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Maternal Mental Health and Stunting among Children Aged 24-59 Months in Jember Regency

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ABSTRAC

Background: Stunting remains a major nutritional problem worldwide, especially in midlle and low-income countries. Poor mental health may diminish a mother's capacity to adequately care for her child, which will ultimately contribute to stunting in children.
Aim: The aim of this study was to analyze the relationship between maternal mental health and stunting among children aged 24–59 months in Jember District. A Cross-Sectional study was conducted among 215 mothers who had children in the age group of 24–59 months using stratified random sampling. A self-administered questionnaire was used to collect the data, including socio-demographic data and a self-reporting questionnaire (SRQ-20), while digital microcode and digital scales were used to measure children's anthropometry.
Result: The result showed that 44% of mothers were identified as having indicated mental health disorders. Meanwhile, children who suffer from stunting were 76% and 24% classified as severely stunted. The results of research using the Chi-Square test showed that maternal mental health was significantly associated with stunting ((χ2= 4,44; p-value <0,05). Moreover, maternal mental health is a protective factor against more severe stunting in children (OR= <1; 95% CI= 0.278-0.959).
Conclusions: Maternal mental health is a associated with stunting among children in the age group of 24–59 months. Therefore, emphasis should be given to preventing, managing, and maintaining maternal mental health to prevent stunting

Keywords*: Maternal Mental Health, Stunting, Nutritional Status, Family*

INTRODUCTION

Stunting or growth failure is a significant global health issue, especially Southeast Asia, including Indonesia. Based on the results of the Indonesia Basic Health Survey in 2023, it is known that around 21,5% of children in Indonesia experience stunting (Kementerian Kesehatan RI, 2023). This number has not reached the target of the second point of the Sustainable Development Goals (SDGs), namely ending all forms of malnutrition by 2030 (Susanto et al., 2019). The high incidence of stunting is caused by many contributing factors, one of which is maternal factors (Khan, 2022). Maternal factors indirectly affect the nutrition and development of children such as mental health, parenting patterns, employment, income, and education the (Khan, 2022; Abdulaziz et al., 2023; Susanto et al., 2021; Supadmi et al., 2024). Maternal mental health is important in fulfilling children's nutrition because will influence the role of mothers in providing caring and nurturing to children (Mediani et al., 2023) .

Mothers play a role as health leaders and caregivers in the family (Friedman, MM, 2010). Consequently, their role as primary caregivers is a determinant of stunting problems in children (Susanto et al., 2023) . One of the primary stressors experienced by mothers as primary caregivers within the family is related to parenting. Parenting stress is defined as the balance between the demands of parenting and the resources perceived as available to meet those demands (Potharst et al., 2022). This stress results in tension and anxiety stemming from the challenges of adapting to the demands and needs of children (Pridandi, 2023). If stress continues to accumulate without effective stress management and timely intervention, it can progress into a more severe condition known as depression (Rahmani et al., 2023). Poor maternal mental health can decrease the emotional bond between the mother-child and the mother's sense of responsibility, which may ultimately affect her ability to provide adequate nutritional intake for the child, leading to potential long-term consequences. A mother's ability to child feeding practices, hygiene practices and preventive care use can also be influenced by her mental health (Khan, 2022). This research will analyze the relationship between maternal mental health and stunting among Children Aged 24-59 Months in Jember Regency, focusing on the three Public Health Centers with the highest stunting rates.

METHODS

This study was used a cross-sectional approach (December 2024 - January 2025) in the Rambipuji, Ledokombo, and Sumberjambe Public Health Center, Jember Regency, Indonesia. The population of this study was children aged 24-59 months who experienced stunting (N = 770 children). The sample of this study was children aged 24-59 months. Based on the results of calculations that include the population size (N = 770), the level of significance of meaning (Z1-α / 2 = 1.96), the absolute error rate (0.05), the sample size in this study was 215 children.

