University of Seville was the difficulty of reconciling breastfeeding and work. This finding is consistent with the assertion by Winegar and Johnson (2017) that employment is the greatest barrier to breastfeeding maintenance by working mothers.

Fernández-Cañadas Morillo et al. (2017) stated that one factor associated with the cessation of breastfeeding was the lack of a college degree. According to our study, women who had a higher education level did continue breastfeeding for longer period. In addition, in comparing faculty members with administrative staff, we found that faculty members have more flexibility in their daily routine and more access to private spaces, which helps them to take regular breaks to express milk. Dabritz, Hinton, and Babb (2008) found that more highly educated women are likely to have greater flexibility and control over their work schedules, and thus they can schedule lactation breaks as needed. Henninger et al. (2017) also showed that higher maternal education levels were significantly associated with longer breastfeeding duration.

The results of our study are consistent with those that revealed that the lack of facilities and support are considered the greatest barrier to continued breastfeeding (Desmond & Meaney, 2016; Ogbuanu, Glover, Probst, Liu, & Hussey, 2011; Tsai, 2013). It is a fact that the participants in this study did not have an available lactation room at the University. Our hope is that this study will encourage the institution to set up lactation rooms for the employees and students on the different campuses. The results from the study show the importance of having designated lactation facilities as well as communication plans to inform employees about their rights in relation to breastfeeding.

During the 2015 World Breastfeeding Week, the World Alliance for Breastfeeding Action proposed the theme *Breastfeeding and work, let's make it work*. The Spanish Association of Pediatrics and the Ministry of Labor, Social Services, and Equality has prepared a report on the benefits to businesses of having an appropriate breastfeeding policy. Benefits include greater employee satisfaction and loyalty, less absenteeism, higher rates of return to work and improved performance, and less loss of skilled employees (Comité de lactancia materna, 2017).

The workplace environment was adequate for our participants, as shown by the scores. As other studies have indicated, social support in the workplace is important to breastfeeding maintenance (Dabritz et al., 2008; Tsai, 2013, 2014a, 2014b). Break time and coworker support were identified by women as positive elements. Support by coworkers scored high in the study, as participants felt that their workplace environment was supportive of breastfeeding. The support of colleagues appears to be an area of strength for female employees at the University of Seville. Other studies have identified this support among the factors that influence lactation maintenance (Jantzer et al., 2018).

Beyond a desire to continue breastfeeding, women need support in the workplace (Iellamo, Sobel, & Engelhardt, 2014). Women feel unsupported by managers and their organization to continue breastfeeding at work (Weber et al., 2011). In our study, we found that female employees who had a female supervisor were more likely to continue breastfeeding after returning to work. This finding is consistent with those of other authors who point out a certain bias against working mothers, especially in male-dominated fields (Poduval & Poduval, 2009).

Greater efforts are needed by institutions around breastfeeding support. Organizational cultures and policies need to provide for spaces that enable women to continue breastfeeding. Employees who have access to a space and a break time where they can express milk are more likely to breastfeed (Jantzer et al., 2018; Lee, 2017; Steurer, 2017). Creating more breastfeeding-friendly workplaces is especially important because a recent study in Spain has concluded that a decrease in predominant breastfeeding rates can be partly attributed to women's returning to work. The authors of that study posited that until employers develop policies that encourage breastfeeding, the recommended 6-month breastfeeding period by WHO is unlikely to be achieved by most working women (Villar et al., 2018).

It is worth noting that breastfeeding-friendly workplace policies also provide benefits for employers, including greater employee satisfaction and loyalty, less absenteeism, higher rates of return to work, greater performance, less loss of skilled employees due to maternity, and a more positive corporate image (Comité de lactancia materna, 2017). The results of our study should encourage the University of Seville to develop a lactation policy and establish lactation rooms for employees and students at the different campuses.

Some studies have found lactation support groups particularly helpful in providing information, although we did not observe better breastfeeding practices among women who participated in the groups (Desmond & Meaney, 2016; Fernández-Cañadas Morillo et al., 2017). The women in our study received support during lactation from family, mainly their partner. This finding is in line with Tsai, who suggested that antenatal education or activities that promote lactation should include the partner to improve workplace breastfeeding rates (Tsai, 2014a).

In some previous research, the length of maternity leave was found to have a positive association with maintaining breastfeeding (Bai & Wunderlich, 2013; Villar et al., 2018), while the duration of breastfeeding was extended when women delayed their return to work (Mirkovic, Perrine, Scanlon, & Grummer-Strawn, 2014; Ogbuanu et al., 2011). However, this finding is not in line with our results. We did not see any difference between women who extended their maternity leave and those whose maternity leave was limited to the legally required 16 weeks. Chekol, Bikis, Gelaw, and Melsew (2017) did find that Ethiopian mothers who were unemployed breastfed more than employed mothers. However, we cannot compare this finding with the Ethiopian study referenced in previous sentence because all participants returned to work while still breastfeeding.

