

The Relationship between the Clean and Healthy Living Behavior Implementation and Stunting Prevalence Amid The Covid-19 Pandemic

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ABSTRACT

Stunting is a chronic nutritional problem that remains unresolved in Indonesia, in which Indonesia ranked third in stunting prevalence in the Southeast Asia region, reaching to 36.4%. During the COVID-19 pandemic, stunting prevalence can be decreased by implementing the clean and healthy living behavior. Unfortunately, community's awareness regarding the importance of the clean and healthy living behaviors is lacking. The results of a survey done to 5 mothers of toddlers aged 12-59 months showed that they washed their hand improperly. They often washed their hands before and after eating only using water without soap, not washing their hands before breastfeeding, and not using running water. This study examined the relationship between the clean and healthy living behavior implementation in the household with stunting prevalence during the COVID-19 pandemic at Bolo Health Center. This quantitative research was performed using a cross sectional design, involving 71 randomly-selected mothers of toddlers at the Bolo Health Center. Data were analyzed using Chi-square test, which results exhibited the importance of the clean and healthy living behavior in relation to the stunting prevalence in toddlers amidst the COVID-19 pandemic. The statistical analysis resulted in a correlation coefficient value of 0.310 and a confidence alpha value of 0.033. These values indicated the presence of a relationship between the two variables. Proper implementation of the clean and healthy living behavior is expected to decrease the stunting prevalence in toddlers. Toddlers are expected to grow and thrive as strong and quality future generation of the nation..

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INTRODUCTION

In the beginning of 2020, COVID-19 outbreak occurred, which had the government issued a disaster emergency status from February 29 to May 29, 2020. One of the measures taken by the government is to promote social distancing. One must keep a two-meter distance from other people, avoid making direct contact and avoid the crowd. The social distancing rule affected the Health Center for Children activities. During the pandemic, the periodical growth monitoring of children under five

periodically decreased, resulting in higher rate of stunting in children (chronic malnutrition). The COVID-19 pandemic has brought major impacts on Indonesian community, affecting the health, economic, social, religious and education sectors. Parents are required to keep their children healthy and safe during the COVID-19 pandemic. Children under five show a 10 to 100 times greater genetic material from the corona virus that causes COVID-19 in their nasal area. Furthermore, the COVID-19 pandemic has changed people's habits where people apply clean and healthy living behavior (Anhusadar, Laode, Et Al, 2020).

Clean and healthy living behavior raises one's awareness and improves their health. It also positively affects family's immune system. Strong immune system prevents a person from easily contracting COVID-19 and from stunting. Stunting is a chronic nutritional problem, where children develop height or body length under the standard that can interfere with children's physical and cognitive development (Lynawati, 2020).

Indonesia ranked third as the country with the highest stunting prevalence in the Southeast Asia region with an average prevalence of stunting in children under five reaching 36.4%. Stunting is still an unresolved nutritional problem in Indonesia (WHO, 2012). Stunting is a chronic malnutrition problem caused by inappropriate feeding and long-term insufficient nutritional intake. Stunting mostly occurs in the first two or three years of life, where the growth reaches its peak that it requires a lot of nutritional intake. Young children who experience stunting have lower levels of intelligence, more vulnerable to diseases, and lower productivity later in their future. Stunting can also negatively affect economic growth, increase poverty and widen the social inequality (WHO, 2014).

Stunting has been set as the second target of the Sustainable Development Goals (SDGs), focusing on the eradication of hunger and all forms of malnutrition by 2030 to achieve the food security (Ministry of Health of the Republic of Indonesia, 2015). The COVID-19 pandemic could decrease the number of stunting children in Indonesia through the implementation of the clean and healthy living behavior. However, the community still lacks of awareness on the importance of applying clean and healthy living behaviors in the family and the environment (Zohrotunnimah, 2020).

In an initial surveys done to 5 mothers of toddlers aged 12-59 months, improper hand washing attitudes were identified, including washing hands before and after eating using only water without soap, not washing hands when breastfeeding, and not using flowing water. Environmental factors have a greater influence on stunting up to 90%, that is more significant than the heredity which made up to 10% of the stunting cases. The World Health Organization (WHO) mentioned that the basic growth and development of every child is the same, but the environment will greatly affect whether a child can grow taller. One of the environmental factors that have a major impact is the public's awareness of the importance of clean and healthy living behavior during the first 1000 days of a baby's life. Strong awareness regarding the proper implementation of clean and healthy living behavior during can prevent children from stunting (WHO, 2012).

Family members can maintain their health themselves and they can engage themselves in social activities (Depkes RI, 2007).

The health of the community can be improved by administering the Clean and Healthy Life Behavior (PHBS) development program. It is challenging to change one's habits, but the COVID-19 pandemic can be a good momentum to promote the clean and healthy lifestyle. Everyone does not expect to catch the virus, that they become aware of the clean and healthy lifestyle. The implementation of the clean and healthy behaviors will improve the quality of human life. Children who are accustomed to such behavior from an early age tend to bring the habit to their adulthood. During the pandemic, people learn about the clean and healthy life and its impacts on their future (Puspita, Et Al, 2020).