The sample size was determined using stratified simple random sampling which went through 2 stages, namely village stratification followed by Maternal and Child Health services (Posyandu) stratification, with the following inclusion and exclusion criteria. This study used research criteria that included inclusion criteria: 1) Stunted children aged 24-59 months who were registered at Posyandu in the Rambipuji, Sumberjambe, and Ledokombo; 2) Stunted children aged 24-59 months whose main caregiver in their family is the mother; 3) mothers who are not currently or have never received a diagnosis of mental disorders from a healthcare professional. The exclusion criteria include: 1) Stunted children aged 24-59 months with limb deformities; 2) Stunted children aged 24-59 months with physical and intellectual disabilities; 4) Mothers of stunted children aged 24-59 months who use psychotropic drugs; 5) Mothers of stunted children aged 24-59 months stated their unavailability; 6) Mothers of stunted children aged 24-59 months with disabilities (hearing impaired and speech impairment). A total of 215 participants participated in this study

This study uses respondents' characteristics questionnaire that contains data on the identity of

a mother (age, occupation, last education, marital status, number of children), child characteristics (age, gender, history of breastfeeding, weight, and height), as well as family characteristics (number of family members and monthly income). The measurement of the independent variable (maternal mental health) uses the Self Report Questionnaire (SRQ-20) while measuring the dependent variable (stunting of children) uses a digital microtoise and digital scale. The researcher calculates the children's anthropometric value using the AnthroPlussoftware. The measurement results are then classified using standard standards from the Ministry of Health of the Republic of Indonesia based on body height according to age (HAZ) so that it can be divided into two categories, namely stunted and severely stunted. Researchers met with midwives and Public Health Center Rambipuji, Ledokombo, and Sumberjambe staff who had data related to children and cadres of each Posyandu, then the researchers visited cadres of each Posyandu to find out the characteristics of children and their mother and asked for addresses to research by home visits. This study was declared ethical by the Health Research Ethics Commission (KEPK) of the Faculty of Nursing, the University of Jember with Number 384/UN25.1.14/ KEPK/2024. The researcher secured formal approval from each participant by obtaining their signed informed consent. The collected data were entered into Microsoft Excel 2010 and subsequently analyzed using SPSS version 26. Categorical data in this study are presented as percentages, whereas numerical data with a normal distribution are presented as the mean and standard deviation. For numerical data with an abnormal distribution, the results are presented as the median and percentiles. The relationship between maternal mental health variables and the stunting of children using the Chi-square statistical test with a significance level ($p < 0.05$).

RESULT

Table 1 shows that the stunted children in the area have a middle-age value of 42 months, with the majority being female (54.9%). Additionally, most of the children have a history of exclusive breastfeeding for more than six months (94%). The data also indicate that the middle-age value of mothers with stunted children is 27 years, which falls within the productive age range. However, the majority of these mothers have only attained an education level equivalent to elementary school (30.8%), while a small proportion have never attended school (1.4%). Most mothers in the area do not work or act as housewives (94%), with a total monthly family income below the minimum wage level (83%). Some mothers have more than two children (21,4%).

In this study, maternal mental health was assessed using three indicators. Table 2 demonstrates a significant difference in maternal mental health ($Z = 0.135$; $p < 0.001$). Additionally, significant differences were observed across all indicators, including symptoms of depression, anxiety, and somatic complaints ($p < 0.001$). The extent of maternal mental health issues in the Rambipuji, Ledokombo, and Sumber Jambe Health Centers in Jember Regency is further illustrated in Figures 1 (a) and 1 (b).

Table 3 describes a significant difference in the height of stunted children ($Z = 0.083$; $p = 0.001$). However, no significant difference was observed in their weight ($Z = 0.058$; $p = 0.076$). Additionally, a significant difference was found in the stunting of the children (HAZ) ($Z = 0.094$; $p = 0.000$), as well as in their nutritional status based on weight-for-height (WHZ) ($Z = 0.077$; $p = 0.003$) and body mass index-for-age (BAZ) (($Z = 0.068$; $p = 0.017$). However, no significant difference was observed in the nutritional status based on weight-for-age (WAZ)($Z = 0.053$; $p = 0.200$). Furthermore, the prevalence of nutritional status among children aged 24-59 months at the Rambipuji, Ledokombo, and Sumber Jambe Health Centers in Jember Regency is presented in Figures 2(a), 2(b), 2(c), and 2(d). This figure shows that the majority of children are stunted in the Rambipuji, Ledokombo, and Sumber Jambe Health Center Work Areas. Based on height-for-age (HAZ) they have short bodies (76%), based on weight-for-age they have underweight (41%),

and based on weight-for-age (WAZ) and body mass index-for-age (BAZ) they have good nutrition (82%).

Bivariate analysis in this study used the Chi-square test. This test uses a 2x2 table where the results are obtained from the merging between cells. In Table 4. It is known that there is a relationship between maternal mental health and the incidence of stunting in children aged 24-59 months in the Work Area of Rambipuji, Ledokombo, and Sumber Jambe Public Health Centers, Jember Regency which is shown from the results ($\chi 2$=4.444; *p-value* = 0.035). Good maternal mental health is one of the factors that help prevent the severity of stunting in children (OR 0.51; 95% CI = 0.278-0.959).

