

Mother's Independence in Stimulation of Growth and Development of Children During The COVID-19 Pandemic

Independencia de la madre en la estimulación del crecimiento y desarrollo de los niños durante la pandemia de COVID-19

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SUMMARY

Introduction: During the pandemic due to COVID-19, health services at the Integrated Healthcare Center (Posyandu) were not running optimally due to government regulations that recommended social movement restrictions. It causes the monitoring of the health of children under five at Posyandu cannot be carried out. This study aimed to determine the independence of mothers in stimulating the growth and development of toddlers during the COVID-19 pandemic.

Methods: This research used descriptive research with a retrospective approach. The population of all mothers who have toddlers is 80 respondents, and the number of samples was 67 respondents using simple

random sampling. The independent variable was the mother's independence using a questionnaire. The dependent variable was the growth and development of the toddler using the maternal and child health book with the chi-square test analysis.

Results: The study results showed that children under five are following the growth curve in Mother and Child Book (MCH), but there is still a small proportion experiencing underweight and overweight growth. Almost all development is according to the age of the toddler. There was a relationship between the growth and development of toddlers and mothers' independence. There is no relationship between the mother's independence using the MCH book and growth. However, there is a relationship between the mother's independence using the MCH book and development. One of the reasons for the growth and development of toddlers is stimulation by the mother and family.

Conclusions: Stimulation of toddler growth and development can be carried out by all family members, who during the pandemic period, all activities are carried out from home. It is recommended that mothers actively coordinate with village midwives online and offline during the COVID-19 pandemic while still paying attention to health protocols.

Keywords: COVID-19, growth and development, mother's independence, stimulation

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RESUMEN

Introducción: Durante la pandemia por COVID-19, los servicios de salud del Centro Integrado de Salud (Posyandu) no estaban funcionando de manera

óptima debido a las normas gubernamentales que recomendaban restricciones de movimiento social. Provoca que no se pueda llevar a cabo el seguimiento de la salud de los niños menores de cinco años en Posyandu. Este estudio tuvo como objetivo determinar la independencia de las madres para estimular el crecimiento y desarrollo de los niños pequeños durante la pandemia de COVID-19.

Métodos: *Esta investigación utilizó una investigación descriptiva con un enfoque retrospectivo. La población de todas las madres que tienen niños pequeños es de 80 encuestadas, y el número de muestras fue de 67 encuestadas utilizando un muestreo aleatorio simple. La variable independiente fue la independencia de la madre mediante un cuestionario. La variable dependiente fue el crecimiento y desarrollo del niño pequeño utilizando el libro de salud materno-infantil con el análisis de la prueba de chi-cuadrado.*

Resultados: *Los resultados del estudio mostraron que los niños menores de cinco años están siguiendo la curva de crecimiento en Mother and Child Book (MCH), pero todavía hay una pequeña proporción que experimenta un crecimiento con bajo peso y sobrepeso. Casi todo el desarrollo está de acuerdo con la edad del niño pequeño. Existía una relación entre el crecimiento y desarrollo de los niños pequeños y la independencia de las madres. No existe relación entre la independencia de la madre utilizando el libro MCH y el crecimiento. Sin embargo, existe una relación entre la independencia de la madre utilizando el libro MCH y el desarrollo. Una de las razones del crecimiento y desarrollo de los niños pequeños es la estimulación de la madre y la familia.*

Conclusiones: *La estimulación del crecimiento y desarrollo del niño pequeño puede ser realizada por todos los miembros de la familia, quienes durante el período de pandemia, todas las actividades se realizan desde el hogar. Se recomienda que las madres se coordinen activamente con las parteras de la aldea en línea y fuera de línea durante la pandemia de COVID-19 sin dejar de prestar atención a los protocolos de salud.*

Palabras clave: *COVID-19, crecimiento y desarrollo, independencia de la madre, estimulación.*

