Original Article

Workplace Breastfeeding Support and Breastfeeding Practices among Healthcare Professionals

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Abstract

Introduction: Working mothers face striking challenges in breastfeeding. It is important to focus on them to further improve breastfeeding rates. **Aim and Objectives:** To assess the workplace breastfeeding support and breastfeeding practices of healthcare professionals. **Methodology:** We conducted a cross-sectional study among two hospitals in East Delhi. All mothers having at least one child aged six months to five years and currently employed as healthcare personnel were included. For a sample size of 100, population proportionate to size sampling was done among two hospitals. The participants were randomly selected from a list of healthcare personnel. Employee perception of breastfeeding support questionnaire (EPBS-Q) was used to assess the workplace breastfeeding support. Chi-square test was used to compare proportions, logistic regression, and survival analysis to find the association between workplace breastfeeding support and IYCF parameters. **Results:** The proportion of mother who perceived poor workplace breastfeeding support was 37%. The mean (SD) score obtained was 103.48 (8.93). The early initiation of breastfeeding within one hour was practiced by 54%, exclusive breastfeeding for at least six months by 60%, and timely initiation of complementary feeding for six to eight months by 64% mothers. Workplace breastfeeding support was significantly associated with exclusively breastfeeding for at least six months. **Conclusions:** More than one-third of mothers perceived poor workplace breastfeeding, and it was associated with exclusive breastfeeding.

Keywords: Breastfeeding, maternity benefits, workplace support

Introduction

World breastfeeding trends initiative assessment report 2018 stated "Arrested Development" in India's policies and programs on infant and young child feeding (IYCF); that is, country has failed to make progress in key indicators in the years between 2015 and 2018.[1] The National Family Health Survey (NFHS-5) report for 2019–21 also confirms that only minimal change from NFHS-4 (2015-16) for IYCF parameters like early initiation of breastfeeding (41.8% from 41.6%) and timely initiation of complementary feeding (45.9% from 42.7%).[2]

With more women joining the workplace, we should focus on working mothers to improve breastfeeding rates. Studies show that employment status affects the status of child feeding practices.[3,4] Comparative studies in India between working and non-working mothers substantiate that exclusive breastfeeding rates were lower among working mothers.[5]

The workplace breastfeeding support includes organizational support, co-worker's support, and time and infrastructure support. Various studies report an association between workplace breastfeeding support and breastfeeding practices.[6-9]

The existing national programs related to child feeding are focused on mothers in the community and do not specifically focus on breastfeeding mothers in their respective workplaces. Therefore, we aimed to assess the mothers' perceptions of workplace breastfeeding support and breastfeeding practices among healthcare professionals.

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Methodology

We conducted a cross-sectional study among two purposively selected teaching hospitals of East Delhi, in 2019–21. Approval was obtained from the Institutional Ethics Committee–Human Research (IEC-HR) prior to the commencement of the study. All mothers having at least one child aged six months to five years and are currently employed as healthcare personnel such as faculty, resident, medical officers, lab technician, nurses, or medical social worker, and employed in the same hospital at the time of delivery were included in the study. Those mothers who were on leave during the whole period of study were excluded.

To the best of our knowledge, there was no similar study published in India. Therefore, we did a pilot study on 20 mothers fulfilling the selection criteria and found that 60% of mothers perceived poor workplace breastfeeding support. For an estimated proportion of 60%, an allowable error of 10%, and for 95% confidence interval, the sample size obtained was 96, rounded to 100. The population proportionate to size sampling was done among the two hospitals, that is, 67 from hospital A and 33 from hospital B to obtain sample size. The participants were randomly selected from a list of healthcare personnel of the respective hospitals.

A pretested, pre-validated, semi-structured schedule was used to collect data. It had four sections, viz. sociodemographic details, employee perception of breastfeeding support questionnaire (EPBS-Q), IYCF practices, details pertaining to maternity-related leave. Employee perception of breastfeeding support questionnaire (EPBS-Q) was used to assess the workplace breastfeeding support.[10] EPBS-Q is a validated questionnaire with a reliability of 0.68–0.89.[11]

To make it adaptive to the local context, few words have been changed in EPBS-Q like "company" was replaced with "hospital"; "manager" was replaced with "head of department/ in charge"; the word "pump" in relation to breast milk was replaced with "express." The face and content validity were assessed by two experts associated with research and policymaking related to breastfeeding in India. The total score ranged from 40 to 160. For the purpose of the study, the midpoint of the range of scores was taken as cutoff for categorizing as good (total scores ≥100) and poor (<100) support. The questionnaire has four sections, and the number of questions varies in each section; therefore, the scores vary in each section. To be able to make a valid comparison between the scores of the sections, we computed standardized mean scores for each section considering a base of 10 questions, that is, a score of 40.