Discussion

Maternal Mental Health and Stunting among Children

This research conducted 215 stunted children in the Rambipuji, Ledokombo, and Sumber Jambe Public Health Center Work Area in Jember Regency. The results showed a relationship between maternal mental health and the incidence of stunting in children aged 24-59 months in the Rambipuji, Ledokombo, and Sumber Jambe Public Health Centers, Jember Regency. Good maternal mental health enables mothers to respond more sensitively to their children's health needs, including fulfilling their nutritional requirements. This finding is also reinforced with the results of a study conducted in Nigeria, that mothers who have mental health problems tend to have stunted children (Folayan et al., 2023) . The results of a study in Africa by Khan (2022) also showed that maternal mental health is closely related to child feeding practices, hygiene practices, and preventive care use by mothers, so it will affect the nutritional status of children. Maternal mental health refers to welfare emotional, social, And mental in a way overall, both during and after pregnancy (Zuloaga, 2023) . Therefore, efforts to improve maternal mental health are very important to support improving the nutritional status of children. This step can be done by providing easily accessible mental health services in the Public Health Center.

The results of this study identified that Good maternal mental health is one of the factors that help prevent the severity of stunting in children. . This may be attributed mothers with good mental health are more likely to exhibit confidence in fulfilling their roles in caring for and nurturing their children. This includes selecting nutritious foods, preparing meals, and creating a positive and enjoyable eating environment for their children. In the nursing theory of *Maternal Role-Becoming a Mother* by Ramona T. Mercer, the achievement of a mother's role is determined by her ability and confidence in carrying out her role (Alligood, 2017). The role of the mother as the primary caregiver determines the problem of stunting in children (Susanto et al., 2023) , Good mental health is essential for implementing optimal patterns of child care and nurturing, as well as for meeting the basic needs of children effectively. The basic needs of children's growth and development consist of 3 main aspects: asuh, asih, and asah (Mediani et al., 2023). Based on these results, it can be seen about the importance the mother's mental health because it can directly affect her ability to provide optimal care and nurturing to her child, especially in fulfilling the nutritional needs of children.

Maternal Mental Health in the Rambipuji, Ledokombo, and Sumber Jambe Health Centers in Jember Regency

The results of this study show that some mothers with stunted children are indicated to have mental health disorder (44%). This is possible due to differences in education levels, where the majority of mothers are elementary school graduates/equivalent (67%) and some mothers have not attended school (1.4%) . The mother's education level may influence her ability to manage stress adaptively, which consequently can affect her mental health and her capacity to care for and fulfill the child's

nutritional needs. Family healthcare practices are greatly influenced by how the family views or defines health and illness (Friedman, M. et al., 2010). Mothers with higher levels of education may exhibit more optimal family health care practices, as they possess better knowledge and skills to address daily challenges, including maintaining the health and development of their children. This is in line with a statement that states that education can improve quality of life, as well as increase mothers' understanding of their physical and mental health (Saeed et al., 2017).

The mental health of mothers with stunted children is indicated by a high prevalence of anxiety, with a reported rate of 57.7%. This is reflected in symptoms of anxiety experienced by mothers in their daily lives, such as difficulty sleeping, being easily frightened, feeling tense or anxious, trembling hands, and fatigue. This condition is likely influenced by family income factors, as the majority of families in the area (83%) have an income below the minimum wage. Such financial constraints may lead to maternal concerns regarding the fulfillment of basic needs, such as food and access to health services. According to Naaz et al. (2021), low family income is a significant predictor of maternal mental health problems, as it increases the risk of food shortages and inadequate household resources to meet

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Table 1. Socio-demographic Characteristics of Participants (n=215)

Variables	Mother	Children
Age Md (P_{25}-P_{75})	27 years (23-33)	42 months (34-51)
Gender (f %)		
Male		97 (45.1)
Female		118 (54.9)
History of exclusive breastfeeding 6 months (f %)		
Yes		202 (94)
No		13 (6)
Last education (f %)		
Bachelor's	4 (1.9)	
Senior High Scool	65 (30.6)	
Junior High School	56 (26)	
Elementary School	67 (30.8)	
No school	4 (1.9)	
Occupation (f %)		
Housewife	202 (94)	
Farmers	2 (0.9)	
Laborer	8 (3.7)	
Enterpreneur	3 (1.4)	
Employee	0 (0)	
Number of children (f %)		
1	100 (46)	
2	69 (32.1)	
>2	46 (21.4)	
Marital status (f %)		
Marry	212 (98.6)	
Divorce	3 (1.4)	
Family income (f %)		
< Minimum Wage Rp2,665,392	179 (83)	
≥ UMR Rp2,665,392 1.	36 (16)	

