

Benefits of a Dedicated Breastfeeding Facility and Support Program for Exclusive Breastfeeding among Workers in Indonesia

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Purpose: A mother's working environment is believed to be a major determinant of exclusive breastfeeding (EBF) practice. We aimed to define the influence of a facility dedicated to breastfeeding and a breastfeeding support program at the workplace on breastfeeding practice.

Methods: A cross-sectional study was performed in five workplaces. The inclusion criteria were female workers whose last child was between 6 and 36 months old. Observational data were obtained and a questionnaire was filled out. The World Health Organization definition for EBF was used.

Results: Data from 186 subjects (74 office workers and 112 factory workers) were collected. Just over half (52%) of the mothers were between 20 and 46 years old, 75.3% had graduated from high school and university, 12.9% had more than two children and 36.0% owned a house. The prevalence of EBF during the last 6 months was 32.3%. A proper dedicated breastfeeding facility was available for 21.5% of the mothers, but only 7.5% had been in contact with a breastfeeding support program. The presence of a dedicated breastfeeding facility increased EBF practice almost threefold, by an odds ratio (OR) of 2.74 and a 95% confidence interval (CI) of 1.34-5.64 ($p < 0.05$). Knowledge of the breastfeeding support program increased EBF practice by almost six times (OR, 5.93; 95% CI, 1.78-19.79) ($p < 0.05$).

Conclusion: Our findings suggest that Governments should make it obligatory for employers to offer a breastfeeding support program and a dedicated breastfeeding facility at the workplace as these simple measures significantly increase EBF.

Key Words: Breast feeding, Manpower, Dedicated breastfeeding facility, Breastfeeding support program

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INTRODUCTION

Exclusive breastfeeding (EBF) practice is influenced by many factors. Up to the age of 6 months it is positively associated with rural residence, Malay speaking, non-working, smoking and multiparous mothers, term infants, having a supportive husband and the mother practicing bed-sharing [1]. The working status of mothers influences EBF practice and a favorable working environment and support in the workplace promotes EBF practice [2]. EBF is usually high during maternity leave in Indonesia and a national health survey found that the prevalence was 40% in 2003 [3], before falling to 32% in 2012 [4]. The increasing number of working mothers and regulations about the duration of maternity leave were identified as the cause for this reduction. New mothers only receive three months' maternity leave, including the pre-delivery period [4].

In 2012, the Republic of Indonesia issued Governmental Regulation number 33, which recommends at least 6-months EBF, protects mothers providing EBF, encourages families and local governments to support EBF and suggests sanctions for employers who do not comply with the regulations. However, the regulations are not being followed sufficiently due to a lack of control. Although a minority of employers in Indonesia have introduced dedicated breastfeeding facilities and adopted a breastfeeding program, many do not provide support to breastfeeding mothers. Therefore, our aim was to evaluate the impact of these variables on the prevalence of breastfeeding. Our objectives were to determine the prevalence of EBF among female employees and how many female employees benefitted from a proper dedicated breastfeeding support facility and a breastfeeding support program at their workplace. We also wanted to determine the effect of a proper dedicated breastfeeding support facility and breastfeeding support program in the workplace on the prevalence of EBF.

MATERIALS AND METHODS

A cross-sectional study was performed between December 2012 and February 2013 in five workplaces in Jakarta: three were Governmental offices and two were factories.

The inclusion criteria were female employees whose children were between 6 and 36 months old. Data were obtained by questionnaires, filled-out by the employees, and by a workplace visit by one of the co-authors (Ray W Basrowi). We calculated the sample size using the single proportion sample formula for a descriptive study and this indicated that a minimum of 160 participants were needed. A chi-square test was performed to analyze cross-tabulated data.

We used the World Health Organization (WHO) definition of EBF, which is a baby who only receives breast milk without any other liquids, such as water, formula milk, tea, honey and orange juice, and any solid food except vitamins and medication [5]. A dedicated breastfeeding facility was defined as a special room that was only used for that purpose, which was closed off, spacious, ventilated or air conditioned with proper lightning and was equipped with a refrigerator, hand washing facilities and a dedicated seat or bed. A breastfeeding support program was defined as one that was created for mothers with a baby up to the age of 12 months that included education and support provided by dedicated personnel, such as a lactation counsellor, doctor, midwife, nurse or other trained staff. Our study protocol was approved by the Faculty of Medicine at the University of Indonesia.

RESULTS

A total of 186 mothers participated in our research: 74 office workers and 112 factory workers. Their ages ranged from 20 to 46 years (mean 32.04 ± 5.05 years) and 75% graduated from high school or university (Table 1). Even though EBF was well defined in this study, in practice it was difficult to control for correct EBF. In order to minimize bias, screening questions were used.

