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Breastfeeding practices among working mothers at the workplace in Erbil city: A cross-sectional study

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Abstract

Background and objective: Breastfeeding is a fundamental human activity, essential to child and maternal health, and of massive economic value to societies and households. This study aimed to determine breastfeeding practices among working mothers in Erbil city.

Methods: A cross-sectional study was carried out in 12 primary health care centers in Erbil city from 19 January 2020 to 10 December 2020. A convenience sampling method was used to recruit the sample of the study (600 mothers). A questionnaire was used for data collection.

Results: A total of 600 working mothers with children 1-2 years of age who attended the selected primary health centers were included in this study. Most participants (58.8%) were in the age group 30-39 years old. The majority of mothers (69.7%)were working in the public sector, while 32% were working in hospitals. Only 66 participants were breastfeeding their child in the workplace, so the prevalence of breastfeeding among working mothers at the workplace was 11%. Only 100 participants (16.7%) reported having a nursery in their workplace. Regarding the impact of the workplace on breastfeeding, 42% of women were breastfeeding in places with a nursery. Breastfeeding is more common among mothers working in public places (13.9%) than mothers working in private sectors (4.4%) (P <0.001).

Conclusion: The prevalence of breastfeeding among working mothers with children 1-2 years of age is low. The availability of supporting facilities significantly impacts breastfeeding practices among working mothers.

Keywords: Breastfeeding; Working mother; Workplace; Erbil city.

Introduction

Breastfeeding is a fundamental human activity, essential to child and maternal health, and of massive economic value to societies and households. For the first six months of life, the World Health Organization (WHO) recommends that infants should be exclusively breastfed to attain optimal health, growth, and development.[1] A child's life from conception till two years of age is especially significant for optimal physical, mental, and cognitive growth. On the other hand, this period is often marked by micronutrient deficiencies and protein energy that interfere with optimal growth.[2]

Mothers informed about the several health benefits of breastfeeding are more likely to breastfeed. Studies have revealed that mothers tend to believe that breastfeeding is best for their babies. However, they appear to know less regarding the specific reductions in health risks that occur through the consumption of breast milk and breastfeeding.[3] The breastfeeding benefits on the health and wellbeing of the infant are well known and contain the optimal neurodevelopment prevention of infections and may limit the progress of allergy, obesity, and diabetes later in life.[4]

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During the first year of life, infants fed breast milk have a 30% lower risk of rotavirus diarrhea. Breast milk has also been described as a defensive factor against Giardia infection, both symptomatic and asymptomatic. The frequency of prolonged diarrhea is also lower in breastfed infants. However, exclusively formula-fed infants have an 80% increase in the risk of diarrhea.[5] Work-related issues have been commonly noted as a major reason for non initiation and early cessation of breastfeeding. Lack of supportive work environments, such as the provision of lactation facilities and paid maternity leave, has been cited as barriers to breastfeeding initiation and prolonged duration.[6]

Many mothers return to work shortly after giving birth, and they have to leave their babies at home. They cannot breastfeed their babies properly as required by the World Health Organization because of the lack of workplace facilities in most organizations.[7] A study carried out in Mulago hospital in Uganda revealed that a significant barrier to breast milk expression is the lack of privacy in public places for expressing breast milk. As it is not yet a policy in this setting for workplaces to have nursery, this contributes to reduced levels of support for breast milk expression, especially outside the home.[8]

This study aimed to determine breastfeeding practices among working mothers with children 1-2 years of age in Erbil city.

Methods

Study design

Across-sectional study.

Setting of the study

This study was conducted in 12 primary health centers in Erbil city.

Duration of the study

From 19 January 2020 to 10 December 2020.

Study population

Working mothers with children after one year of age till two years.

Inclusion criteria

The inclusion criteria included working mothers (not on maternity leave) with children from one year of age to two years. Because the maternity leave is in the first year after delivery, this study included mothers returning to work after maternity leave to determine the impact of workplace facilities on breastfeeding.

