Maternal knowledge regarding antenatal care services, history of exclusive breastfeeding and stunting among toddlers in West Java, Indonesia

Astri Mufti Aini*, Maria Komariah, Lilis Mamuroh, Laili Rahayuwati, Yanti Hermayanti, Ristina Mirwanti, Theresia Eriyani

Fakultas Keperawatan Universitas Padjadjaran
Corresponding author: *E-mail: astri20006@mail.unpad.ac.id

Abstract

Background: A mother's knowledge of ANC can increase interest and motivation in carrying out pregnancy checks which aim to detect problems early. Exclusive breastfeeding is one effort that can be made to meet nutritional needs to prevent stunting.

Purpose: Analyzing the correlation between maternal knowledge of ANC, exclusive breastfeeding history, and stunting incidence in Hamlet III, Sukamulya Village.

Method: Quantitative correlational, with a population of 68 families of stunted toddlers living in Hamlet III, Sukamulya Village. The sample size used for the research is total sampling. Secondary data is used for the research with instruments that include a combination of "Environmental Modification through Sanitation, Clean Water, Hygiene and Nutrition for Stunting Prevention" with the research instruments of Khairani, (2012) and Fitriani, (2021). The data analysis method used is univariate and bivariate analysis (Spearman rho).

Results: There was no significant relationship between ANC knowledge and the incidence of stunting, obtained r=0.114 and p=0.353. Likewise, exclusive breastfeeding also did not show a significant relationship with the incidence of stunting, obtained r=0.007 and p=0.955.

Conclusion: There is no relationship between maternal ANC knowledge and exclusive breastfeeding with the incidence of stunting.

Keywords: Antenatal Check-Up; Exclusive Breastfeeding; Incidence of Stunting; Level of Knowledge; Mother.

INTRODUCTION

Stunting is a condition where a child's growth and development fail, which is caused by malnutrition over a long period (Magasida & Erawati, 2022). The World Health Organization (WHO) defines stunting as a condition where the z score for height for age is < -2 SD. Factors that cause stunting can come from various dimensions (multidimensional) and can be broken down into parent, child and household environmental factors (Sitanggang Kasim, & Sari, 2020).

The prevalence of stunting in Indonesia is relatively high. Indonesia is ranked 10th in Southeast Asia. The prevalence of stunting in Indonesia in 2022 will be 21.6% (Ministry of Health of the Republic of Indonesia, 2023). If the incidence of stunting reaches 20% or more, it can be said to be a public health problem (Apriluana & Fikawati, 2018). Based on this, it can be concluded that Indonesia has still not succeeded in overcoming the stunting problem and requires efforts to overcome it.

Prevention of stunting can be started during pregnancy, one of which is by regularly checking the condition of the pregnancy. Antenatal care is important for the early detection of problems during
Maternal knowledge regarding antenatal care services, history of exclusive breastfeeding and stunting among toddlers in West Java, Indonesia

pregnancy and for maintaining the health of both the mother and the baby (Dharmayanti, Azhar, Tjandrarini, & Hidayangshih, 2019). According to Health Personnel Education Center, neglecting antenatal care can lead to insufficient knowledge about proper methods of pregnancy care, and failure to detect pregnancy problems promptly (Dewanggayastuti, Surinati, & Hartati, 2022). This includes danger signs of pregnancy, signs of childbirth complications, comorbidities, and other complications that can potentially trigger bleeding during childbirth and even lead to maternal death. One of the examinations carried out during antenatal care is a weight examination, the aim of which is to show possible growth disorders in the fetus (Wiyandani, 2019). One of the effects of poor fetal development during pregnancy is the low birth weight (LBW), which if left for a long time has the potential to cause stunting.

The execution of antenatal care is influenced by various factors. Health behavior is influenced by driving, supporting, and reinforcing factors, with knowledge being the initial factor in forming health behavior (Green, 2001; Asmarasari, & Astuti, 2019). Individuals with higher levels of knowledge tend to exhibit better health behavior (Hermawan, Yani, Yuliani, & Rahayuwati, 2023). That is accordance that, a mother's knowledge about antenatal care can enhance her interest and motivation in carrying out antenatal care (Panjaitan, Santosa, & Utama, 2019). One research shows that babies born to mothers who don't receive standardized ANC have 2.28 times higher risk of stunting than those born to mothers who do (Amini, 2016).