Description: f(%) = Number of participants (percentage); Md = Median; P25-P75 = *Percentiles* 25-75

Table 2. Maternal Mental Health Indicators (n=215)

Mental Health Indicators	Md (P_{25}-P_{75})	Z	*P-value*
Symptoms of depression	3 (1-5)	.135	<0.001
Symptoms of anxiety	1 (0-3)	.223	<0.001

Symptoms of somatic	1 (0-2)	.243	<0.001
Total Score	5 (3-9)	.612	<0.001
Maternal Mental Health			

Information: M d = *M ed ean* , SD= *Std.Deviation; Z = Kolmogorov–Smirnov Test* calculated value ; *p-value = Significant Kolmogorov–Smirnov Test*

Figure 1. Maternal Mental Health

1 (a) 1(b)

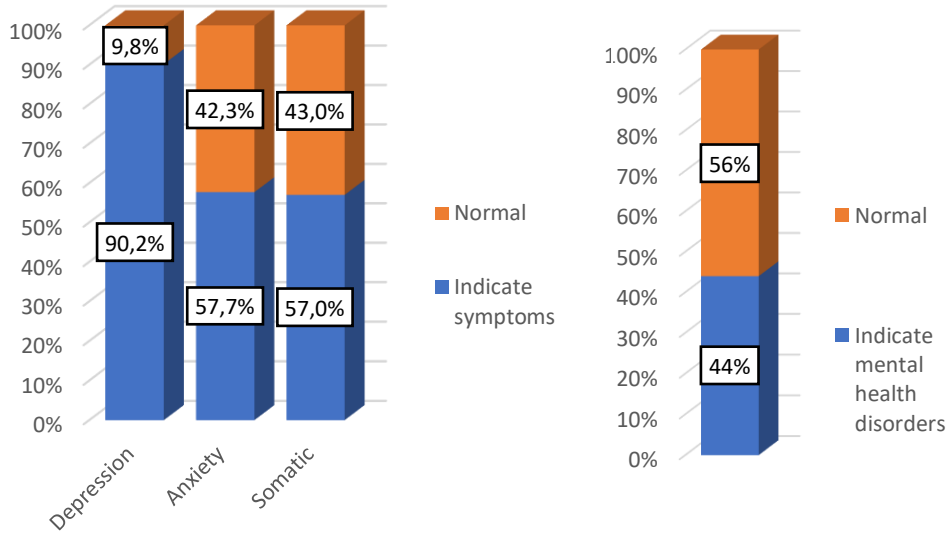

Table 3. Indicators of Children's Nutrition Status (n=215)

Variables	Md (P25 – P75)	Z	*P-value*
Height	11.4 (10.2-12.5)	0.083	0.001
Weight	89 (84-93.7)	0.058	0.076
Nutritional status			
Height-for-Age	-2.52 (-2.97 - -2.28)	0, 119	0,000
Weight-for-Age	-2.21 (-2.69 - -1.7 6)	0.05 4	0.200
Weight-for Height	-1.01 (-1.6 6 - -0.31)	0.0 80	0.00 2
BMI-for-Age	-0.77 (-1.44 - -0.07)	0.068	0.017

Description: Md=Median, P25-P75 = *Percentiles* 25-75; Z = *Kolmogorov–Smirnov Test calculated value; p-value* = Significant *Kolmogorov–Smirnov Test*