Sample size

The sample size was determined using the Epi info program (version 7.3) based on the default value of population size, expected rate of 50% (the maximum expected rate of 50% because there are no literature references in Iraq), and desired precision of 4% and 95% confidence interval. The estimated sample size was 600.

Sampling method

A convenience sampling method was used for selecting 600 working mothers in the 12 primary health centers in Erbil city.

Data collection

Data were collected by direct face to face interviews with mothers by the investigator at the vaccination unit. A structured questionnaire was used for data collection. The questionnaire consisted of three parts. The first part was related to demographic characteristics of the mothers like age, educational level, family status, number of children, type of housing, and monthly household income. The second part was related to the breastfeeding practices of the mothers in the workplace and workplace facilities.

Statistical data analysis

The data were summarized and analyzed using the statistical package for the social sciences (SPSS version 21).

Analysis was done using frequencies and percentages. Chi-square test and Fisher's exact test were used to find the association with different workplace facilities on breastfeeding at the workplace. A P value ≤0.05 was considered statistically significant.

Ethical consideration

This study was approved by the ethics

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committee at the College of Medicine, Hawler Medical University. Informed consent was obtained from all mothers after explaining the purpose of the study to them.

Results

A total of 600 working mothers who attended the selected primary health centers were included in this study. Three hundred fifty three (58.8%) participants were in the age group 30-39 years old. Two hundred ninety nine (49.8%) participants were college graduates. Two hundred sixteen mothers had only one child, and more than half of the participants (56.7%) had their own house, as shown in Table 1.

Table 1 Sociodemographic characteristics of working mothers

Variables	No.	(%)
Mother's age (years)		
20_29 years	191	(31.8)
30_ 39 years	353	(58.8)
40 years + more	56	(9.4)
Educational level of mothers		
Illiterate	3	(0.5)
Read & write	4	(0.7)
Primary school	18	(3.0)
Secondary school	65	(10.8)
Institute	211	(35.2)
College	299	(49.8)
No. of children		
1-2	420	(70.0)
3-4	167	(27.9)
5-6	13	(2.1)
Type of housing		
Owned	340	(56.7)
Partially owned	55	(9.2)
Rented	200	(33.3)
Others	5	(0.8)
Total	**600**	**(100)**

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The majority of mothers (69.7%) were working in the public sector, and 192 (32%) were working in a hospital. More than half of the participants (57%) were manual workers. According to working hours per day, the highest percentage (77.5%) were working for 5-9 hours per day, as shown in Table 2.

Only 66 participants were breastfeeding their child in the workplace, so the prevalence of breastfeeding among working mothers was 11%, as shown in Table 3.

Table 2 Working status of mothers

Variables	No.	(%)
Working sector		
Public	418	(69.7)
Private	182	(30.3)
Place of work		
Hospital	192	(32.0)
School	146	(24.3)
University	83	(13.8)
Others	179	(29.8)
Type of work		
Office	342	(57.0)
Manual	258	(43.0)
Working hours/day		
<5	105	(17.5)
5-9	465	(77.5)
10-14	22	(3.6)
15-19	1	(0.2)
20-24	7	(1.2)
Total	**600**	**(100)**

Table 3 Prevalence of breastfeeding in the workplace

The characteristics	Subgroups	No	(%)
Breastfeeding in workplace	Yes	66	(11)
	No	534	(89)
Total		600	(100)

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The participants reported different causes for not breastfeeding their child in the workplace, including not having child care facilities (68.1%), and not having privacy in the workplace (16.5%) as shown in Table 4.

Regarding the availability of breastfeeding facilities in the workplace, only 100 participants (16.7%) reported having a nursery in their workplace. Five participants (0.8%) reported the availability of a private room in their workplace, as shown in Table 5.

