The Determinant of Exclusive Breastfeeding among Female Worker in Indonesia

Ina Kusrini¹, Mara Ipa², Agung Dwi Laksono³, Noviati Fuada¹, Sri Supadmi¹

¹ Unit of Health Research and Development Magelang, Ministry of Health, Center Java, Indonesia
² Unit of Health Research and Development Pangandaran, Ministry of Health, West Java, Indonesia.
³ National Institute of Health Research and Development, The Ministry of Health, The Republic of Indonesia, Jakarta, Indonesia

*Corresponding Author: Agung Dwi Laksono
Email: agung.dwi.laksono-2016@fkm.unair.ac.id

ABSTRACT

Previous studies have informed that female workers are a vulnerable group that can affect the failure to achieve exclusive breastfeeding (EBF). This study aims to analyze the determinants of EBF among female workers in Indonesia. The research used secondary data from the 2017 Indonesian Nutritional Status Monitoring as a material analysis. Apart from EBF, other variables analyzed included the type of place of residence, age group, marital status, education level, under-five’s age, and under-five’s gender. The study employed 13,042 female workers as analysis material. Binary Logistic Regression was employed in the final stage. The results show female workers who live in urban areas have 1,144 times the probability of achieving EBF than female workers who live in rural areas. Female workers with high school senior education have 0.891 times the chance of achieving EBF compared to female workers with a college education. Under-five’s age was found as a determinant of EBF. Female workers who have boys have 0.909 times the chance to reach EBF than female workers who have under-five women. It was concluded that 4 variables proved to be determinants of EBF among female workers in Indonesia. The four determinants are the type of place of residence, education level, under-five’s age and gender.

INTRODUCTION

Exclusive breastfeeding (EBF) is an effort to achieve SDG goals. Breastfeeding behavior is more widely practiced in low and middle-income countries than in developed countries. One reason for this practice is that EBF is an inexpensive type of health care. Savings from EBF are estimated to contribute around 302 billion USD annually, equivalent to 0.49% of the world’s Gross National Income (GNI). On the other hand, EBF also benefits children in the long run. This is related to cognitive enhancement, which in turn produces superior human resources that are productive and beneficial to the country. The results of previous studies found that EBF benefits not only the child but also the mother. EBF can prevent morbidity from diarrhea and under-five respiratory infections and cancer in mothers. This increase in EBF could prevent 823,000 annual deaths in children under five and 20,000 annual deaths from breast cancer. The long-term benefits of EBF practice can protect from chronic diseases in children such as obesity and for mothers such as cancer, cardiovascular, hypertension, and diabetes. The practice of EBF became a world program after WHO and UNICEF launched the Global Strategy for Infant and Young Child Feeding in 2002. Globally, the prevalence of EBF has increased from 34.5% in 1990 to 43.5% in 2019. Indonesia provides support for the EBF policy with the issuance of a Government Regulation which states that every mother who gives birth must provide exclusive breastfeeding to the baby she is born with. The implementation of EBF in Indonesia has also shown significant progress. The 2010 Indonesia Basic Health Survey data reports EBF coverage of only 15.3%. This coverage then experienced an upward trend in 2013 by 38% and then decreased in 2018 to 37.3%. However, all of these conditions have not met the achievement of the global target for 2025 with an EBF coverage figure of at least 50%.

Broadly speaking, obstacles to female workers related to EBF include parity, knowledge, economy, time, and place of work. A previous study in Ghana informed that although the level of awareness of EBF provision in Ghana was high (99%), there was a significant decrease from the IMD figure of 91% to EBF of 10.3%. Furthermore, they said that they did not perform EBF because they did not receive advice from health workers and had a shorter leave duration. Meanwhile, those who tend to practice EBF are caused by normal delivery. Unlike in China, work benefits, travel time, work environment, and labor intensity are the things that influence breastfeeding practice. Those who experience one or more of the above will decide to reduce the frequency or stop breastfeeding. Meanwhile, previous studies reported that in Indonesia the practice of EBF is controlled by age at birth, household welfare index, and frequency of antenatal care. Based on the background description, this study aims to analyze the determinant of EBF among female workers in Indonesia.