In addition to irregular pregnancy checks, malnutrition in the first 1000 days of life can also be a cause of stunting. Actions that can be taken after labor are optimization of early breastfeeding initiation practices, followed by exclusive breastfeeding for 6 months without being accompanied by giving fluids or other foods (Rahmadi, 2016). There is a significant relationship between exclusive breastfeeding and stunting incidence with a p-value of 0.001 (Sampe, Toban, & Madi, 2020). This study was supported by research which found a significant relationship between exclusive breastfeeding and stunting (p = 0.001) (Pratama, & Irwandi, 2021).

Contrary to previous research, obtained a p value = 1.001 which shows that there is no relationship between exclusive breastfeeding and the incidence of stunting (Malka, Musni, & Fatimah, 2020). The things that affect the incidence of stunting in this study are early pregnancy and ANC visits. In the other study, there was no correlation between stunting and exclusive breastfeeding (Hikmahrachim, Rohsiswatmo, & Ronoatmodjo, 2020). The study identified maternal age, socioeconomics, education level, and quality of ANC as factors contributing to stunting.

Sukamulya Village is one of the stunting locus villages in Bandung Regency with a total stunting incidence of 68 toddlers (33.6%) out of a total of 202 toddlers residing in Hamlet III of Sukamulya Village. This still shows that the target of the West Java Provincial Government to become a zero-stunting province in 2023 has not been achieved. In addition, the average education level of the local productive age population is graduating from elementary school to junior high school. Education level can impact knowledge and information acceptance, so higher education levels lead to better understanding (Angraini, Amin, Pratiwi, Febriawati, & Yanuarti, 2021). This may be one of the factors causing stunting in Hamlet III of Sukamulya Village.

Seeing the low level of education of the local community and the high incidence of stunting, encouraged researchers to further examine how maternal knowledge about ANC and exclusive breastfeeding can affect stunting incidence in Hamlet III of Sukamulya Village. The lack of literature regarding the correlation between ANC knowledge and stunting incidence prompted further research. In addition, differences in previous studies on the correlation between exclusive breastfeeding and stunting incidence also encourages researchers to examine the problem more deeply.

RESEARCH METHOD

This study is a form of secondary research that uses correlational quantitative research design. The population used is the population in the primary study, namely families who have stunting toddlers and live in Hamlet III of Sukamulya Village, Rancaekek District, Bandung Regency. The sampling technique used is total sampling, with inclusion criteria for mothers who

Astri Mufti Aini*, Maria Komariah, Lilis Mamuroh, Laili Rahayuwati, Yanti Hermayanti, Ristina Mirwanti, Theresia Eriyani

Fakultas Keperawatan Universitas Padjadjaran
Corresponding author: *E-mail: astri20006@mail.unpad.ac.id

DOI: https://doi.org/10.33024/minh.v7i2.226
Maternal knowledge regarding antenatal care services, history of exclusive breastfeeding and stunting among toddlers in West Java, Indonesia

Astri Mufti Aini*, Maria Komariah, Lilis Mamuroh, Laili Rahayuwati, Yanti Hermayanti, Ristina Mirwanti, Theresia Eriyani

Fakultas Keperawatan Universitas Padjadjaran
Corresponding author: *E-mail: astri20006@mail unpad.ac.id

DOI: https://doi.org/10.33024/minh.v7i2.226

have at least 1 or more stunting toddlers, mothers who have given birth within the last 5 years, have a history of ANC, and provide complete data needed by researchers. The primary study included 68 mothers with stunted toddlers.

