Do Health Workers Play a Role in Exclusive Breastfeeding among Working Mothers in Industrial Area?

Tria Astika Endah Permatasari and Ni Wayan Sudiarini

1 Faculty of Medicine and Health, Universitas Muhammadiyah Jakarta, Jl. K.H. Ahmad Dahlan Cirendeu, Ciputat, Jakarta, 15419, Indonesia
2 Health Office of Bogor District, Jl. Raya Tegar Beriman, Kelurahan Pakansari, Cibinong Sub-District, Bogor, 16710, Indonesia

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Summary The culture of breastfeeding has been inherited for a long time in Indonesia. Changes in lifestyle have caused an increase in the number of working mothers. Results of the Basic Health Research in 2018 reported exclusive breastfeeding coverage was decreased as much as 17% between 2013 and 2018. The purpose of this study was to determine association of health workers support and other factors on exclusive breastfeeding practice among working mothers in industrial area. Methods: A cross-sectional study was conducted in April-June 2018 in industrial area at Cibinong, Bogor, Indonesia. As many as 126 working mothers who had babies aged 7–24 mo were selected using a purposive sampling technique. Results: Only 37.3% of working mothers breastfed their babies exclusively. The support of health workers was the most dominant factor associated with exclusive breastfeeding ($p=0.001; \text{OR}: 6.210 \ (1.184–6.257)$). Husband’s support ($p=0.014; \text{OR}: 5.228 \ (1.306–10.234)$) were also associated with exclusive breastfeeding. Working mothers who obtained support from health workers were 6.210 times more likely to breastfeed exclusively as compared to mothers who did not receive support from health workers. Conclusions: Actual and direct support from husband and health workers from the period of pregnancy to lactation is important for the success of exclusive breastfeeding among working mothers.

Key Words exclusive breastfeeding, working mothers, health workers, industrial area

Breastfeeding provides benefits that extend far beyond nutrition for babies. Scientific evidence consistently indicates that breastfeeding exclusively to babies during the first six months after birth was the best prevention for infection and noncommunicable disease, and support emotional and intelligence development (1–3). Globally, scaling up exclusive breastfeeding (EBF) rate can save 823,000 lives per year among children ages five years old and younger (4). The benefits of EBF for maternal health are also indisputable. EBF can reduce the risk of breast and ovarian cancer, diabetes, and keep the mother’s psychoemotion (5, 6). Moreover, breastfeeding is positively related to human capital in the next period of life. It is one of the most effective investments a country can have to ensure a brighter and healthier generation as well as country’s economy (7, 8).

Industrialization contributes to the changes in lifestyle and other socio-cultural practices. This has an effect on the increasing number of working mothers as a major factor in EBF failure (9–11). Generally in many countries, less than half of working mothers give EBF. In the Fazan zone, of the Somalia regional state of Ethiopia in 2016, showed that EBF coverage among working mothers was 24.8% (12). Oftenly, the policy in the workplace does not support mothers for EBF. World Health Organization (WHO) recommends giving early breastfeeding initiation (EBI) within one hour of birth and continuing with EBF, which is defined as giving only breastmilk without any foods or liquids for the first six months of life (8).

In Indonesia, the culture of breastfeeding also been inherited for a long time. The rules for EBF are regulated in Constitution Number 36 of 2009 concerning health and Government Regulation Number 33 of 2012 (13, 14). It is also stipulated in joint regulations of The Minister of Women Empowerment, The Minister of Labor and Transmigration, and The Minister of Health in 2008 about improvement of breastfeeding during work time at workplace (15). Nevertheless, the Basic Health Research in 2018 reported that EBF rates was decreased as much as 17% from 54.3% (2013) to 37.3% (2018) (16). This correlates with the increasing Employment to Population Ratio (EPR) for women from year to year (17).

There are several factors that cause the cessation of EBF among working mothers, which includes internal factors such as breastfeeding intention, maternal health and nutritional status, and sociodemographic (18–21) and external factors such as workplace support (policy of maternity leave, breastfeeding facilities, the rules of hours and breastfeeding breaks, work type and duration per day), husband’s support and health workers...
support (11, 22, 23). Nevertheless, evidence supporting this association among working mothers remains limited. Thus the present study was undertaken to determine the association of health workers support and other factors on EBF practice among working mothers in industrial area.

MATERIALS AND METHODS

Study participants. A cross-sectional study was conducted in May-June 2018 in industrial area at Cibinong sub-district, Bogor, West Java Province, Indonesia, 60 km away from the capital city (DKI Jakarta Province). As many as 126 working mothers who work as laborers in industrial areas were selected using a purposive sampling technique with inclusion criteria: 1) mothers who had babies aged >6–24 mo, 2) baby’s birth weight was at least 2,500 g, babies were born at term (minimally 38 gestational weeks), and mothers and babies do not suffer from serious illness during the period of exclusive breastfeeding (0–6 mo). The minimum number of participants is calculated using hypothesis testing for a single population proportion (24).

Ethical approval number 008/PE/KE/FKK-UMJ/IV/2018 was granted by the Commission of Health Research Ethics of the Faculty of Medicine and Health, University of Muhammadiyah Jakarta. The written approval regarding the procedure and research objectives was obtained from every participant, before the study was conducted.

Data collection and analysis. All variables were collected primarily by interviewing the working mothers using a questionnaire. The validity and reliability of the questionnaire were tested. Exclusive breastfeeding as dependent variable was assessed using standard questionnaire adopted from WHO and the Ministry of Health of he Republic of Indonesia. Breastfeeding practice according to WHO definition was categorized into 4 categories: 1) never breastfeed, 2) partial breastfeeding, 3) predominant breastfeeding, and 4) exclusive breastfeeding (24, 25). Independent variables in this study were maternal characteristics (mother’s age, mother’s and husband’s education level, knowledge, and mass media exposure), breastfeeding support at workplace, breastfeeding exposure form mass media, husband’s support, and health workers’ support.

