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Original Article

Family support and exclusive breastfeeding among Yogyakarta mothers in employment

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Background and Objectives: Exclusive breastfeeding provides many benefits to both infants and mothers. Despite the introduction of laws aimed at protecting the practice of exclusive breastfeeding, the coverage of exclusive breastfeeding remains low, particularly for working mothers. **Methods and Study Design:** This cross-sectional study recruited working mothers employed in medium and large companies in Bantul District, Daerah Istimewa Yogyakarta, Indonesia. The study participants were 158 working mothers whose children were aged 6–12 months, and they were selected using the probability proportional to size technique. The data were analyzed using descriptive statistics, chi-square tests, and multiple logistic regression. **Results:** Adequate family support for breastfeeding (OR: 2.86; 95% CI: 1.25–6.53) and a high paternal education level (OR: 2.68; 95% CI: 1.11–6.48) were significantly associated with the practice of exclusive breastfeeding among working mothers. However, the infant's sex and age, parity, and the mother's age and education level were unassociated with exclusive breastfeeding. **Conclusion:** Family support and a high paternal education level are crucial in enabling working mothers to practice exclusive breastfeeding. Interventions that promote exclusive breastfeeding should focus on involving the husband and other family members in health care programs related to breastfeeding.

Key Words: exclusive breastfeeding, family support, paternal education level, working mothers

INTRODUCTION

Exclusive breastfeeding provides short- and long-term benefits to infants and their mothers.[1] It is associated with reduced risks of morbidity and mortality in infants, and it improves maternal health.[1-5] The fifth global target proposed by WHO is to increase the rate of exclusive breastfeeding to 50% by 2022.[6] However, the coverage of exclusive breastfeeding remains low, both globally and in Indonesia.[7,8] Data from Indonesia revealed that the rate was 25.6% in 2013, and it was much lower among employed mothers than among unemployed mothers.[9]

Maternal work contributes to the reduced rate of exclusive breastfeeding.[9] Breastfeeding is a learned behavior that can be performed by all mothers with family support.[10] In Indonesia, feeding only breast milk to babies in the first 6 months without any additional food or drink is stipulated under the Government Regulation Number 33 of 2012; this regulation also guarantees the rights of babies to breast milk. However, in practice, achieving exclusive breastfeeding is difficult for working mothers, because they must return to work relatively early because of their short maternity leave, no break times being given for nursing, and a lack of equipment for expressing breast milk.[11]

Family support has been found to be associated with the practice of exclusive breastfeeding.[12] Some qualitative studies have also revealed that paternal and family support contribute to the success of exclusive breastfeeding practice.[11,13] Nevertheless, evidence supporting this association among working mothers remains limited. Therefore, the present study was aimed at proving the relationship between family support and the practice of exclusive breastfeeding among working mothers in Bantul District, Daerah Istimewa Yogyakarta, Indonesia.

MATERIALS AND METHODS

This cross-sectional study was conducted between December 2016 and March 2017. This is a part of a larger study conducted by Alma Ata Centre for Healthy Life and Food (ACHEAF). The study population comprised only working women of reproductive age (15–64 years) who were employed in medium and large companies in Bantul District, Daerah Istimewa Yogyakarta, Indonesia. The participants were 158 working mothers whose infants were aged 6–12 months. We categorized companies with a total of 51–200 workers as medium companies and those with more than 200 workers as large companies. The probability proportional to size technique was em-

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Table 1. Items from the family support questionnaire

Emotional support
Mother was praised when breastfed the baby
Mother was convinced to keep providing breastmilk up to six months
All of the burdens felt by mother were listened
Mother was motivated to always give expressed breastmilk to her baby during her work
Mother was helped to face breastfeeding problems
Informational support
Mother was provided with information about giving only breastmilk in the first six months without any additional food or drink
Mother was informed that during her work, she should have only gave breastmilk to her baby
Mother was helped to seek information about how to provide breastmilk during her work
Mother was informed on how to prepare expressed breastmilk to her baby during her work
Mother was advised to keep giving breastmilk although she returned to work
Instrumental support
Mother was helped to provide enough food during breastfeeding
Mother was helped to care the baby during her work
Mother was accompanied when checked-up her and her baby's health
Mother was given adequate resting time between breastfeeding time
Mother was helped to store expressed breastmilk in the refrigerator/freezer in order to keep its quality
Appraisal support
Mother was accompanied and guided when breastfed the baby
Mother's decision to give exclusive breastfeeding was approved
Mother was guided to express and store expressed breastmilk
Mother was guided to provide breastmilk during her work

Table 2. Distribution of participant's characteristics and main variables

Variables	n	%
Characteristics		
Infant's sex		
Male	87	55.1
Female	71	44.9
Infant's age (months)		
6-8	89	56.3
9-12	69	43.7
Parity		
≤2	143	90.5
>2	15	9.5
Mother's age (years)		
19-29	68	43.0
≥30	90	57.0
Mother's education level		
High	103	65.2
Low	55	34.8
Husband's education level		
High	95	60.5
Low	62	39.5
Main variables		
Exclusive breastfeeding		
Yes	35	22.2
No	123	77.8
Family support		
Good	82	51.9
Poor	76	48.1

ployed to select the study participants.