The instrument used is a combination of primary research instruments "Environmental Modification Through Sanitation, Clean Water, Hygiene, and Nutrition for Stunting Prevention" developed by Rahayuwati, et al. (2023) with research instruments used by (Khairani, 2012) and (Fitriani, 2021). The results of the validity test show that the result of r count is greater than r table, so it is said that the instrument used is valid. The results of the reliability test show an alpha value greater than 0.7 so that the questionnaire can be said to be reliable and can be used. ANC Knowledge Level is categorized as good with a value of 76-100%; Sufficient if 56-75%; and Less if <55%. incidence of stunting are categorized as moderate with height for age with a value -3 SD to -2 SD; and severe if height for age < -3 SD.

This research uses secondary data and has received from the Research Ethics Committee of Padjadjaran University with ethical number 37/UN6. KEP/EC/2023.

After obtaining the secondary data, it was analyzed using both univariate and bivariate analysis. The data obtained was analyzed using univariate analysis to observe the frequency distribution. Bivariate analysis was conducted to examine the correlation between ANC knowledge, exclusive breastfeeding, and incidence of stunting. To test the correlation between the variables studied with the available data, the statistical test used is Spearman's rho.

RESEARCH RESULTS

Table 1. Characteristics of Respondents (N = 68)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Age (Mean±SD)(Range)(Year)</td>
<td>(28.17±8.725)(19-49)</td>
</tr>
<tr>
<td>Education Level (n/%)</td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>19/27.9</td>
</tr>
<tr>
<td>Junior High School</td>
<td>37/54.4</td>
</tr>
<tr>
<td>Senior High School</td>
<td>12/17.7</td>
</tr>
<tr>
<td>Number of Children (n/%)</td>
<td></td>
</tr>
<tr>
<td>1 child</td>
<td>24/35.3</td>
</tr>
<tr>
<td>2 children</td>
<td>31/45.6</td>
</tr>
<tr>
<td>3 children</td>
<td>7/10.3</td>
</tr>
<tr>
<td>≥ 4 children</td>
<td>6/8.8</td>
</tr>
<tr>
<td>Revenue per Month (n/%)</td>
<td></td>
</tr>
<tr>
<td>Under Wages City/Regency</td>
<td>50/73.5</td>
</tr>
<tr>
<td>Wages equivalent – Rp. 5,000,000</td>
<td>18/26.5</td>
</tr>
<tr>
<td>ANC Knowledge Level (n/%)</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>21/30.9</td>
</tr>
<tr>
<td>Sufficient</td>
<td>38/55.9</td>
</tr>
<tr>
<td>Less</td>
<td>9/13.2</td>
</tr>
<tr>
<td>Exclusive Breastfeeding (n/%)</td>
<td></td>
</tr>
<tr>
<td>≥ 6 Month</td>
<td>32/47.1</td>
</tr>
<tr>
<td>&lt; 6 Month</td>
<td>36/52.9</td>
</tr>
<tr>
<td>Incidence of Stunting (n/%)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>38/55.9</td>
</tr>
<tr>
<td>Severe</td>
<td>30/44.1</td>
</tr>
</tbody>
</table>
Maternal knowledge regarding antenatal care services, history of exclusive breastfeeding and stunting among toddlers in West Java, Indonesia

Based on the data presented in Table 1, the mean maternal age is 28.17 with a standard deviation of 8.725 and an age range between 19 and 49 years. In terms of education, the majority of mothers had completed junior high school education, namely 37 (54.4%). In addition, most mothers had two children, namely 31 (45.6%). Most families have a monthly income below the Regency/City wage, which is 50 (73.5%). The majority of mothers’ level of knowledge about antenatal care (ANC) was in the sufficient category, namely 38 (55.9%). The majority of toddlers do not receive exclusive breast milk (< 6 months), namely 36 (52.9%), and the majority of stunting incidents are in the moderate stunting category, namely 38 (55.9%).