Statistical analysis: Data was entered in Microsoft Excel and cleaned. The cleaned data were imported into SPSS 20.0 software. Categorical variables such as breastfeeding status, maternity leave, workplace breastfeeding support, etc., are presented in the form of proportions, and continuous variables such as age, income, breastfeeding duration, scores of EPBS-Q, etc., as means and standard deviations or median (IQR). Chi-square test was used to compare proportions. Binomial logistic regression was done for finding out the independent predictors of mothers' perception of workplace breastfeeding support. Variables with *P* value less than 0.25 by the bivariate analysis were included in multivariate analysis. Survival analysis was done to find the association between the duration of breastfeeding and workplace breastfeeding support. Log-rank test was used to statistically compare the survival curves. All statistical tests were two-tailed. *P* - value less than 0.05 was considered statistically significant.

Results

Majority (73%) of the participants were nurses, 16% were doctors, and the rest 11% were other supporting staff like lab technicians, medical social workers. Most of the mothers (80%) were graduates or higher degree holders, and the median family income per month was INR 100000 [Table 1].

More than one-third of the participants (37%) were found to have poor workplace breastfeeding support and 63% of them perceived good workplace breastfeeding support. The total possible score range for workplace support from EPBS-Q was 40 to 160, and the observed range was from 76 to 130. The

Table 1: Sociodemographic details of healthcare professionals who were mothers of children 6–60 m from two teaching hospitals of East Delhi (*n*=100)

Variables	Percentages
Age of the mothers (in years)	
Median (IQR)	32 (30,35)
Educational status of mothers	
Professional	16%
Postgraduate	12%
Graduate	52%
Diploma	20%
Designation of mothers	
Doctors	16%
Nurse	73%
Other supporting staffs	11%
Distance from the residence to the workplace (km)	
Median (IQR)	5 (2,13.75)
Type of family	
Nuclear	60%
Joint	40%
Number of family members	
Median (IQR)	4 (4,5)
Total family income per month (INR)	
Median (IQR)	100,000 (100,000, 200,000)
Sex of the child	
Male	54%
Female	46%
Age of the child (in months)	
Median (IQR)	27 (13,42.75)

IQR-Interquartile range

standardized mean score for managerial support, organization support, time and physical space, and co-worker support were 27.30, 26.46, 22.45, and 18.13, respectively. [Table 2] Among these various domains, distribution of responses which contributed to the poorer score was shown in Figure 1.

The early initiation of breastfeeding within one hour was practiced by 54% of the mothers. Exclusive breastfeeding for at least six months was done by 60% of mothers. Timely introduction of complementary feeding for six to eight months was done 64% by mothers. Maternity leave was availed by 92% of the participants. The next common leave was Child Care Leave (CCL), 50 out of 100 participants. The median duration of maternity leave availed by the mothers was 6 months ranging from 2 months to 6 months. Only around one out of ten mothers were aware of the availability of lactation rooms in the workplace, that is, hospitals.

Table 3 shows the association of workplace breastfeeding support and IYCF practices and certain sociodemographic features. The proportion of mothers practicing exclusive breastfeeding for at least six months was higher (70%) among mothers who perceived good workplace breastfeeding support as compared to those who perceived workplace breastfeeding support as poor.

Multivariate binomial logistic regression for analysis of factors for workplace breastfeeding support revealed that odds of perceiving poor workplace breastfeeding support was 3.8 times (CI = 1.61 – 9.35) higher among those who did not exclusively breastfeed for six months compared to those who exclusively breastfeed for at least six months ($P = 0.002$).

Figure 2 shows that mothers who perceived good workplace breastfeeding support were breastfeeding longer than the mothers who perceived poor workplace breastfeeding support though it was not statistically significant ($P = 0.13$).

Discussion

The proportion of mothers with poor workplace breastfeeding support was 37%. The total observed score ranged from 76 to 130, and the mean (SD) score from our study was 103.48 (8.93). Scott *et al*.,[9] in 2019, done a study in North Carolina among employees of a large integrated healthcare system using EPBS-Q, revealed that the total observed score ranged from 63 to 158. Another study by Waite *et al*.,[12] done in Seattle children's hospital among female employees who had a child born within the last five years, in 2015 revealed that observed scores range from 89 to 156, and the mean (SD) total workplace support score was 124.5 (14.99).