There are some limitations to our study. First, since it was retrospective, we can speak about association but not causality. Second, we asked women about matters that happened a long time ago, sometimes as much as 10 years ago, so it is possible that many of them could have forgotten some details. Third, we had a low response rate. Although the online questionnaire was sent to more than 500 employees, only 35.4% responded. This response rate may indicate a bias in the information collected. It is likely that women with extreme positions are the ones who chose to participate. However, it was not possible to determine the motivation for not responding. A possible reason for a lack of response could be that a woman had her children prior to working at the University. We observed that women who completed the survey referred to their experience while working at the University of Seville, so we assume that respondents provided information aimed at our specific research. Thus, our results cannot be generalized to other universities where lactation rooms may be available. Given that these findings are limited to employees at one Spanish university, the results are also not generalizable to other university settings.

The study was conducted only on University staff as the maternity rate in students is low. In the future we would like to perform

the same investigation on students, although in many cases it is difficult to reach them once they have graduated.

## 5 | CONCLUSIONS

A strategic plan is needed to encourage breastfeeding at work so that women are more likely to continue breastfeeding when they return to work at the University of Seville. The period following a mother's return to work is critical to breastfeeding maintenance at work. A designated lactation space and amenities should be provided by public universities for their employees and students who are mothers to extend the duration of breastfeeding of infants. The results from our study suggest that encouragement from colleagues and female supervisors are also effective at prolonging breastfeeding maintenance.

Workplace interventions, such as the establishment of lactation rooms on campus, are needed to encourage and support female employees at the University of Seville to continue breastfeeding at work. Our findings suggest that lactation rooms will address the need of working mothers employed by the University of Seville to breastfeed infants and/or express milk when they return to work after their maternity leave. Currently, it is mandatory for universities to designate public spaces for breastfeeding. As a public institution, the University of Seville should have a lactation room available for its community along with a breastfeeding policy.

## ACKNOWLEDGEMENTS

Thanking all employees from University of Seville who participated in this research. This research was funded by Equality Unit of University of Seville (Grant 17102/2016).

## CONFLICT OF INTEREST

None declared.

## ORCID

Fatima Leon-Larios  <https://orcid.org/0000-0001-9475-0440>

## REFERENCES

- Anstey, E. H., Coulter, M., Jevitt, C. M., Perrin, K. M., Dabrow, S., Klasko-Foster, L. B., & Daley, E. M. (2018). Lactation consultants' perceived barriers to providing professional breastfeeding support. *Journal of Human Lactation*, *34*, 51–67. <https://doi.org/10.1177/0890334417726305>
- Anuario Estadístico Universidad de Sevilla. (2015). *Anuario estadístico 2015-16*. Sevilla, ES: Vigerencia de organización. Retrieved from [http://servicio.us.es/splanestu/WS/Anuario\\_Anterior\\_20152016.html](http://servicio.us.es/splanestu/WS/Anuario_Anterior_20152016.html)
- Attanasio, L., Kozhimannil, K. B., McGovern, P., Gjerdingen, D., & Johnson, P. J. (2013). The impact of prenatal employment on breastfeeding intentions and breastfeeding status at 1 week