Table 2. Correlation Analysis (N = 68)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Incidence of Stunting</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderate (n=38)</td>
<td>Severe (n=30)</td>
<td>ρ</td>
</tr>
<tr>
<td>ANC Knowledge Level (n/%)</td>
<td>Good</td>
<td>14/36.8</td>
<td>7/23.3</td>
</tr>
<tr>
<td></td>
<td>Sufficient</td>
<td>19/50.0</td>
<td>19/63.3</td>
</tr>
<tr>
<td></td>
<td>Less</td>
<td>5/13.2</td>
<td>4/13.4</td>
</tr>
<tr>
<td>Exclusive Breastfeeding (n/%)</td>
<td>≥ 6 Month</td>
<td>18/47.4</td>
<td>14/46.7</td>
</tr>
<tr>
<td></td>
<td>&lt; 6 Month</td>
<td>20/52.6</td>
<td>16/53.3</td>
</tr>
</tbody>
</table>

Table 2 shows that the majority of mothers who have sufficient knowledge have toddlers in the moderate stunting category, namely 19 cases (50.0%). Statistical analysis using the Spearman rho test produces r = 0.114 and ρ = 0.353, and the majority of babies who do not receive exclusive breastfeeding suffer from moderate stunting, namely around 20 (52.6%). The results of statistical tests with Spearman’s Rho show a correlation coefficient r = 0.007 and p-value ρ = 0.955.

DISCUSSION
ANC Knowledge and Stunting
This study involved 68 respondents who were mothers who had stunted children aged 5 years and under and lived in Hamlet III of Sukamulya Village. Out of 68 respondents, it was discovered that 21 mothers (30.9%) had a good understanding of ANC. Out of 68 mothers, 38 (55.9%) had sufficient knowledge about ANC. Only 13.2% of mothers have a level of knowledge of ANC that is below 9.

The data obtained was then processed and carried out statistical analysis using Spearman rho where the results of the correlation coefficient of 0.114 and sig value were obtained. amounted to 0.353. Based on the statistical analysis, there is no significant correlation between maternal knowledge about antenatal care (ANC) and the incidence of stunting. This may happen because knowledge about ANC is not a direct factor causing stunting, but an indirect factor.

Based on research at Ridos Medan Hospital, of the 89 samples, 56 (62.9%) had sufficient knowledge and 23 (30.3%) had good knowledge. Research also shows that good knowledge can increase mothers’ interest in attending antenatal care (ANC) visits (Panjaitan et al., 2019). This is also supported by research conducted at the Abiansemal I Community Health Center, where from a total of 32 samples, 17 (53.1%) respondents had good knowledge, 13 (40.6%) had sufficient knowledge, while 2 (6.3%) respondents have less knowledge. Based on the results of bivariate analysis, there is a relationship between knowledge and ANC regularity, which is indicated by a p-value of 0.000 and a coefficient of r = 0.876 (Padesi et al., 2021).

However, knowledge is not a direct factor causing stunting, because in addition to knowledge, experience can also be one of the influencing factors. Mothers who have had more than one pregnancy have greater knowledge compared to first-time mothers (Kanu, Tang, & Liu, 2014). This is because mothers who have been pregnant multiple

Astri Mufti Aini*, Maria Komariah, Lilis Mamuroh, Laili Rahayuwati, Yanti Hermayanti, Ristina Mirwanti, Theresia Eriyani

Fakultas Keperawatan Universitas Padjadjaran
Corresponding author: *E-mail: astri20006@mail.unpad.ac.id

DOI: https://doi.org/10.33024/minh.v7i2.226
times have a history of more frequent pregnancy checks than first-time mothers. Thus, it can be said that antenatal care (ANC) visits are more appropriate if they are said to be a factor causing stunting, while ANC knowledge is only an indirect factor. The research conducted by Amini, (2016) with a total sample of 128 respondents, showed that non-standardized ANC visits were 57.8% and more common in stunted toddlers compared to non-stunted toddlers. Chi-square analysis indicated a significant association between stunting in toddlers aged 12-59 months and their ANC visits. The study found that mothers who did not receive standardized antenatal care had a 2.28 times higher risk of having stunted toddlers compared to those who did.

Breastfeeding and Stunting
This study aimed to examine the history of exclusive breastfeeding among 68 mothers living in Hamlet III of Sukamulya Village. According to the study, 32 infants (47.1%) at Hamlet III in Sukamulya Village were exclusively breastfed. Meanwhile, 36 (52.9%) toddlers do not get exclusive breastfeeding.