INTRODUCTION

During the new normal period, the impact of the COVID-19 pandemic has dramatically affected the health services for infants and toddlers at the Integrated Healthcare Center (Posyandu). Due to restrictions on social movement from March to July 2020, activities for monitoring the health of toddlers at the Posyandu have been neglected

because all concentration of services and health is focused on COVID-19. All activities that gather the community are stopped to break the chain of the spread of COVID-19, including Posyandu activities. Monitoring the growth and development of toddlers uses the growth chart (KMS) in Posyandu (1). A growth chart or Mother and Child Book (MCH) is a benchmark card used to record the developmental graph of each child concerning weight, age, and gender. This tool is also used to see the toddler's development and become a reference to keep the baby healthy and get the proper nutrition.

As a result of the pandemic, all activities involving the community that have the potential to assemble have been postponed due to the determination of the COVID-19 pandemic as a non-natural disaster (2-5) and efforts to inhibit the spread of the virus with the issuance of rules regarding large-scale restrictions issued by the Jombang Regent (6-9). During the COVID-19 pandemic, a mother's independence is needed to stimulate toddlers' optimal growth and development. Before the pandemic, mothers can stimulate by referring to the MCH handbook. In the pre-pandemic period, stimulation assistance was carried out when attending the Posyandu held every month by cadres and health workers face-to-face to help groups of mothers easily understand the contents of the MCH handbook in doing stimulation. However, during the COVID-19 pandemic, face-to-face Posyandu activities were limited by the regent's decree on physical distancing. The Large-Scale Social Restriction (PSBB) policy also limited population mobility and impacted the accessibility of health services, including the Posyandu activities. This can risk disrupting the continuity of health services for toddlers, increasing morbidity, mortality, and developmental disorders. During the pandemic and entering the new normal, steps need to be taken for mothers to be able to stimulate growth and development independently, which is carried out at home at any time in a pleasant situation refers to the information in the MCH Handbook so that toddlers can continue to grow and develop optimally. Factors influencing a mother's independence in stimulating growth and development are knowledge (10,11), availability of MCH Handbooks, and supporting services provided by health workers (12).

The COVID-19 situation at the national level is still at a very high-risk level. As long as vaccine development is still ongoing, society is faced with the reality of preparing to coexist with COVID-19. The community must make changes in their daily lifestyle and adapt to new normal habits to live productively and avoid the transmission of COVID-19. Discipline in applying the principles of a clean and healthy lifestyle is the key to suppressing the transmission of COVID-19 in the community. In addition to the government's efforts to prevent the spread of COVID-19, they must also pay attention to growth and development by providing Posyandu health services to the community even during the COVID-19 pandemic while still paying attention to health protocols following government regulations. During the pandemic, Posyandu activities will be replaced with weighing posts where mothers only need a short time to reduce crowding time. After they are finished, mothers will go home quickly with their toddlers (6). Mothers' independence in stimulating growth and development is needed so that toddlers grow according to their age. This independence in stimulating and detecting growth and development and monitoring changes in body weight is needed during a pandemic, which is guided by the MCH handbook. The purpose of this study was to determine the independence of mothers in stimulating the growth and development of toddlers during the COVID-19 pandemic.

METHODS

Research design

The method used is a descriptive research with a retrospective approach. A retrospective is a method of collecting data related to the past (13), where the researcher looks at the dependent variable: the growth and development of toddlers during the pandemic (March - July 2020), while the independent variable is the mother's independence in stimulating growth and development of toddlers during the pandemic.

Population, sample, and sampling

The population is all mothers who have toddlers at the Posyandu as many as 80 respondents. In

the sample of some mothers who have toddlers, as many as 68 respondents used the simple random sampling technique. Data collection through the WhatsApp group of Posyandu women through the google form with village midwife assistance. Data analysis used Chi-square.

Research Ethics

Ethical worth is proven by the existence of Ethical Clearance No. 0121070336/KEPK/STIKES-PEMKAB/JBG/VII/2021.