MATERIALS AND METHODS

Data Source

The study uses secondary data from the 2017 Indonesian Nutritional Status Monitoring. The 2017 Indonesian Nutritional Status Monitoring is a national scale survey using the multi-stage cluster random sampling method conducted by the Directorate of Nutrition of the Indonesian Ministry of Health. The population in this study were all female workers who have under five (7-60 months) in Indonesia. The sample size analyzed in this study was 13,042 respondents.

Data Analysis

Exclusive Breastfeeding (EBF) was breastfeeding only for the first six months without drinks or other food...
additives. EBF was divided into 2 categories, namely achieving EBF (yes) and not reaching EBF (no). Variable selection was performed using the Chi-Square test to test the dichotomous variables, while the T-test was used for continuous variables. This statistical test is used to assess whether there is a statistically significant relationship between the EBF status variable as the dependent variable and the independent variable. Six variables will be tested as determinant candidates of EBF among female workers, namely the type of place of residence, age group, marital status, education level, under-five’s age, and gender. In the final stage, the binary logistic regression test is used to determine the determinant of EBF among female workers in Indonesia.

Ethical Approval

The 2017 Indonesian Nutritional Status Monitoring has an ethics license approved by the national ethics committee (ethics number: LR.02.01/KE.244/2017). In this survey, informed consent was used during data collection, which took into account aspects of the procedure for data collection, voluntary, and confidentiality.

RESULTS AND DISCUSSION

Table 1 is a statistical description of EBF among female workers in Indonesia. Based on the type of place of residence, it can be seen that female workers who have under five are dominated by those who live in rural areas. Meanwhile, based on the age group, female workers who reached EBF or not were dominated by the 26-30 age group.

Table 2 shows the results of the binary logistic regression test to determine the determinant of EBF among female workers in Indonesia. In this binary logistic regression test, "No EBF" is used as the reference.

Table 2. The Results of Binary Logistic Regression of EBF among Female Worker in Indonesia (n=13,042)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Sig.</th>
<th>EBF OR</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of place of residence: Urban</td>
<td>*0.003</td>
<td>1.144</td>
<td>1.045</td>
<td>1.251</td>
</tr>
<tr>
<td>Type of place of residence: Rural</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age group: &lt;21</td>
<td>0.122</td>
<td>0.785</td>
<td>0.578</td>
<td>1.067</td>
</tr>
</tbody>
</table>

Note: Chi-Square used for dichotomous variables and T-test used for continuous variables; *Significant at the 95% level.

Based on marital status, both categories of EBF achievement were dominated by married female workers. On the other hand, based on education level, the two categories of EBF achievement were dominated by female workers who graduated from senior high school. According to under-five’s age, female workers who reach EBF have under-five’s older average age. Meanwhile, based on under-five’s gender, female workers who reach EBF are dominated by those who have under-five’s with gender girl. Moreover, female workers who do not reach EBF are dominated by those who have under five with the gender boy.

Table 2. Descriptive Statistics of EBF among Female Worker in Indonesia (n=13,042)