This research aimed at proposing a solution that could accelerate local government's program in reducing the stunting prevalence and preventing children from getting infected with COVID-19 virus.

RESEARCH METHOD

This quantitative study was conducted using a cross sectional design (Nursalam, 2016). The subjects were 71 mothers and toddlers aged 12-59 months at the Bolo Health Center. The inclusion criteria included children under five aged 12-59 months, mothers of toddler willing to participate as respondents, permanent residence and children are in good health.

Samples were selected using a simple random sampling (Nursalam, 2016), by making serial numbers and lists of names for toddlers with the entire population at the Bolo Health Center. Samples were selected randomly using a random table by selecting them starting the rows and columns in the random table and then selecting individuals as samples according to their numbers. The implementation of the clean and healthy living behavior was assessed using a questionnaire which had been previously tested for the validity and reliability. Stunting prevalence was assessed using the standard Anthropometric table as recommended by Indonesia's Ministry of Health. Toddlers with Z-scores below - 2 of the standard deviations were categorized as stunting. Data of this study were analyzed using a univariate analysis and bivariate analysis using the Chi-square test to determine the relationship between the implementation of clean and healthy living behavior and the stunting prevalence.

RESULTS AND DISCUSSIONS

1. Characteristics

1) Mothers' Age

The majority of the respondents (60 respondents or 84.5%) are at the low-risk age between 20-35 years.

Table 1. Respondents' Characteristics based on Age

Age	Frequency	Percentage (%)
Low Risk (20-35 years old)	60	84.5
High Risk (<20 and >35 years old)	11	15.5
Total	71	100.0

2) Employment Status

Most of the respondents, 52 people (73.2%) were unemployed.

Table 2. Respondents' Characteristics based on Employment Status

Employment Status	Frequency	Percentage (%)
Unemployed	52	73.2
Employed	19	26.8
Total	71	100.0

2. Univariate Analysis

1) The Implementation of the Clean and Healthy Living Behavior at home

Table 3. Respondents' Characteristics based on the Implementation of the Clean and Healthy Living Behavior at Home

Clean and Healthy Living Behavior in Family	Frequency	Percentage (%)
Inadequate	30	42.3
Adequate	41	57.7
Total	71	100.0

The implementation of the clean and healthy living behavior in 41 respondents (57.7%) is regarded adequate.

2) Stunting Prevalence

Table 4. Respondents' Characteristics based on the Stunting Status

Stunting Status	Frequency	Percentage (%)
Not Stunting	31	43.7
Stunting	40	56.3
Total	71	100.0

Of 71 respondents, 40 children experienced stunting (56,3%) during the COVID-19 pandemic.

3. Bivariate Analysis

The correlation between the implementation of the clean and healthy living behavior and the stunting prevalence was examined in a *Chi-Square* test, resulting in the following outcome.

Table 5. Bivariate Analysis

Variable	<i>P value</i>	OR (95%CI)
Implementation of the Clean and Healthy Living Behavior	0.033	0.310 (0.116-0.827)
Stunting Prevalence		

In table 3 shows the results of the square test with a *p value* of $0.033 < (0.05)$, thereby H_0 is rejected, and a significant relationship between the implementation of the clean and healthy living behaviors and the stunting prevalence during the COVID-19 Pandemic has been confirmed. In addition, OR value was obtained at 0.310, indicating the presence of a significant relationship between the implementation of the clean and healthy living behaviors and the COVID-19 impacts on the stunting rate during the COVID-19 Pandemic. The relationship strength was low, yet it has a positive direction. Therefore, the implementation of Clean and Healthy Living Behavior is more optimal taught at home and it can reduce the stunting prevalence.

The COVID-19 pandemic has changed people's habits, including greater awareness of the clean and healthy living behavior. During the COVID-19, people are required to apply the clean and healthy living behavior to stop the spread of COVID-19 virus. This virus can survive and stay in various types of objects for few hours even days. The health protocols also require everyone to wash their hand properly every 1-2 hours. The clean and healthy living behavior raises ones' self-awareness and health improvement as it can develop stronger family's immune system. Immunity is the key to prevent a person from getting infected with COVID-19 (Anhusadar, Laode, Et Al, 2020).

The COVID-19 pandemic has brought significant impacts on various sectors, including the health sector. Djalilah (2021) stated that the COVID-19 pandemic also affected children's health. The short-term impacts are the higher morbidity and mortality due to late diagnosis and treatment, lower immunization coverage, and nutrition problems. Whereas, the long-term impacts of the pandemic are the outbreaks of diseases that can be prevented by immunization, increased prevalence of stunting and wasting in children, growth disorders in terms of psycho-social and mental development as well as ineffective teaching and learning activities.

CONCLUSIONS

Clean and healthy living behavior needs to be implemented and habituated in daily life. Clean and healthy living behavior can affect the stunting prevalence. Future researchers are expected to develop this research by involving larger sample size and using different approaches such as case control and multivariate analysis in order to determine the risk factors of stunting. The health workers at Public Health Centres need to improve the community's awareness on the importance of clean and healthy living behavior. The community is expected to implement the clean and healthy living behaviour while preventing and overcoming various health problems. Every family should implement the clean and healthy living behavior to keep their environment and lifestyle healthy.

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