- postpartum. *Journal of Human Lactation*, 29, 620–628. <https://doi.org/10.1177/0890334413504149>
- Bagci Bosi, A. T., Eriksen, K. G., Sobko, T., Wijnhoven, T. M. A., & Breda, J. (2015). Breastfeeding practices and policies in WHO European Region Member States. *Public Health Nutrition*, 19, 753–764. <https://doi.org/10.1017/s1368980015001767>
- Bai, Y., Peng, C. Y. J., & Fly, A. D. (2008). Validation of a short questionnaire to assess mothers' perception of workplace breastfeeding support. *Journal of the American Dietetic Association*, 108, 1221–1225. <https://doi.org/10.1016/j.jada.2008.04.018>
- Bai, Y., & Wunderlich, S. M. (2013). Lactation accommodation in the workplace and duration of exclusive breastfeeding. *Journal of Midwifery & Women's Health*, 58, 690–696. <https://doi.org/10.1111/jmwh.12072>
- Biks, G. A., Berhane, Y., Worku, A., & Gete, Y. K. (2015). Exclusive breastfeeding is the strongest predictor of infant survival in Northwest Ethiopia: A longitudinal study. *Journal of Health, Population and Nutrition*, 34, 9. <https://doi.org/10.1186/s41043-015-0007-z>
- CDC. (2013). Division of nutrition, physical activity, and obesity, National center for chronic disease prevention and health promotion. Breastfeeding report card. United States/2013. Retrieved from [www.cdc.gov/breastfeeding/pdf/2013BreastfeedingReportCard.pdf](http://www.cdc.gov/breastfeeding/pdf/2013BreastfeedingReportCard.pdf)
- Chekol, D. A., Biks, G. A., Gelaw, Y. A., & Melsew, Y. A. (2017). Exclusive breastfeeding and mothers' employment status in Gondar town, Northwest Ethiopia: A comparative cross-sectional study. *International Breastfeeding Journal*, 12(1), 27. <https://doi.org/10.1186/s13006-017-0118-9>
- Comité de lactancia maternal. (2017). Lactancia materna en cifras: Tasas de inicio y duración de la lactancia en España y en otros países. Retrieved from <http://www.aeped.es/sites/default/files/documentos/201602-lactancia-materna-cifras.pdf>
- Dabritz, H. A., Hinton, B. G., & Babb, J. (2008). Evaluation of lactation support in the workplace or school environment on 6-month breastfeeding outcomes in Yolo County, California. *Journal of Human Lactation*, 25, 182–193. <https://doi.org/10.1177/0890334408328222>
- Dagher, R. K., McGovern, P. M., Schold, J. D., & Randall, X. J. (2016). Determinants of breastfeeding initiation and cessation among employed mothers: A prospective cohort study. *BMC Pregnancy and Childbirth*, 16(1), 194. <https://doi.org/10.1186/s12884-016-0965-1>
- Desmond, D., & Meaney, S. (2016). A qualitative study investigating the barriers to returning to work for breastfeeding mothers in Ireland. *International Breastfeeding Journal*, 11, 16. <https://doi.org/10.1186/s13006-016-0075-8>
- Fernández-Cañadas Morillo, A., Duque, M. D., López, A. B. H., Miguel, C. M., Rodríguez, B. M., Prim, A. O., ... Gabriel, M. A. M. (2017). A comparison of factors associated with cessation of exclusive breastfeeding at 3 and 6 months. *Breastfeeding Medicine*, 12, 430–435. <https://doi.org/10.1089/bfm.2017.0045>
- Hamada, H., Chala, S., Barkat, A., & Lakhdar, A. (2017). Évaluation de l'effet du travail sur la pratique de l'allaitement maternel. *Archives De Pédiatrie*, 24, 720–727. <https://doi.org/10.1016/j.arcped.2017.05.003>
- Henninger, M. L., Irving, S. A., Kauffman, T. L., Kurosky, S. K., Rompala, K., Thompson, M. G., ... Naleway, A. L. (2017). Predictors of breastfeeding initiation and maintenance in an integrated healthcare setting. *Journal of Human Lactation*, 33, 256–266. <https://doi.org/10.1177/0890334417695202>
- Iellamo, A., Sobel, H., & Engelhardt, K. (2014). Working mothers of the World Health Organization Western Pacific Offices. *Journal of Human Lactation*, 31, 36–39. <https://doi.org/10.1177/0890334414558847>
- Jantzer, A. M., Anderson, J., & Kuehl, R. A. (2018). Breastfeeding support in the workplace: The relationships among breastfeeding support, work-life balance, and job satisfaction. *Journal of Human Lactation*, 34, 379–385. <https://doi.org/10.1177/0890334417707956>
- Jones, G., Steketee, R. W., Black, R. E., Bhutta, Z. A., & Morris, S. S. (2003). How many child deaths can we prevent this year? *The Lancet*, 362, 65–71.
- Lee, J. (2017). Supporting breastfeeding moms at work: How a doctor's note can make the difference. *Breastfeeding Medicine*, 12, 470–472. <https://doi.org/10.1089/bfm.2017.0107>