RESULTS

Table 1 shows that most of the growth is normal, but toddlers still experience abnormal growth (some are thin and fat). Most developments are age-appropriate.

Table 1
Frequency distribution of growth and development of toddlers

Growth	Normal 47(69.1 %)	Abnormal 21(30.9 %)
Development	In accordance 64(94.1 %)	It is not following 4(5.9 %)

Table 2 shows the statistic test Chi-Square Asympsig (2-Sided)=0.02. It is a significant value of 0.02 which means it is smaller than = 0.05, then H1 is accepted. This means that there is a relationship Toddler growth with the mother's independence in stimulating Toddler growth during the COVID-19 pandemic.

Table 2
Cross-tabulation between toddler growth and mother's independence in growth stimulation

Independence Growth	Independent f (%)	Less independent f (%)	Amount f (%)
Normal	29 (72.5)	11 (27.5)	40 (100)
Abnormal	18 (64.3)	10 (35.7)	28 (100)
Amount	47 (69.1)	21 (30.9)	68 (100)

Table 3 shows the Chi-Square test Asympsig (2-Sided) = 0.03. This shows a significance value of 0.03 which means it is smaller than = 0.05, then H1 is accepted. This means that there is a relationship between the development of toddlers and the mother's independence in stimulating the development of toddlers during the COVID-19 pandemic.

Table 3

Cross-tabulation between toddler development and mother's independence in developmental stimulation

Independence	Independent f (%)	Less independent f (%)	Amount f (%)
Development			
In accordance	52 (96.3)	2 (3.7)	54 (100)
It is not in accordance with	12 (85.7)	2 (14.3)	14 (100)
Amount	64 (94.1)	4 (5.9)	68 (100)

Table 4 shows the Chi-Square test Asympsig (2-Sided) = 0.043. This shows a significance value of 0.053 which means it is greater than = 0.05, then H1 is accepted. This means that there is no relationship between the independence of mothers in using the MCH handbook and the growth of toddlers during the COVID-19 pandemic.

Table 4

Cross-tabulation between mother's independence in using MCH handbooks and toddler growth

Growth MCH book	Normal f (%)	Abnormal f (%)	Amount f (%)
Independent	27(57.4%)	20(42.6%)	47 (100)
Less independent	3(14.3%)	18(85.7%)	21 (100)
Amount	30 (44.1%)	38(55.9%)	68 (100)

Table 5 shows the Chi-Square test Asympsig (2-Sided) = 0.017. This shows a significance value of 0.017 which means it is smaller than = 0.05, then H1 is rejected. This means that there is

a relationship between the mother's independence in using the MCH handbook and the development of toddlers during the COVID-19 pandemic.

Table 5

Cross-tabulation between mother's independence in using MCH handbooks and toddler development

Development MCH book	In accordance f (%)	It is not following f (%)	Amount f (%)
Independent	29 (96.7)	1 (3.3)	30 (100)
Less independent	35 (92.1)	3 (7.9)	38 (100)
Amount	64 (94.1)	4 (5.9)	68 (100)

DISCUSSION

The results showed that most toddlers' growth was normal and followed the growth curve in the growth card, but a small portion of toddlers experienced abnormal growth consisting of lean growth and overweight. The development of toddlers during the COVID-19 pandemic is mostly age-appropriate. Although some are not appropriate, this may be because the child's development is influenced by the stimulation carried out by the mother and her family. During the pandemic, all family members often gather to carry out activities at home to comply with the health protocols to reduce crowding outside the home. In a family, there is intense interaction because all family members carry out activities in the house. Children grow with the stimulation that all family members.