<table>
<thead>
<tr>
<th>Variables</th>
<th>EBF</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>The type of place of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>1796</td>
<td>20.7%</td>
</tr>
<tr>
<td>Rural</td>
<td>6864</td>
<td>79.3%</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td>*0.014</td>
</tr>
<tr>
<td>&lt; 21</td>
<td>474</td>
<td>5.5%</td>
</tr>
<tr>
<td>21-25</td>
<td>1686</td>
<td>19.5%</td>
</tr>
<tr>
<td>26-30</td>
<td>2598</td>
<td>30.0%</td>
</tr>
<tr>
<td>31-35</td>
<td>2177</td>
<td>25.1%</td>
</tr>
<tr>
<td>36-40</td>
<td>1174</td>
<td>13.6%</td>
</tr>
<tr>
<td>41-45</td>
<td>395</td>
<td>4.6%</td>
</tr>
<tr>
<td>&gt; 45</td>
<td>156</td>
<td>1.8%</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td>0.102</td>
</tr>
<tr>
<td>Never married</td>
<td>56</td>
<td>0.6%</td>
</tr>
<tr>
<td>Married</td>
<td>8425</td>
<td>97.3%</td>
</tr>
<tr>
<td>Divorce/Widowed</td>
<td>179</td>
<td>2.1%</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td>*0.030</td>
</tr>
<tr>
<td>No education</td>
<td>426</td>
<td>4.9%</td>
</tr>
<tr>
<td>Primary school</td>
<td>1853</td>
<td>21.4%</td>
</tr>
<tr>
<td>Junior high school</td>
<td>1655</td>
<td>19.1%</td>
</tr>
<tr>
<td>Senior high school</td>
<td>2758</td>
<td>31.8%</td>
</tr>
<tr>
<td>College</td>
<td>1968</td>
<td>22.7%</td>
</tr>
<tr>
<td>Under-five’s Age (in months; mean)</td>
<td></td>
<td>*0.000</td>
</tr>
<tr>
<td>8660</td>
<td>(14.67)</td>
<td>4382</td>
</tr>
<tr>
<td>Under-five’s Gender</td>
<td></td>
<td>*0.012</td>
</tr>
<tr>
<td>Male</td>
<td>4436</td>
<td>51.2%</td>
</tr>
<tr>
<td>Female</td>
<td>4224</td>
<td>48.8%</td>
</tr>
</tbody>
</table>
Table 2 shows that female workers living in urban areas had 1.144 times the chance of achieving EBF than female workers living in rural areas (OR 1.144; 95% CI 1.045-1.251). The results of this analysis confirm the results of previous research on disparities between urban-rural areas in access to health information and access to health services. Often people who live in urban areas have better access than those who live in rural areas. Meanwhile, other previous studies in Indonesia have shown the influence of culture which is often found as a barrier to EBF in rural areas. The practices of giving drinks or other food prematurely, and even given sometime after the baby is born, is also related to health belief in certain religions, for example by applying honey to the lips of babies, or provide a sugar solution because it is believed to provide strength.

The results of the analysis found that the education level partially affects the achievement of EBF among female workers in Indonesia. Female workers with high school senior education have 0.891 times the likelihood of achieving EBF than female workers with a college education (OR 0.891; 95% CI 0.806-0.985). This means that female workers who graduate from college have a better chance of achieving EBF. Better education is assumed to have a relationship with a better understanding of receiving health information. Education is a strong positive determinant that is most often found to affect performance in the health sector. Under-five’s age was found to be a determinant of EBF among female workers in Indonesia. This finding information is in line with findings that were informed in several previous studies in Ethiopia. Moreover, under-five’s gender is also found as a determinant of EBF among female workers in Indonesia. Female workers who have under five men have a 0.909 times chance of achieving EBF than female workers who have under five women (OR 0.909; 95% CI 0.845-0.977). Under-five’s gender as a determinant of EBF was also reported in previous studies with the same theme in Malawi and Somalia.

The information generated in this study provides clear targets for policymakers if they wish to increase the coverage of EBF, especially among female workers. Policymakers can formulate specific policies targeting female workers who live in rural areas and have low levels of education. In addition to breastfeeding leave policies, policymakers can also release special policies at work, so those female workers can receive guarantees to express breastmilk for their children.

CONCLUSIONS
Based on the research results, it can be concluded that 4 variables were proven to be determinants of EBF among female workers in Indonesia. The four determinants were the type of place of residence, education level, under-five’s age, and gender.

ACKNOWLEDGMENTS
The author would like to thank the Directorate of Community Nutrition of the Ministry of Health of the Republic of Indonesia for allowing the 2017 Indonesia Nutritional Status Monitoring data.

DECLARATION OF CONFLICTING INTERESTS
The authors declare no conflict of interest, financial or otherwise.

REFERENCES
26. Maghfiroh MS, Laksono AD. "Given sugar water ... at first the cry became silent, because it was full, not limp, its endurance increased"; Study of Patterns of Infant Intake ("Diberi air gula ... awalnya nangis menjadi diam, karen a kenang, gak lemas, daya tahan tubuhnya meningkat"); S. Amerta Nutr. 2020;4(2):116–22.