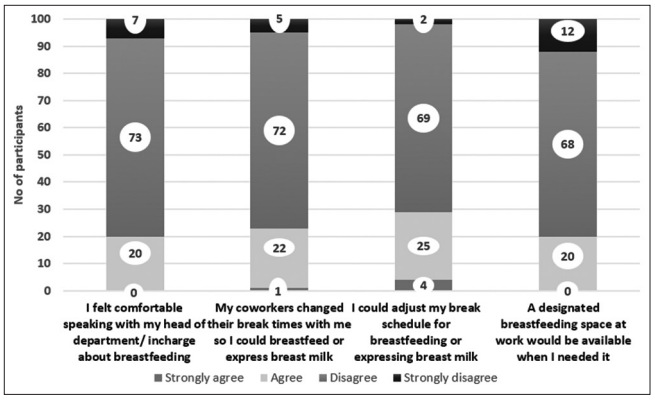

Figure 1: Distribution of responses for questions under various domains of employee perception of breastfeeding support (EPBS) questionnaire among study participants ($n = 100$)

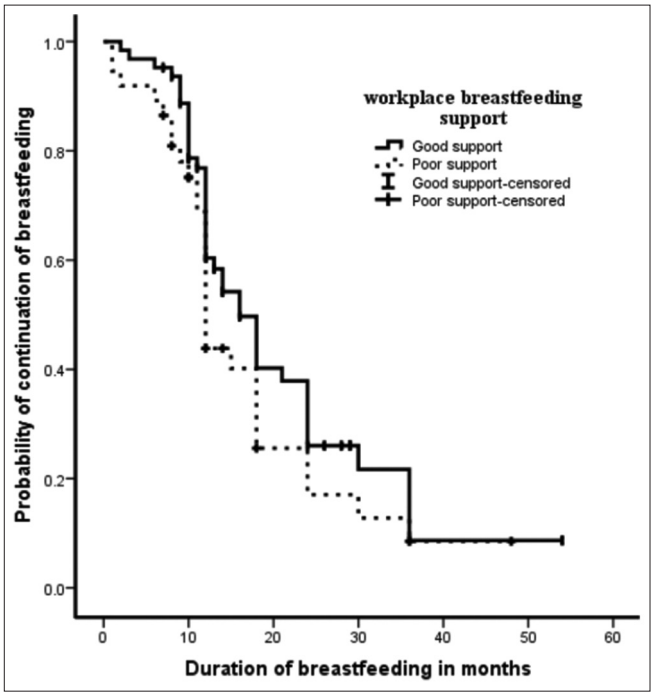

Figure 2: Survival curves depicting the probability of continuation of breastfeeding with respect to the perceived workplace breastfeeding support among mothers of children 6–60 m employed in the teaching hospitals of East Delhi

Table 2: Employee perception of breastfeeding support (EPBS) score among mothers of children 6–60 m employed in two selected teaching hospitals of East Delhi ($n=100$)

Domains	Minimum score	Maximum score	Mean score (SD)	Mean score (standardized)
Organizational support	22	38	29.14 (3.08)	26.46
Managerial Support	23	45	32.56 (3.17)	27.30
Co-worker support	11	23	16.88 (1.97)	18.13
Time and physical space	11	34	24.70 (4.31)	22.45
Total EPBS Score	76	130	103.48 (8.93)	94.34

SD- Standard Deviation

Table 3: Association of workplace breastfeeding support with infant and young child feeding practices, certain sociodemographic, and work-related factors among mothers of children 6–60 m employed in two selected hospitals of East Delhi (*n*=100)

	Workplace breastfeeding support		OR (95% CI)	*P*
	Good support (*n*=63)	Poor support (*n*=37)		
Exclusive breastfeeding (months)				
≥6	44 (73%)	16 (27%)	3.03 (1.30–7.06)	0.009*
<6	19 (47%)	21 (53%)		
Initiation of complementary feeding (months)				
6 to 8	42 (66%)	22 (34%)	1.36 (0.58–3.15)	0.46
<6 and >8	21 (58%)	15 (42%)		
Age (years)				
≤32	36 (67%)	18 (33%)	1.40 (0.34-4.76)	0.41
>32	27 (59%)	19 (41%)		
Designation of mothers				
Doctors	9 (56%)	7 (44%)	0.71 (0.24–2.11)	0.54
Nurses & others	54 (64%)	30 (36%)		
Distance between residence and workplace (Km)				
≤5	37 (67%)	18 (33%)	1.50 (0.66–3.44)	0.32
>5	26 (58%)	19 (42%)		
Night shift performed				
Yes	59 (64%)	32 (36%)	1.25 (0.36–4.26)	0.75#
No	7 (58%)	5 (42%)		
Working hours per week (hrs.)				
<48	16 (64%)	9 (36%)	1.05 (0.41-2.71)	0.90#
≥48	47 (62%)	28 (48%)		
Awareness on availability of lactation room				
Yes	8 (88%)	1 (12%)	5.23 (0.62–43.66)	0.14#
No	55 (60%)	36 (40%)		

*Statistically significant #Fisher's exact test

The maximum observed score was around 150 in the above-quoted studies, whereas in our study, the maximum was only 130. The observed scores were low in our study. The difference in the lactation program, maternity benefits, working hours, etc., among the countries might be the reason for this difference.