Growth is increasing physical size and body shape on an ongoing basis. Examples of changes experienced by children such as increased height, weight, and strength, but not all children have optimal growth. Growth is quantitative, measurable, and occurs physically. Toddler growth can be monitored by measuring high, weight, head circumference, and other age-appropriate measurements with certain standardized measuring instruments. On the other hand, development is an increase in the ability of the structure and function of the body

to be more complex, and can be observed from the way he plays, learns, talks, and behaves. Internal and external factors influence growth and development. Internal factors include gender, racial differences, age, genetics, and chromosomes. While external factors include the state of the social environment, economy, nutrition, and stimulation (14).

During the COVID-19 pandemic, all people are required to carry out health protocols in the form of always wearing masks, washing hands frequently, and avoiding crowds. At this time, it has a significant influence on human life, including in the childhood phase. A child loses playing time with his peers and lacks interaction with others because of imposed social restrictions. Children are limited by social distance and cannot play outside the house with their peers. Cannot come to Taman Posyandu with (Family Development Toddler) BKB, (Early Childhood Education) PAUD activities, and Posyandu to monitor Toddler children's health and growth and development. It causes difficulty to detect early childhood growth due to the limited services of basic health facilities such as Posyandu. Therefore, a mother's knowledge about complementary feeding and monitoring child growth and development independently is essential for the early detection of malnutrition and developmental delays in children, especially in the age range of 4-24 months (15). Maria Galuh (2020) stated that monitoring the growth of under-fives in the COVID-19 pandemic era was significantly related to nutritional status. However, there was no relationship between the mother's sources of information about complementary feeding and the nutritional status of under-fives (16).

Most of the respondents are housewives who depend on their husbands for their economy, meaning that the source of income comes from only one source. This can impact toddlers' nutrition, which is most likely to be disrupted due to the economic impact. At this time, many affected companies were unable to carry out operations, which reduced employees. Families who experience economic impact are felt heavy because the sources of income used to meet daily needs are reduced or even non-existent. In this phase, families who have children under five need funds to buy food, health maintenance, stimulation

of growth, and development activities. Toddlers who experience abnormal growth consisting of underweight growth and overweight is also a dangerous sign because, during the Toddler period, no one should experience growth disorders. After all, this period is the golden age, which is a very important period from the fetus to the age of two years.

In toddlers who grew thin during the COVID-19 pandemic, it could be caused by insufficient intake of nutrients. This can be caused by economic factors from family income that cannot meet the needs of buying food according to the nutrients needed. It can also be caused by toddlers having difficulty eating nutritious food. This is because toddlers may not be introduced as early as possible to eat nutritious complementary breast milk according to age stages. It can also be caused because of the possibility of toddlers experiencing illnesses that often attack acute respiratory infection (ARI), diarrhea, measles, typhus, DH, and tuberculosis, making it difficult for children to eat. The mother's lack of understanding in providing a variety of nutritious foods for toddlers who are still growing can also be one of the reasons. Parents can do activities for children who have difficulty eating by inviting children to play with cooking according to the child's age and helping cook food together. The child will grow the desire to eat food that is cooked together. Parents are expected to appreciate what food desires

In overweight toddlers, it can be caused during a pandemic, and children are less active in playing with peers. Playing activities themselves can be useful because they use the energy obtained from the metabolism of food. Playing will burn fat in the body. If you don't play enough, the results of your metabolism will accumulate to become fat and overweight. At this time, one of the health protocols is to reduce crowds. Children tend to only play at home with a limited place to reduce body movement to burn fat, and children become overweight (obese). Obesity in children can also have a negative effect on health, both in the long and short term. The risk of metabolic disease can include high blood pressure, high levels of fat in the blood, and diabetes (diabetes) increases in children who are obese. As a result, health risks such as coronary heart disease and stroke also increase later. Various other health

complications can arise in children with obesity, such as the risk of asthma, airway obstruction during sleep, bone problems, fatty liver, and psychological disorders.