Mothers were asked if they thought they were giving EBF to their latest baby and 75% answered yes. We then asked how long they had been providing EBF and just under half (47%) said they had been providing EBF for at least 6 months. But then they were asked when they had started giving their baby formula milk or solids and this made it clear that only 32.2% had actually been practicing EBF up to the age of six months. Therefore, the perceived prevalence of EBF following the WHO criteria was 75% compared to a real prevalence of EBF of 32.3-32% of the whole group or 43% of the group who thought they had practised EBF up to 6 months of age. There was no initial mention of 75%.

Table 2 shows the cumulative increase in the number of the infants that were not EBF as they got older. In addition to the absence of an adequate workplace facility, the most important influencing factors for EBF included the end of maternity leave and the introduction of solids.

Table 3 shows that the percentage of EBF was

Table 1. Social Background of the Participants (n=186)

Variable	n (%)
Education level	
Low	46 (24.7)
Middle	72 (38.7)
High	68 (36.6)
Number of children	
One	97 (52.2)
Two	67 (36.0)
More than two	22 (11.8)
Status of home	
Owned	68 (36.6)
Rented	77 (41.4)
Owned by relatives	41 (22.0)

Table 2. Percentage of Infants That Were not Exclusively reastfed, according to Age (n=186)

Age (mo)	n (%)	Cumulative %
0-1	26 (14.0)	14.0
1-2	19 (10.2)	24.2
2-3	10 (5.4)	29.6
3-4	30 (16.1)	45.7
4-5	15 (8.1)	53.8
5-6	26 (14.0)	67.8
>6	60 (32.2)	100.0

Table 3. Cross Tabulation of Factors Related to Exclusive Breastfeeding Practice

Factors	EBF	No EBV	OR	CI	p-value
Education level					
High*	33 (48.5)	35 (51.6)	9.93	3.22-30.59	† - * < 0.001
Middle†	22 (30.6)	50 (69.4)	4.74	1.52-14.77	† - † 0.004
Low†	4 (8.7)	42 (91.3)	Ref.		
Number of Children					
1*	38 (40.0)	57 (60.0)	2.58	0.89-7.46	† - * 0.074
2†	16 (23.9)	51 (76.1)	1.24	0.40-3.83	† - † 0.705
>2†	5 (20.8)	19 (79.2)	Ref.		
Status of home					
Owned*	26 (38.8)	41 (61.2)	0.86	0.39-1.87	† - * 0.698
Rented†	16 (20.8)	61 (79.2)	0.34	0.15-0.78	† - † 0.009
Owned by relatives†	18 (42.9)	24 (57.1)	Ref.		
Workplace					
Office*	36 (48.6)	38 (51.4)	3.33	1.77-6.25	* - † < 0.001
Factory†	24 (21.4)	88 (78.6)			
Proper dedicated breastfeeding facility					
Exists*	20 (50)	20 (50)	2.62	1.27-5.38	* - † 0.008
Does not exist†	40 (28.2)	102 (71.8)			
Breastfeeding support program					
Exists*	10 (71.4)	4 (28.6)	5.93	1.78-19.79	* - † 0.001
Does not exist†	51 (29.7)	121 (70.3)			

EBF: exclusive breastfeeding, OR: odds ratio, CI: confidence interval. Ref.: reference.

higher in women with one child than women with more children and that EBF decreased as the number of children rose. Education levels showed a similar trend: the lower the education level, the lower the percentage of EBF. Office workers had a higher percentage of EBF than factory workers.

Just over a fifth (21.5%) of the mothers had access to a proper dedicated breastfeeding support facility and only 7.5% been fitted from a breastfeeding support program at their workplace. A cross tabulation analysis showed that the availability of a proper dedicated breastfeeding facility increased EBF practice almost three times, with an odds ratio (OR) of 2.74 and a 95% confidence interval (CI) of 1.34-5.64 ($p < 0.05$). The existence of a breastfeeding support program at the workplace increased EBF practice by almost six times (OR, 5.93; 95% CI, 1.78-19.79; $p < 0.05$).

DISCUSSION

The prevalence of EBF for 6 months was 32.3% in this study, which is very similar to the national prevalence in Indonesia (32%). Another Indonesian study evaluated breastfeeding rates and the impact of a lactation support program, which formed part of a multilevel promotion program for EBF in two rural public health centers in the Demak district of Central Java. A total of 599 participants were enrolled: 163 mother-infant pairs, 163 fathers, 163 grandmothers, 82 community leaders and 28 midwives. Mothers with the best breastfeeding knowledge had the longest EBF duration, similar to our findings [6]. Nearly three-quarters (73%) of mothers with a knowledge score of more than 80 breastfed their babies, with a hazard ratio (HR) of 0.27 (95% CI, 0.15-0.48), compared to mothers who had a knowledge score of < 60 . Again this is comparable with our findings. Factors that shortened EBF duration were lack of support from the woman's mother (HR, 2.04; 95% CI, 1.33-3.14), receiving formula samples on discharge from the maternity unit (HR, 1.99; 95% CI, 1.25-3.16) and problems with breast engorgement (HR, 1.97; 95% CI, 1.32-2.94) [6]. Good maternal

breastfeeding knowledge was the only factor associated with longer duration of EBF. The decline of EBF in our study is comparable to other findings in the literature