The WHO definition of exclusive breastfeeding was adopted in this study.[11] Family support was defined as support received from family members to ensure the success of exclusive breastfeeding among working mothers. A questionnaire on family support was administered to measure the emotional, informational, instrumental, and appraisal support given by the husband and grandmothers (Table 1). Maternal and paternal education levels were categorized as high if the mother and the husband had completed a minimum education of senior high school and as low if they completed junior high school or lower. The validity and reliability of the questionnaire were tested. A signed informed consent was obtained from each participant. Ethical approval number KE/AA/I/22/EC/2017 was granted by the Ethics Committee Board of Alma Ata University.

The data were analyzed using the chi-square test and multiple logistic regression with the significance level set as $p<0.05$. The final logistic regression model was determined through stepwise backward selection. All statistical analyses were performed using STATA 13.0 (Stata Corporation, College Station, TX, USA).

RESULTS

A total of 158 women participated in this study. However, only 12 clusters or 9 companies were included in the study due to the low response rates. The frequencies and percentages of the participants' characteristics and main variables are presented in Table 2.

Table 2 shows that most infants were male (55.1%) and aged 6–8 months (56.3%). Almost all mothers had a parity of two or less (90.5%), and most were older than 29 years (56.9%). Both maternal and paternal education levels were high (65.2% and 60.5%, respectively). The proportion of mothers who practiced exclusive breastfeeding was only 22.2%, and 51.9% of mothers reported receiving family support for breastfeeding.

Based on Table 3, 30.5% children who had good family support received exclusive breastfeeding, where only 13.2% children with poor family support were exclusively breastfed. Among children with high paternal education, there was 28.4% exclusively breastfed. On the other hand, children with low paternal education who got exclusive breastfeeding were 12.9%. No significant different in exclusive breastfeeding proportion between

Table 3. Bivariable analysis of factors associated with exclusive breastfeeding among working mothers

Variables	Exclusive breastfeeding				OR (95% CI)	*p*
	Yes		No			
	n	%	n	%		
Family support						
Poor	10	13.2	66	86.8	1	
Good	25	30.5	57	69.5	2.89 (1.29-6.44)	0.01
Infant's sex						
Male	23	26.4	64	73.6	1	
Female	12	16.9	59	83.1	0.57 (0.26-1.23)	0.15
Infant's age (months)						
6-8	20	22.5	69	77.5	1	
9-12	15	21.7	54	78.3	0.96 (0.45-2.03)	0.91
Parity						
≤2	34	23.8	109	76.2	1	
>2	1	6.7	14	93.3	0.23 (0-1.43)	0.13
Mother's age (years)						
19-29	11	15.2	57	84.9	1	
≥30	24	26.7	66	73.3	1.88 (0.86-4.13)	0.12
Mother's education level						
Low	11	20.0	44	80.0	1	
High	24	23.3	79	76.7	1.22 (0.55-2.68)	0.63
Husband's education level						
Low	8	12.9	54	87.1	1	
High	27	28.4	68	71.6	2.68 (1.15-6.25)	0.02

sex, age, parity, maternal age, and maternal education level.

Bivariable analysis results indicated that adequate family support was significantly associated with a higher likelihood of mothers practicing exclusive breastfeeding (OR: 2.89; 95% CI: 1.29–6.44). Paternal education level was also significantly related to exclusive breastfeeding (OR: 2.68; 95% CI: 1.15–6.25). We included all variables with $p<0.25$ in multivariate analyses for further analysis. The results of the final multivariate model (Table 4) revealed that family support and paternal education level were the only factors associated with practicing exclusive breastfeeding among working mothers. Specifically, mothers who received adequate family support were associated with a 2.85-fold increased likelihood of practicing exclusive breastfeeding (relative to those for whom family support was poor). Women whose husband had a high education level were 2.68 more likely to practice exclusive breastfeeding (relative to those whose husband had a low education level).