The mother's age in this study was not associated with the nutritional status of the children. This is in line with previous research, which states that there is no significant relationship between maternal age and the nutritional status of children under five (17). If grouped according to the nutritional status of infants under two years old, mothers who work as nurses have more babies under two years of age with good nutritional status when compared to mothers who have children with other nutritional statuses. The analysis results showed that there was no significant relationship between the mother's employment status and the nutritional status of infants under two years of age. These results follow research that states that there is no relationship between mothers' work and the nutritional status of children aged 12-36 months (18).

Mother's education is the last education that was taken by the mother when the research was conducted. A person's level of education plays an essential role in public health, but in this study, mothers with a bachelor's education still had children with poor nutritional status. This number is higher than mothers with malnourished children with Diploma and high school education levels. This is following previous research that stated that the mother's education level was not significantly related to nutritional status (17,19). The higher the mother's education level, the higher the tendency for the mother to be busy, which affects the lack of attention and care in monitoring the nutritional status of children. Parents who have higher education tend to choose foods with balanced nutrition and pay attention to the nutritional needs of children (20,21). The higher the level of education, the quality of the work undertaken, the more difficult it is, and the time that mothers have to take care of their children between busy working mothers, so this phenomenon is related to children who have poor nutritional status.

In this study, it was shown that the most sources of maternal knowledge regarding the provision of complementary feeding were obtained from various sources of social media

whose validity was varied so that it was still not completely accurate, but this was equivalent to obtaining complementary feeding information from health facilities, the majority of which had provided appropriate counseling. The mother's source of knowledge about complementary feeding is not related to the child's nutritional status. Various previous studies have stated a relationship between the mother's level of knowledge about complementary feeding and the child's nutritional status (22-24). However, no study examines the relationship or validity of maternal information sources on complementary feeding with the nutritional status of children. The study results of Muller and Krawinkel (2005) stated that the early introduction of low quality and quantity first foods, low exclusive breastfeeding, and high frequency of disease in early infancy were the reasons for the delay in growth (25). The quantity and quality of food provided and the frequency of eating are important factors related to nutritional status. Studies conducted by Beck and Lavender stated that nutritional status is related to the immune response and can also affect viral pathogenicity. Providing proper nutrition, especially during the golden age of children, will significantly affect the body's resistance to reduce the risk of exposure to infection (26). Monitoring children's growth during the COVID-19 pandemic is very important in connection with the many basic health facilities that do not provide direct services.

This study also shows a significant relationship between the way of monitoring growth (in this case, weight and height) and the nutritional status of children during the COVID-19 pandemic. Most mothers who always used the MCH handbook and made regular visits to the midwife/general practitioner and pediatrician indicated that their child had good nutritional status. This study is closely related to the parameters used by mothers continuously to guide children's growth. Mothers who are close to the virtual world have used a child growth monitoring application, namely, Primaku, which was made by the Indonesian Pediatrics Society (IDAI). This method is very easy to use for the early detection of child growth problems.

Social and physical distancing makes individuals have to maintain a safe distance, causing no gathering of people in one place,

one of which is the Posyandu. Because there is no Posyandu, toddlers' growth still has to be monitored. It makes parents feel overwhelmed and confused. Health workers and health cadres are also not allowed to visit families. Children are also not allowed to leave the house and must keep their distance. Parents may not realize that their child is experiencing delays due to not taking routine measurements at the Posyandu. Mothers can consult via WA (WhatsApp), Personal chat (Private Line) with health workers if they experience problems with children in growth and development. Parents still have to provide stimulation guidance, provide good nutrition, and prevent children from getting sick during the pandemic. This shows how important it is for the growth and development of Toddlers to be monitored, even during a pandemic.

CONCLUSION

In conclusion, most growth and development are appropriate during the COVID-19 pandemic. There is a relationship between toddler growth and mother's independence during the COVID-19 pandemic and a relationship between toddler development and mother's independence during the COVID-19 pandemic. There is no relationship between a mother's independence using the MCH book and growth during the COVID-19 pandemic. However, there is a relationship between the mother's independence using the MCH handbook and the development of children.

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