The data obtained were then processed and statistical analysis was carried out using Spearman ρho. The results obtained are a correlation coefficient of 0.007 and a sig value. amounted to 0.955. From the results of the statistical analysis it can be concluded that there is no significant correlation between exclusive breastfeeding and the stunting incidence.

Breast milk is a liquid produced by the breast glands that contains essential nutrients for babies. Exclusive breastfeeding for 6 months without being followed by fluids or other foods such as formula milk, water, honey, bananas, porridge, and others. Exclusive breastfeeding for 6 months without being followed by other foods can help children get adequate nutritional intake and the baby's intestines are able to digest incoming intake optimally.

The results of this study contradict the results of research in Buntu Malangka District, Mamasa Regency, which found a correlation between exclusive breastfeeding and the incidence of stunting in toddlers. Where toddlers who do not receive exclusive breastfeeding for 6 months have a 61 times higher risk of experiencing stunting than toddlers who receive exclusive breastfeeding (Sampe, et al., 2020).

Incidence of Stunting

Stunting is a condition where a child's growth and development fails which can be caused by poor nutrition, repeated infections and inadequate psychosocial stimulation. Stunting is a condition where the z score for height for age is < -2 SD. This event is a long-term impact that occurs from pregnancy to the first 1000 days of life and only appears at the age of 2 years.

This study involved 68 respondents who lived in Hamlet III of Sukamulya Village and had stunting toddlers. From the results of the study, data were obtained that there were 38 (55.9%) stunted toddlers with moderate stunting category. While 30 (44.1%) other toddlers are stunted in the category of severe stunting.

The incidence of stunting can be influenced by various factors (multidimensional), including poor parenting practices such as breastfeeding and complementary foods, limited access to health services so that pregnancy checks (ANC) and postnatal care cannot be fulfilled properly, access to nutritious food, clean water, and poor environmental sanitation, and chronic lack of energy.
(SEZ) conditions in mothers. In addition to these things, other factors such as socioeconomic status, education level, premature birth, short birth length, and maternal age and height can also be factors that may affect the incidence of stunting. Therefore, further studies are needed on factors that affect the incidence of stunting, considering that stunting risk factors can occur from various factors.

The incidence of stunting greatly impacts the condition of babies in the future, such as susceptible to disease, impaired brain and physical development, non-optimal posture, increased risk of obesity and comorbidities, and decreased learning achievement. For this reason, an effort is needed to prevent stunting, starting from pregnancy to the future. Starting from maintaining health during pregnancy by consuming nutritious foods and routinely conducting pregnancy checks, conducting exclusive breastfeeding for 6 months and providing complementary foods after the age of 6 months, always monitoring the growth and development of toddlers at Integrated Healthcare Center, and increasing access to clean water and sanitation facilities. Thus, it is hoped that the incidence of stunting can be reduced, and the target of the West Java Provincial government in realizing West Java as a zero stunting province can be realized.

CONCLUSION

Research of 68 respondents from families with infants stunting toddlers in Hamlet III of Sukamulya Village, found that mothers’ knowledge of antenatal care (ANC) and exclusive breastfeeding there was no correlation with the stunting incidence. Since there are many factors (multidimensional), that contribute to stunting, further research is needed to examine the factors that cause stunting in Hamlet III of Sukamulya Village.

REFERENCES


Hikmahrachim, H. G., Rohsiwasmo, R., & Ronoatmodjo, S. (2020). Efek ASI Eksklusif...
Maternal knowledge regarding antenatal care services, history of exclusive breastfeeding and stunting among toddlers in West Java, Indonesia

Malahayati International Journal of Nursing and Health Science, Volume 07, No.2, April 2024: 130-136

Astri Mufti Aini*, Maria Komariah, Lilis Mamuroh, Lilis Rahayuwati, Yanti Hermayanti, Ristina Mirwanti, Theresia Eriyani

Fakultas Keperawatan Universitas Padjadjaran
Corresponding author: *E-mail: astri20006@mail.unpad.ac.id

DOI: https://doi.org/10.33024/minh.v7i2.226