- Lennon, T., Bakewell, D., & Willis, E. (2018). The breastfeeding employer supported time project: Using a mentor-mentee-based approach to establish workplace lactation support in Milwaukee County. *Journal of Human Lactation*, 34, 47–50. <https://doi.org/10.1177/0890334417719246>
- Ministerio de Empleo y seguridad Social. (2016). Observatorio de las ocupaciones. Informe del mercado de trabajo de las mujeres estatal datos 2015. Retrieved from [http://www.sepe.es/contenidos/que\\_es\\_el\\_sepe/publicaciones/pdf/pdf\\_mercado\\_trabajo/imt2016\\_datos2015\\_estatal\\_mujeres.pdf](http://www.sepe.es/contenidos/que_es_el_sepe/publicaciones/pdf/pdf_mercado_trabajo/imt2016_datos2015_estatal_mujeres.pdf)
- Mirkovic, K. R., Perrine, C. G., Scanlon, K. S., & Grummer-Strawn, L. M. (2014). Maternity leave duration and full-time/part-time work status are associated with US mothers' ability to meet breastfeeding intentions. *Journal of Human Lactation*, 30, 416–419. <https://doi.org/10.1177/0890334414543522>
- Monteiro, F. R., Buccini, G. D. S., Venâncio, S. I., & da Costa, T. H. M. (2017). Influence of maternity leave on exclusive breastfeeding. *Jornal De Pediatria*, 93, 475–481. <https://doi.org/10.1016/j.jpmed.2016.11.016>
- Nobari, T. Z., Jiang, L., Wang, M. C., & Whaley, S. E. (2017). Baby-friendly hospital initiative and breastfeeding among WIC-participating infants in Los Angeles County. *Journal of Human Lactation*, 33, 677–683. <https://doi.org/10.1177/0890334417716118>
- Ogbuanu, C., Glover, S., Probst, J., Liu, J., & Hussey, J. (2011). The effect of maternity leave length and time of return to work on breastfeeding. *Pediatrics*, 127, e1414–e1427. <https://doi.org/10.1542/peds.2010-0459>
- Poduval, J., & Poduval, M. (2009). Working mothers: How much working, how much mothers, and where is the womanhood? *Mens Sana Monographs*, 7, 63. <https://doi.org/10.4103/0973-1229.41799>
- Río, I., Luque, Á., Castelló-Pastor, A., Sandín-Vázquez, M. D. V., Larraz, R., Barona, C., ... Bolívar, F. (2012). Uneven chances of breastfeeding in Spain. *International Breastfeeding Journal*, 7(1), 22. <https://doi.org/10.1186/1746-4358-7-22>
- Steurer, L. M. (2017). Maternity leave length and workplace policies' impact on the sustainment of breastfeeding: Global perspectives. *Public Health Nursing*, 34, 286–294. <https://doi.org/10.1111/phn.12321>
- Tsai, S.-Y. (2013). Impact of a breastfeeding-friendly workplace on an employed mother's intention to continue breastfeeding after returning to work. *Breastfeeding Medicine*, 8, 210–216. <https://doi.org/10.1089/bfm.2012.0119>
- Tsai, S.-Y. (2014a). Employee perception of breastfeeding-friendly support and benefits of breastfeeding as a predictor of intention to use breast-pumping breaks after returning to work among employed mothers. *Breastfeeding Medicine*, 9, 16–23.
- Tsai, S.-Y. (2014b). Influence of partner support on an employed mother's intention to breastfeed after returning to work. *Breastfeeding Medicine*, 9, 222–230.
- Villar, M., Santa-Marina, L., Murcia, M., Amiano, P., Gimeno, S., Ballester, F., ... Ibarluzea, J. (2018). Social factors associated with non-initiation and cessation of predominant breastfeeding in a mother-child cohort in Spain. *Maternal and Child Health Journal*, 1–10.
- Weber, D., Janson, A., Nolan, M., Wen, L. M., & Rissel, C. (2011). Female employees' perceptions of organisational support for breastfeeding at work: Findings from an Australian health service workplace. *International Breastfeeding Journal*, 6(1), 19.

- WHO. (2017). WHA global nutrition targets 2025: Breastfeeding policy brief. Retrieved from [http://www.who.int/nutrition/topics/global-targets\\_breastfeeding\\_policybrief.pdf](http://www.who.int/nutrition/topics/global-targets_breastfeeding_policybrief.pdf)
- WHO/UNICEF. (2003). Global strategy for infant and young child feeding. Geneva: World Health Organization.
- Winegar, R., & Johnson, A. (2017). Do workplace policies influence a woman's decision to breastfeed? *The Nurse Practitioner*, 42, 34–39.
- Wolf, J. H. (2003). Low breastfeeding rates and public health in the United States. *American Journal of Public Health*, 93, 2000–2010.

**How to cite this article:** Leon-Larios F, Pinero-Pinto E, Arnedillo-Sanchez S, Ruiz-Ferron C, Casado-Mejia R, Benitez-Lugo M. Female employees' perception of breastfeeding-friendly support in a public university in Spain. *Public Health Nurs*. 2019;36:370–378. <https://doi.org/10.1111/phn.12590>