Table 4 Causes for not breastfeeding child in the workplace

Causes	No.	(%)
Not having privacy	88	(16.5)
Not having childcare facilities	364	(68.1)
Not having breast pump	2	(0.4)
Not having milk	65	(12.2)
Not having family support	15	(2.8)
Total	**534**	**(100)**

Table 5 Distribution of breastfeeding facilities in the workplace

Facilities	No.	(%)
Nursery in the workplace?		
Yes	100	(16.7)
No	500	(83.3)
Private room (no restroom or lunchroom)		
Yes	5	(0.8)
No	595	(99.2)
Does the private room contain an electric pump?		
Yes	1	(20.0)
No	4	(80.0)
Does the private room provide a refrigerator for milk storage?		
Yes	1	(20.0)
No	4	(80.0)
Total	**600**	**(100)**

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Regarding the impact of the workplace on breastfeeding, 42% of women were breastfeeding in places with nursery (*P* <0.001), and 20% in places with a private room for pumping (*P* = 0.443). Breastfeeding was more common among mothers working in public places (13.9%) than mothers working in private sectors (4.4%) (*P* <0.001). Breastfeeding was more common in hospitals (20.3%) than in other places (*P* <0.001) and among those who worked between 10-14 hours per day (18.2 %) (*P* = 0.018**)** than in other groups, as shown in Table 6.

Table 6 Impact of workplace facilities on breastfeeding

Facilities	**No.**	**Breastfeeding in the workplace)**		***P* value**
		Yes No. (%)	**No No. (%)**	
Nursery				<0 .001*
Yes	(100)	42 (42.0)	58 (58.0)	
No	(500)	24 (4.8)	476 (95.2)	
Private room for pumping				0.443 *
Yes	(5)	1 (20.0)	4 (80.0)	
No	(595)	65 (10.9)	530 (89.1)	
Working sector				<0.001 *
Public	(418)	58 (13.9)	360 (86.1)	
Private	(182)	8 (4.4)	174 (95.6)	
Place of work				<0.001
Hospital	(192)	39 (20.3)	153 (79.7)	
School	(146)	15 (10.3)	131 (89.7)	
University	(83)	2 (2.4)	81 (97.6)	
Others (places)	(179)	10 (5.6)	169 (94.4)	
Working hours/day				0.018
< 5	(105)	16 (15.2)	89 (84.8)	
5-9	(465)	43 (9.2)	422 (90.8)	
10-14	(22)	4 (18.2)	18 (81.8)	
15-19	(1)	0 (0.0)	1 (100)	
20-24	(7)	3 (42.9)	4 (57.1)	
Total	**600**			

(*) Fisher's exact test was used

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Discussion

The age of the participants ranged from 20 to 45 years. The majority of them (58.8%) were aged 30-39 years. A study conducted in Ethiopia showed that nearly two-thirds (64.4%) of employed mothers were in the age group 24–29 years.[9]

Most of the study participants (49.8%) were college graduates, and 35.2% were diploma holders. In a study from Taiwan, 71.7% of mothers had college and higher degrees.[10] Most working mothers (36%) had only one child, 56.7% of them owned a house, with 33.3% of them lived in a rented house. Most of the mothers (69.7%)worked in the public sector, while 30.3 % were working in the private sector.

A study conducted in Malaysia showed that (56%) of respondents work in the public sector.[11] Another study conducted in Malaysia showed that 53.9% of the participants worked in government institutions while 46.1% were involved in private institutions. In this study (77.5%) of mothers had fixed working time, only 17.5 % of them had a part-time work (<5 hours) per day, only 3.6% of mothers had full-time, and 57% of mothers were working in the office while 43% of them had a manual (non-professional works).

A study from Malaysia showed that 93.4% of the mothers were full-timed employees and 86.2% had fixed working arrangements, 118 of the participants were working in a professional career, and 34 mothers were working in a non-professional job.[12]

In this study, the prevalence of breastfeeding in the workplace was 11% among working mothers. A study carried out by Fein et al. reported that 43% of mothers pumped milk at work only 32% fed the infant directly from the breast only.[13] Another study done in Sri Lanka revealed that of the 22 mothers who left for work before six months, 20 of them did not practice expressing breast milk at the workplace.[14] In this study, the main reason for not breastfeeding in the workplace was not having childcare facilities (68.1%), followed by not having a private place for breastfeeding (16.5%). A study done in Australia revealed that 20% of working mothers reported that lack of childcare facilities close to the workplace was the main reason to cease breastfeeding and not breastfeed at the workplace.[15]

