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Factor analysis of exclusive breastfeeding to mothers who work as health personnel in Kupang, Indonesia

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Abstract

Introduction: Breast milk (breast milk) is rich in nutrients and nutrients that babies need from birth. Exclusive breast milk is breast milk given to babies for the first six months without additional fluids or other solid foods. Many factors influence the success of exclusive breastfeeding, including working mothers. Mothers who work as health workers have good scientific knowledge of the benefits of exclusive breastfeeding, but in practice, many people still experience failure.

Objective: This study aims to analyze the factors of exclusive breastfeeding for mothers who work as health workers in Kupang.

Method: The type of research used in this research is analytical observational, using a cross-sectional approach. The population in this study were all mothers with babies aged 6 – 36 months who worked in Health Facilities in the Kupang Regency area. The samples were taken using total sampling with a total of 61 mothers. Inclusion criteria are that the mother is in good health and willing to be a respondent. The independent variables in this research are attitude, family support, and distance from home to work. Data collection used a questionnaire with G-Form, with data analysis using chi-square and Mann-Whitney.

Result: The study's results showed a significant relationship between the maternal attitude variable and family support for exclusive breastfeeding for mothers who work as health workers ($p\text{-value} \leq 0.05$). In contrast, the distance variable was unrelated ($p\text{-value} \geq 0.05$).

Conclusion: Mothers who work as health workers need support from their families to strengthen their determination and provide exclusive breastfeeding, especially after the mother returns to work. Future researchers are expected to be able to examine other factors that influence exclusive breastfeeding behavior, such as culture, regulations, policies, and others.

Keywords: Exclusive Breastfeeding; Child Health; Health Workers; Working Mother

1. Introduction

In order to support improving the quality of life of Indonesian people, including strengthening a productive, independent, and competitive economic structure, it is necessary to reduce the maternal mortality rate (MMR) and infant mortality rate (IMR). Indicators for measuring the success of achieving health development are through MMR and IMR. One crucial indicator of this target is increasing coverage of exclusive breastfeeding [1].

Breast milk (ASI) is the best food that contains all the nutrients babies need from birth. During the first six months of a baby's life, the mother does not need to provide any additional intake because breast milk already provides essential

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nutrients for the baby's growth and development. Children who receive exclusive breast milk and proper parenting will grow and develop optimally and will not get sick quickly.

According to Statistics Indonesia 2022 [2], exclusive breastfeeding coverage in Indonesia has increased since 2019. An increase also occurred in East Nusa Tenggara Province from 2019 to 2021, but there was a decline in 2022. According to several researchers, this was due to the large-scale social restriction policy, which requires mothers to stay at home, which has a positive influence on increasing lactation behavior.

East Nusa Tenggara is one of the outermost provinces in the Republic of Indonesia, which still lacks health workers. Kupang Regency is one of the districts closest to the capital of East Nusa Tenggara Province. Having extensive geographic conditions and remote areas that are still difficult to reach, access to health services still needs to be improved. These include the limited number of health workers in areas far from urban areas, so the existing health workers have a large workload to achieve the given targets.

Based on initial interviews with several health workers who work at one of the Community Health Centers in Kupang Regency, of the 23 midwives and nurses, only 4 provide exclusive breastfeeding to their children from birth to six months. The failure of health workers in providing breast milk is ironic, in fact, as health workers have good scientific knowledge of the benefits of exclusive breastfeeding, but in practice, many people still experience failure. Not all mothers have the same views and obstacles in providing exclusive breastfeeding. This also happens to mothers who work as health workers.

This study aimed to analyze the factors of exclusive breastfeeding (mother's attitude, family support, and distance from home to work site) for mothers who work as health workers in Kupang.

2. Material and methods

This study was approved by the Universitas Airlangga School of Medicine Health Research Ethics Committee. This research used an analytical observational research design with a cross-sectional approach. We used the total sampling and found a population of 96 mothers. After applying the inclusion and exclusion criteria, we recruit 61 respondents to participate in this study. The research locations were 26 Community Health Centers and 1 Hospital in Kupang Regency. The research was carried out from July – September 2023. The independent variables in this research are the mother's attitude, family support, and distance from home to work site. The dependent variable is exclusive breastfeeding by mothers who work as health workers.

Informed consent was obtained from all individual participants included in the study. Data was collected using an online questionnaire. The questionnaire was delivered via the google form platform link. The mother's attitude was measured by Mother's Attitude Questionnaire with 7 questions. This questionnaire guide uses a likert scale, with a choice of answers consisting of strongly agree, agree, disagree, and strongly disagree. This attitude questionnaire consists of 7 questions, numbers 1,2,3,7 are favorable (positive) questions and numbers 4,5,6 are unfavorable (negative) questions. This questionnaire has been tested for the validity and reliability with the Cronbach's Alpha Coefficient is 0,762 which means that the questionnaire has been reliable. The family support was measured by Family Supports Questionnaire with 22 questions. This questionnaire has been tested for the validity and reliability with the Cronbach's Alpha Coefficient is 0,762 which means that the questionnaire has been reliable. The distance from home to work site was measured by a question about distance in kilometers.