Mother’s age was categorized based on reproductive risk age (‘high risk’, if less than 20 y and more than 35 and ‘low risk’, if 20–35 y). Mother’s and husband’s education levels consist of elementary school (≤6 y), junior high school (7–9 y), Senior high school (10–12 y), and college (>12 y). Then it was categorized as ‘high’ if the mother and the husband had completed a minimum education of senior high school or higher and as ‘low’ if they completed junior high school or lower. Mother’s knowledge about breastfeeding was classified into three categories: poor, fair, and good (26). Social media exposure was grouped as ‘less exposed’ if mothers were exposed less than 3 times per week, and ‘quite exposed’ if mothers were exposed equal or more than 3 times per week. Husband’s support includes emotional, informational, instrumental, and appraisal support given by the husband (27). Support at workplace consists of questions about policy on maternity leave, availability of nursery room and breastfeeding facilities, supervisor’s support, and regulation on breastfeeding breaks (11). A questionnaire on health worker’s support was administered to measure the all efforts given with regard to breastfeeding information (counseling/training/assistance) during pregnancy (antenatal care) and EBF period, implementation of ‘rooming in’ for mothers-babies after childbirth, implementation of EBI, information giving about infant formula milk disadvantages, not providing infant formula and other food/drinks during EBF period, and home visit after childbirth for breastfeeding assistance. The health worker’s support was categorized as ‘Good Support’ if the mother obtained at least 4 of the 5 treatments assessed (28).

The data were analyzed using the chi-square test and multiple logistic regression with the significance level set as $p<0.05$. All statistical analyses were performed using SPSS version 25.0.

RESULTS

A total of 126 working mothers participated in this study. The frequencies and percentages of the maternal characteristics and main variables are presented in Table 1. Table 1 shows that most mother’s age were 20–35 y (55.6%) and education level were low (junior high school 35.7% and elementary school 26.2%). Generally, husband’s education level was higher than mother’s education level. Most mothers had good (46.8%) and fair (46.8%) knowledge. More than half of the mothers were less exposed (54.0%) to social media in breastfeeding. Mothers who got good support to breastfeed exclusively from their husbands, support at workplace, and health worker were 80.2%, 39.7%, and 48.4% respectively. The proportion of mothers who practiced exclusive breastfeeding was only 37.3%.

Table 2 shows that most of mothers (76.2%) got breastfeeding information from health workers including midwives, obstetricians, general practitioners, and breastfeeding counselor from the pregnancy period particularly during ANC visit. As many as 70.6% mothers were rooming in with their babies, 47.6% put the babies to the breast within the first hour of life, 54.0% mothers had breastfeeding information about formula’s disadvantages from health workers, 74.6% did not provide formula or other food/drinks other than breastmilk, and only 30.2% health worker visit mother’s home for breastfeeding assistance.

Based on Table 3, 62.3% mothers who had good health worker support breastfeed exclusively, where only 13.8% mothers with poor health worker support were breastfeed exclusively. Bivariate analysis results indicated that the support from health workers significantly ($p<0.05$) related to EBF. In addition to that, mother’s age, mother’s educational level, and social media exposure were also significantly related with
breastfeeding ($p<0.05$). While other variables such as husband’s educational level, mother’s knowledge, and husband’s support showed no significant relationship with EBF. For further analysis, we included all variables with $p<0.25$ in multivariate analysis. The results of the final multivariate model (Table 4) revealed that health workers’ support, husband’s support and mother’s age were related to EBF practice. Specifically, mothers who received good health worker’s support were associated with a 6.210 fold increased likelihood of practicing EBF (relative to those for whom health support was poor). Mothers who received good husband’s support were 5.228 more likely to practice EBF (relative to those for whom husband’s support was poor).

**DISCUSSION**

In this study, the coverage of exclusive breastfeeding among working mothers was 37.3%. This finding was higher compared to 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 (29). While other research in Yogyakarta, Indonesia based on Basic Health Research in 2013 showed that exclusive breastfeeding coverage was 22.2%. Nevertheless, this rate shows a very high gap with the WHO global target (50%) and the Indonesian national target (80%) (8, 30). The low proportion of exclusive breastfeeding among working mothers may be influenced by several factors such as support at workplace, family support and health worker support (27). Working mothers have a shorter time to breastfeed their babies than mothers who don’t work. It also has an impact on the timing of breastmilk pumping that probably correlated with breastmilk volume (10, 11, 31). Likewise, nursing mothers who become full-time workers especially in urban areas leaves her baby at home at least 10 h every day which is the total number of trips to work and return to home plus the hours used at workplace (32). This study showed that husband’ and health workers’ support positively related with EBF practice. This finding was consistent with a study among laborers in textile industry in Jakarta which highlighted the role of health workers in achieving the success of EBF (2). Moreover, husband’s support also associated with EBF practice in this study which inline with other study among urban mothers in West Jakarta, Indonesia (18).

**CONCLUSIONS**

The factors that related to breastfeeding practice in this study were health workers’ support, husband’s support and mother’s age with the dominant factor was health workers’ support. Synergic cooperation between families, especially husbands and health workers, is needed to increase the success of exclusive breastfeeding among working mothers.
Do Health Workers Play a Role in Exclusive Breastfeeding

Disclosure of state of COI
No conflicts of interest to be declared.

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