The prevalence of EBF is low in Indonesia compared to countries such as Malaysia and Taiwan. The rate of EBF is reported to be 49% in office workers in Malaysia and as high as 66.9% in Taipei, Taiwan [1,2]. The low prevalence of EBF in Indonesia, and in this study, may be related to lack of knowledge. Recommendations for improving EBF include providing better support for working mothers by extending maternity leave and establishing workplace daycare centers for infants. Expanding the urban health extension program to teach more pregnant women and mothers about appropriate feeding practices for infants and young children and how to express breast milk may improve their breastfeeding knowledge [7]. Education has a significant influence on EBF [8]. The answers to the screening questionnaire indicated that 75% of the mothers in the Jakarta study thought they were providing EBF to their infants in the first six months, but the reality was that less than half of them were: 32% of the total group or 43% of the group that thought they were providing EBF. Although a support program is of major importance, some studies have reported negative results. Receiving one-to-one prenatal and postnatal breastfeeding education from a lactation consultant has been associated with an insignificant increase in EBF during the first three postpartum months in low-income mothers [9]. These negative results demonstrate that receiving information on just one occasion was insufficient to increase EBF rates. However, training health professionals had a positive impact on infant feeding practices and contributes to the promotion of child health [10].

Paid employment is a critical barrier to successful breastfeeding and mothers receive little help [11]. A study carried out in the USA, found that few companies (3%) had written policies on breastfeeding or using breast pumps to express milk at work. However, the majority of companies allowed women to express breast milk in the workplace (94%) and

provided time (73%) and a proper space, other than a toilet, to express milk (78%) [12]. But only 22% of the companies allowed breastfeeding on company premises and only 32% provided a designated room solely for breastfeeding or pumping [12]. Breastfeeding interventions that support EBF in working mothers should include education and training for healthcare professionals, regulation and enforcement of workplace breastfeeding support policies and support from peers who act as breastfeeding role models. Culturally adapted interventions are needed to support breastfeeding [11].

We know that the intervention described in this trial was unique, because a Cochrane review from 2012 concluded that: “no trials have evaluated the effectiveness of workplace interventions in promoting breastfeeding among women returning to paid work after the birth of their child” [13]. The impact of such interventions on outcomes is also unknown. Randomized controlled trials are required to establish the benefits of various types of workplace interventions to support, encourage and promote breastfeeding among working mothers [13]. This study showed that a proper dedicated breastfeeding facility in the workplace, and a breastfeeding support program, were significantly related to EBF, confirming the data provided by Weber et al. [14]. The availability of a proper dedicated breastfeeding facility increased EBF almost three times and the availability of a breastfeeding support program increased EBF almost six times. Companies employing a high number of females of reproductive age should be encouraged to offer facilities that promote breastfeeding. Only 7.5% of the mothers in our study had the opportunity to benefit from a breastfeeding support program.

There are some issues that need to be tackled as a result of this study including the low prevalence of EBF, which is likely to be related to lack of knowledge. Breastfeeding support programs should be the first priority and providing information on the benefits of EBF for the infant and the mother is a good starting point. Once a breastfeeding support program has been established, a dedicated breastfeeding facility should be created.

A combination of initiatives provided the best results. The primary goals of one 12-month project was to educate 20 businesses about breastfeeding support in the workplace, engage 10 businesses in implementing the “business case for breastfeeding” and assess sustainability via documented policy and environmental changes and integration of the “lactation support program” into the business infrastructure [15]. More than 20 businesses were educated about the “business case for breast feeding”, 17 engaged in the project and 14 significantly accelerated environmental changes, developed a “lactation support program”, wrote policies and implemented physical and social environment changes ($p \leq 0.001$). A brief follow-up study revealed that all 14 employers maintained their programs eight months after the program ended, with accelerated change, policy enforcement and changes to the physical environment ($p \leq 0.05$). The “business case for breast feeding” provided an effective approach, as it helped employers to establish and maintain lactation support programs in the workplace across several cities [15]. Enabling women to continue breastfeeding at work has benefits for the infant, employee and organization [14].

Our study found that the prevalence of EBF in Indonesia was 32.3 that 21.5% of the mothers were exposed to a proper dedicated breastfeeding support facility and that only 7.5% were able to benefit from a breastfeeding support program at their workplace. A proper dedicated breastfeeding facility increased EBF practice three times and a breastfeeding support program at the workplace increased EBF practice almost six times. It is likely that the combination of both of these initiatives is the key to success. Therefore, governments should force employers to offer breastfeeding support programs and facilities in the workplace.

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