The analysis of quantitative data was performed using SPSS 26 for Windows (SPSS Inc., Chicago, IL). Specific tests were applied based on the aims of the study, namely Chi Square and Mann Whitney test with the statistical significance set at $p < 0.05$.

3. Results

Based on Table 1 below, the characteristics of respondents seen from the age of mothers breastfeeding babies, most of them are at a young age or healthy reproductive age, namely 20-35 years, with 43 respondents (70.5%).

Table 1 Distribution of Demographic Characteristics of Respondents Exclusively Breastfeeding by Mothers Working as Health Workers in Kupang Regency (2023)

Characteristics	f	%
Mother's Age		
20-35 Years	43	70,5
>35 Years	18	29,5
Workplace		
Public health center	44	72,1
Hospital	17	27,9
Department		
Doctor	3	4,9
Midwife	41	47,2
Nurse	17	27,9
Number of living children		
1	23	37,7
2	29	47,5
3	8	13,1
4	1	1,6
Lactation Corner Facility		
There is	38	62,3
There is not any	23	37,7
Total	61	100

Most respondents' workplace distribution came from community health centers, namely 44 (72.1%) people spread across 26 community health centers in Kupang Regency. Based on the type of mothers who work as health workers in this study, this study took medical personnel, nursing personnel, and midwifery personnel who provide direct services to mothers and families. The most health workers who had babies were found in midwifery staff, namely 41 people (47.2%).

The distribution of respondents based on the number of children was primarily found in respondents with two children, namely 29 people (47.5%). The distribution of respondents based on whether there was a lactation corner in the workplace was 38 (62.3%) respondents said there was a lactation corner and it was functioning well.

Table 2 Distribution of Respondents Based on Exclusive Breastfeeding

Exclusive breastfeeding	Category	F	%
	Providing Exclusive Breastfeeding	36	59,0
	Not exclusive breastfeeding	25	41,0
	Total	61	100

From the table above, it can be seen that of the 61 health workers, 36 (59.0%) respondents gave only breast milk to their babies for six months.

Table 3 Relationship between attitudes and family Support and exclusive breastfeeding for mothers who work as Health workers in Kupang Regency (2023)

Variable	Exclusive Breastfeeding Behavior				Total	
	Exclusive Breastfeeding		Not Exclusive Breastfeeding			
Positive	27	69,2	12	30,8	39	100
Negative	9	40,9	13	59,1	22	100
Total	36	59,0	25	41,0	61	100
<i>Chi square p= 0,031</i>						
Family Support						
Support	27	73,0	10	27,0	37	100
Not Support	9	37,5	15	62,5	24	100
Total	36	59,0	25	41,0	61	100
<i>Chi square p= 0,006</i>						

Table 3 shows that 36 respondents (59%) gave exclusive breast milk to their babies. Respondents with a positive attitude (69.2%) gave exclusive breast milk to their babies. For the attitude variable after testing with *chi-square*, The result was $p = 0.031$, which means there is a significant relationship between maternal attitudes and exclusive breastfeeding for mothers who work as health workers.

Family support is closely related to breastfeeding for mothers who work as health workers in Kupang Regency. This can be seen from statistical tests using *Chi-square*, which got a value of $p = 0.006$. Respondents who received family support (73%) gave exclusive breast milk to their babies.

Table 4 Relationship between family distance and exclusive breastfeeding among mothers who work as health workers in Kupang Regency (2023)

Distance	N	Median (min-max)	p-value
Exclusive breastfeeding	36	7 (0 - 50)	0,113
Not exclusive breastfeeding	25	20 (0 - 39)	
Total	61		

Statistical tests for the distance variable from home to work use the *Mann-Whitney* test with a p -value = 0.113, which means there is no relationship between the distance from home to work and exclusive breastfeeding for mothers who work as health workers in Kupang Regency.

4. Discussion

The results of this study show that 59% of mothers who work as health workers in Kupang Regency provide exclusive breast milk to their babies, and 41% have not succeeded in providing it. Health results from the interaction of various factors, both internal (within humans) and external (outside humans). According to Laurence Green's theory, the factors that influence the formation of health behavior, in this case, are exclusive breastfeeding by the mother, determined by three factors: predisposing factors, supporting factors, and driving factors [3]. Researchers included several variables for these three factors that influence exclusive breastfeeding behavior. These variables are attitude, family support, and distance.

The results of the bivariate test research on the attitude variable obtained p value = 0.031 PR 3.90 (95% CI 1.094-9.651), which means that there is a relationship between attitude and exclusive breastfeeding, where mothers who have a positive attitude are 3-4 times more likely to provide exclusive breastfeeding compared to respondents who have a negative attitude. Respondents who had a positive attitude towards providing exclusive breastfeeding were 27 people (69.2%). This shows that the more positive the respondents' attitudes are, the more they can increase exclusive breastfeeding. However, respondents who have negative attitudes also do not rule out the possibility of giving exclusive breastfeeding due to other behavioral and environmental factors.