DISCUSSION

The number of working women in Indonesia has begun to increase due to the demand to improve family welfare. Many women have switched from the economically inactive to be labor force participants.[14] In Bantul District, women who worked the non-agricultural sector have increased from 82.6% in 2014 to 84.6% in 2015.[15,16] Bantul is one of districts in Yogyakarta, a province that that had the highest life expectancy in Indonesia. One of the factors contributing was health aspect. It has been shown by the reduction of maternal, neonatal and child mortality rates; improvement in health care system; and nutritional status in the population.[17,18] Specifically, nutritional status of infant and young children was affected by their feeding practices, including the pactice of breastfeeding.[19] On the other hand, strong cultural factors in Yogyakarta might affect the feeding practices such as giving sugar water and or *tajin* (water from boiled rice), perception of baby crying because they want to eat, and discarding colostrum as it considered as stale milk.[20] In this study, the coverage of exclusive breastfeeding among working mothers was 22.2%. This finding confirms that of the latest large-scale study, in which the exclusive breastfeeding proportion in Indonesia was only 23.9% among working mothers employed in the private or government sector and 25.9% among laborers.[9] However, this rate is still far from the WHO global target (50%) and the Indonesian national target (80%).[6,8] The low proportion of exclusive breastfeeding among working mothers may be influenced by several factors such as maternity leave time, break time for nursing, and workload.

Table 4. Multivariate analysis (final model) of factors associated with exclusive breastfeeding among working mothers

Variables	OR (95% CI)	*p*
Family support		
Good	2.86 (1.25-6.53)	0.01
Poor	1	
Husband's education level		
High	2.68 (1.11-6.48)	0.03
Low	1	

In this study, adequate family support was significantly associated with practicing exclusive breastfeeding. This finding is consistent with that of a previous study that indicated that family support can increase exclusive breastfeeding achievement.[11,21] Family members can improve exclusive breastfeeding adherence by emphasizing that breast milk provides the highest source of nourishment for infants, even when they return to work. To provide support to working mothers, husbands and grand-

mothers can contribute to childcare by providing babysitting, purchasing or preparing food, and feeding children.[12] Family support can also enhance maternal self-efficacy.[13] A qualitative study in Myanmar has highlighted that mothers require paternal support because fathers can also assist in sourcing information on breastfeeding in addition to providing encouragement and motivation.[22]

The five main roles for husband support are knowledge, positive attitude, involvement in decision-making, practical support, and emotional support for breastfeeding. A husband's positive or negative attitude toward breastfeeding can influence the mother's breastfeeding behavior. A negative attitude influenced by sexual preferences, such as the fear that breastfeeding will distort the breast shape, may cause husbands to disapprove of breastfeeding. Moreover, a positive attitude among husbands may develop when the household economic advantage of breastfeeding over the purchase of infant formula is evident.[23] Grandmothers may also play significant roles in exclusive breastfeeding, particularly when they reside with the mother.[11]

In this study, paternal education level was associated with a higher likelihood of mothers practicing exclusive breastfeeding. The early weaning of babies before the age of 6 months was related to low paternal education.[24] This is in agreement with a study in Dhaka, which revealed that the higher education level of fathers, but not mothers, was related to knowledge about breastfeeding.[25,26] In addition, fathers' education affects the perception of breastfeeding. Therefore,paternal educationcan be a major step towards successful breastfeeding.[26]

Strengths and limitations

This study contributes to the growing evidence about factors associated with exclusive breastfeeding and provides new insights into how family support may be critically associated with working mothers' practice of exclusive breastfeeding. We combined several types of support (emotional, informational, instrumental, and appraisal) in regard to family support by husbands and grandmothers. The study has some limitations, however. Information about the exclusive breastfeeding variable was obtained from respondents whose children were aged 6–12 months at the time of interview, potentially leading to recall bias. Moreover, because of the cross-sectional design, potential cause–effect relationships between the variables could not be identified. In addition, only 12 of 30 clusters were included in this study because of the low response rate from employers. Despite participants being lost to follow up because of this problem, the minimum sample size was achieved.

Conclusions and Consequences

Family support and paternal education level are significantly associated with the practice of exclusive breastfeeding among working mothers. Mothers who receive adequate family support and whose husband is well educated are more likely to practice exclusive breastfeeding than those with poor family support and whose husband has limited education. The infant's sex and age, parity, and the mother's age and education level are unassociated with exclusive breastfeeding achievement.

The holistic approach to successful breastfeeding in Susiloretni in Central Java by community health workers, traditional birth attendants, and government has played a significant role in the implementation of breastfeeding legislation.

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AUTHOR DISCLOSURES

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