Another study done in Bandar-Abbas (Iran) revealed that 78.3% of mothers did not have access to a nursery at their workplace, and 56.63% of these women used formula.[16] Another study carried out by Indrawanto et al. showed that most working mothers (75%) did not breastfeed their children due to a lack of support and facilities in the workplace, such as lactation rooms and childcare facilities.[17] While, another study conducted in Australia found that only 30% of employee mothers had access to suitable facilities (private room or breast pump).[15]

Another study found that only 32% of the companies provided a designated room only for breastfeeding or pumping, 21.5% of the mothers had access to a proper dedicated breastfeeding support facility, and only 7.5% had benefitted from a breastfeeding support program at their workplace.[18] Another study done in Indonesia revealed that working mothers face difficulty finding places to express their breast milk during working hours and managing the breast milk stocks because of the low milk supply.[19] In a study done by Kozhimannil et al. revealed that only 59% of women who returned to work reported having access to adequate break time to express milk, 45% had private space, and only 40% had access to both break time and private space.[20]

Regarding the impact of work facilities on breastfeeding, there was a statistically significant association between breastfeeding among mothers (42%) and not practicing breastfeeding (58%) in places with a nursery facility (P <0.001). This is supported by the finding of a study carried out by Ahmadi and Moosavi, which revealed the rate of formula use was significantly higher in mothers who did not

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have a suitable nursery or place to milk themselves and preserve the milk in their workplace.[16]

In this study, there was no statistically significant association between breastfeeding among women regarding private room availability for pumping at the workplace (*P* = 0.443). This finding disagrees with another study in Mexico that found mothers with a lactation room were about three times and two and half times more likely to breastfeed for ≥6 and ≥12 months, respectively, compared to mothers without a lactation room.[21] In this study, there was a statistically significant difference between the impact of the work sector (public and private sectors) on breastfeeding at the workplace (*P* <0.001). This may be due to the availability of nursery more commonly in the public sector. Also, the public sector is more liable to have flexible working hours than the private sector. This explanation is supported by the finding of another study carried out in Karachi, Pakistan, which revealed that breastfeeding breaks of at least one hour in a shift of 6–8 hours were also more common in the public sector (23% vs. 9%) (*P* = 0.001). Also, the breastfeeding corner was provided by 1% of the government sites and none of the private sites.[22]

This study also revealed a significant association between places of work and breastfeeding at the workplace (*P* <0.001), as 20.3% of those who practiced breastfeeding at work were working in hospitals, 10.3 % were working in schools, 2.4% in universities, and 5.6% in other places. This may be because the hospital had a more supportive place (like the availability of nursery and flexible working hours) for breastfeeding.

This finding is similar to a study done in the United States in which significant breast pumping duration was longer for women working in the healthcare industry, as they reported utilizing a breast pump for the longest duration of 12 or more months (22.8%).[23] Furthermore, to explore the impact of working hours on breastfeeding at the workplace, this study found no significant relationship between working hours and breastfeeding at the workplace (*P* = 0.018). The rate of breastfeeding at the workplace or during working hours was 15.2% among those who had worked for less than 5 hours per day. Regarding those who had 5-9 hours per day, breastfeeding during working hours was 9.2%.

A study on the impact of the breastfeeding-friendly workplace in Taiwan found that in the workplace, the working mother often worked more than the legally mandated 8 hours (83.3%), and 46.7% needed to take shifts and thus bear a heavy work burden. The study also revealed that working mothers with shift work had a lower prevalence to use the breast pumping breaks than non-shift workers (27.2% vs. 44.0%, *P* <0.0001).[10]

Conclusion

The prevalence of breastfeeding practice among working mothers with children 1-2 years of age is low. The workplace facilities have an impact on mothers' decisions regarding breastfeeding their children.

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Competing interests

The authors declare that they have no competing interests.

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