Attitude is a person's closed response to a particular stimulus or object, which already involves the relevant opinion and emotional factors. Salgues suggests that a theory that can explain the relationship between attitudes and breastfeeding practices is the theory of reasoned action (*theory of reasoned action*) by Ajzen and Fishbein (1975) [4]. The assumptions underlying this theory are: 1) humans generally carry out actions reasonably; 2) humans will consider the information that underlies the calculation of the consequences of actions. A positive attitude about breastfeeding will influence the practice of exclusive breastfeeding. Behavior results from a careful and reasoned decision-making process by considering the advantages and disadvantages of the action. Attitude is not yet an action or activity but is a predisposition to a behavior [5].

In this study, the researcher believes that the positive attitude of respondents has a significant role in providing exclusive breastfeeding. Respondents with a positive attitude revealed that they did not give exclusive breast milk because there were problems or obstacles in breastfeeding, one of which was breast milk that could not come out even after trying to express it and other factors that were obstacles, such as the mother feeling tired after working all day, lack of support from the family. To help with breastfeeding while the mother is working, some decide from the start not to breastfeed. Health workers should not only share health knowledge with the public but strengthen themselves and their colleagues to achieve health for themselves and their families.

Family is an essential part of a person's life. Support from the family is vital for a mother to provide exclusive breastfeeding successfully. Support from the family will influence the mother's decision to provide exclusive breastfeeding. The statistical test results obtained p value = 0.006, meaning that family support is significantly related to exclusive breastfeeding, where mothers who receive support from the family are 4-5 times more likely to provide exclusive breastfeeding than mothers who do not receive support from the family.

After the leave period ends and the mother returns to work, support from the family can help the mother continue exclusive breastfeeding for up to 6 months. Adapting mothers to work and continuing to breastfeed exclusively is a challenge for mothers. Long working hours, long distances, and the hassle of giving breast milk during work can make mothers experience stress. Stress can affect the self-efficacy of breastfeeding mothers; if the mother feels very tired, anxious, and depressed, it will affect breast milk production [6]. This condition makes the husband and family worry that breast milk is insufficient, so the family gives formula milk to the baby. Husbands and families must have good knowledge and be involved since pregnancy in order to be able to support mothers in providing exclusive breastfeeding to their babies. The statistical test results show a p -value of 0.113, which means there is no significant relationship between the distance from home to work and exclusive breastfeeding for mothers who work as health workers in Kupang Regency.

In contrast to Erlani's research on health workers at Sanglah Central General Hospital, the behavior of exclusive breastfeeding among female health worker mothers was primarily found in mothers with a residence distance of 10-15 km from their place of work, which was equal to 72.2% [7]. Research by Dewi on working mothers in Denpasar City stated that the distance from work to home and the duration of the mother's work correlated with exclusive breastfeeding [8]. The distance a mother travels from home to work greatly influences exclusive breastfeeding. Workplaces that are far from home do not allow mothers to go home to breastfeed their babies with short rest periods.

In this study, mothers who gave exclusive breastfeeding were more likely to be mothers whose homes were close to their workplace, but there were also mothers whose workplaces were far away but still gave their babies exclusive breast milk. Some mothers do not provide exclusive breastfeeding even though their house is close to their workplace. This can be influenced by the mother's readiness and determination to continue breastfeeding her baby even though the leave period has ended and the mother returns to work.

Mothers who have a long distance from home to work choose to take their babies to work or give their babies breast milk at home with the help of their family. Some mothers have implemented lactation management; even though the mother is not always with the baby, the mother can still give exclusive breast milk. The government has issued many regulations and policies to support the success of exclusive breastfeeding for working mothers. Researchers believe that

the policies and regulations provided by the government should positively impact exclusive breastfeeding for working mothers. However, many other factors can influence breastfeeding, such as providing breastfeeding support facilities such as lactation corners and official residences for health workers who travel long distances to health facilities. Sometimes, the lactation corner does not function properly due to limited space or energy. Likewise, with official residences, several areas in Kupang Regency have rugged and remote access, so if official residences are available and suitable for use, it can make it easier for mothers to bring their babies to reduce the distance traveled so that exclusive breastfeeding does not become an obstacle.

Also, breastfeeding for working mothers can be done by implementing lactation management. Implementing lactation management requires preparation, determination, and support from various parties to overcome obstacles such as distance and lack of time for the mother and baby.

5. Conclusion

Health Workers, as role models and service providers with extensive knowledge about health, especially the importance of exclusive breastfeeding, must be able to apply it in their lives. Support from the family plays a significant role in determining the mother's attitude to give exclusive breastfeeding to her baby from birth to 6 months, even though the mother has returned to work. Apart from this, good lactation management can help mothers continue breastfeeding even if the mother is not with the baby because long distances do not allow the mother to go home to breastfeed. Refresh lactation management and pregnancy planning for health workers and families so that families have good knowledge to support mothers in providing exclusive breastfeeding.

Compliance with ethical standards

Disclosure of conflict of interest

All authors declare that no competing interests were disclosed.

Statement of Ethical Approval

Ethical clearance was approved by the Ethics Committee of Faculty of Medicine Universitas Airlangga, Surabaya, Indonesia Number 123/EC/KEPK/FKUA/2023 on May 25, 2023.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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