Workplace characteristics like working hours, distance between workplace and residence were associated with workplace breastfeeding support in other studies which shows significant difference between full-time workers and part-time workers[13], and also among multinational companies providing job adjustments like relocating mothers' workplace near to their home were found to have higher workplace breastfeeding support than national companies.[14] In our study, the median (IQR) of working hours was 48 (46, 48). The range of working hours among our study participants was very less, as majority of our study participants were nurses, who have uniform working schedule, and also, no such job adjustments were given in our study hospitals. As there was a lack of comparative group in our study, there was no significant association among mothers who perceived good and poor workplace breastfeeding support in terms of their age, occupation (doctors/nurses and supporting staff), distance between residence and workplace, working hours per week or night shift performed. In India, there were no policies that reduce the working hours per week during post-partum period.

Workplace breastfeeding support is multidimensional and, in our study, co-workers support, time, and physical space support were lacking majorly. About 77% of the mothers disagreed that their co-workers helped them continue breastfeeding. More than one-third mothers felt that they could not able to adjust their break schedules in order to breastfeed or express breast milk. A study which compared workplace breastfeeding support among faculty and administrative staffs found significant difference to access to breastfeeding breaks.[15]

In our present study, the survival analysis revealed that the median duration of breastfeeding among mothers who perceived good workplace breastfeeding support was higher when compared to those who had poor support, yet it was not statistically significant. Multiple other studies using different scales for workplace breastfeeding support have revealed an association between support and duration of overall breastfeeding[6,16] and also return to work is the reason for discontinuation of breastfeeding.[17] Sattari *et al*'s study showed each unit increase in organizational support increased breastfeeding duration by 1.3 months.[18] The decreased

access to lactation room among our study participants might be the reason for that. A study done in Minnesota found that women with access to workplace accommodations to support breastfeeding were 1.5 times as likely to continue breastfeeding compared with women without access.[19]

In our study, only one in ten mothers reported the availability of lactation rooms. Both hospitals in our study had lactation rooms, and these lactation rooms were available for both the general public who were admitted in hospitals and also to employees. Weber *et al*. (2011)[6] study about the female employees' perceptions of organizational support for breastfeeding at work found that only a few (19%) had access to a room specially designated for breastfeeding. Non-availability of lactation rooms might be one of the reasons for mothers to think cessation of breastfeeding before returning to work. Women working in other informal and non-hospital settings might have a lesser probability of access to the lactation room. A comparative study was done among hospital and non-hospital employees and found there was a significant association between them for workplace breastfeeding support.[6] Our study population was from a homogenous group, that is, hospital setting, and this might be the reason that our study didn't find any association. Even if lactation room was available, the additional supportive features like provision of nursing breaks, creche facility needs to be reiterated. The Maternity Benefits Act requires employers to provide fully paid nursing breaks until a child reaches the age of fifteen months and creche facility.[20] The current operational positions of these laws require assessment.

More than half (60%) of the mothers practiced EBF for six months. This was similar to the NFHS-5 report for India and Delhi and also to other studies done in Delhi.[2,21-23] There was an association between exclusive breastfeeding for six months and workplace breastfeeding support in our study which was supported by studies done using the same and also different questionnaires.[6,9]

Although less sample size was a limitation, our study contributes to identifying the domains which were perceived as poor workplace breastfeeding support and requires improvement at the local level. There is a possibility of recall bias for certain IYCF indicators and maternity leave details, as the mothers who were having at least one child of fewer than 5 years were included, and also the validation study of the EPBS-Q also done for mothers with child of less than 2 years. The internal reliability of the scale for our study was found to be high (Cronbach's alpha = 0.84). The EPBS-Q score cutoff considered by us for good and poor breastfeeding support was arbitrary and could have implications in the analysis. However, to avoid error on either side, we considered the cutoff as the midpoint of minimum and maximum possible scores. Another limitation was a lack of a qualitative component in our study which could have given more insight into the reasons for the responses given by the mothers. Also, we did not capture the employer's perspectives in this study.

Conclusion

We found that more than one-third of mothers of children 6–60 m perceived poor workplace breastfeeding support. Exclusive breastfeeding till six months of age was associated with perceived workplace breastfeeding support in our study. More studies are needed from India on the impact of workplace support and breastfeeding.

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Conflicts of interest

There are no conflicts of interest.

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