Figure 2. Children Nutrition Status

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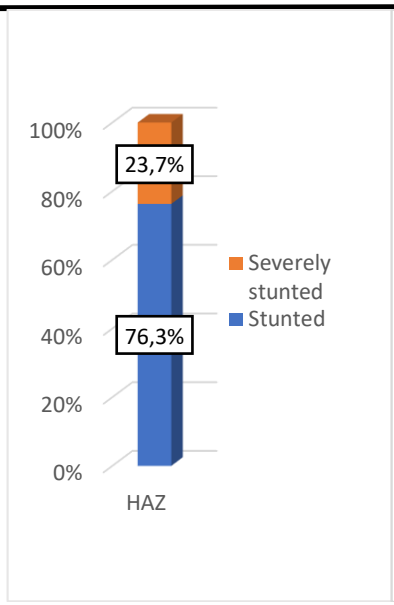
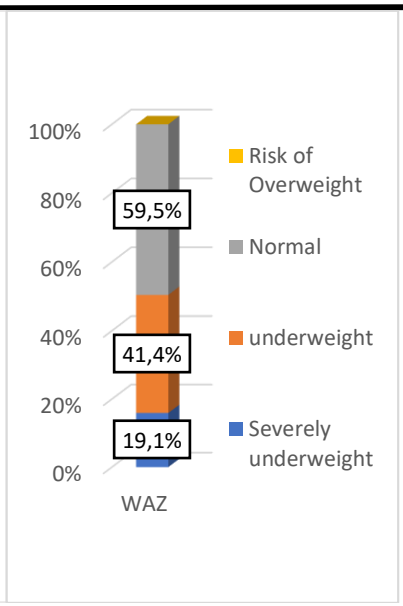
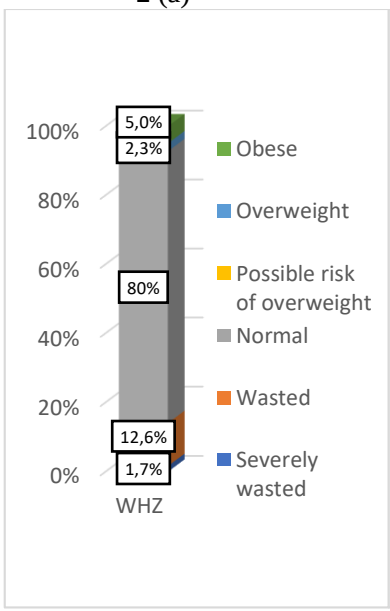


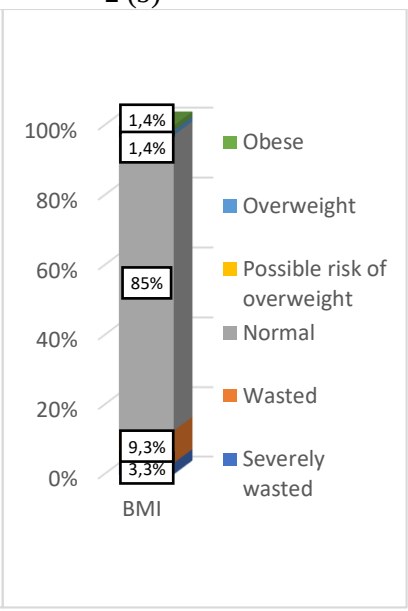
2 (a)



2 (b)



2 (c)



2 (d)

Table 4. Relationship between Maternal Mental Health and Incidence of Stunting in Children

Maternal Mental Health	Stunting		χ2	*p-value*	OR	95% CI
	Short	Very short				
	f (%)	f (%)				
Normal	96 (44.7)	24 (11.2)	4.44	0.035	0.51	0.278-0.959
Indicated	64 (29.8)	31 (14.4)				

Description: χ2= *Chi-square* value ; *p-value* =Significant Chi square; (%)=Number of participants (percentage); OR = Odds Ratio; 95% CI = 95 Confidence Interval

daily needs, thereby exacerbating maternal anxiety. This highlights the critical importance of the family's economic function, which encompasses the provision of resources—including finances, space, and materials—and their appropriate allocation to ensure stability (Friedman et al., 2010).

The mental health of mothers with stunted children is indicated by the presence of somatic symptoms, with a prevalence of 57%. These symptoms include headaches, loss of appetite, and digestive disorders, which arise due to tension and anxiety stemming from unmanaged stress. Mothers are at risk of experiencing role tension caused by the numerous demands of fulfilling basic childcare needs (Kaakinen et al., 2018). Somatic symptoms represent the body's Physiological response to stress, involving neurobiological changes such as the release of stress hormones. These changes can elevate blood pressure, causing muscle tension that compresses nerves, reduces blood flow, and triggers headaches (Stubberud et al., 2021). Additionally, acute stress impacts brain responses, particularly in the frontal areas responsible for appetite regulation and emotional control (Nakamura et al., 2020). In this study, 21.4% of mothers had more than two children. A higher number of children can increase the burden of maternal responsibilities, which not only affects maternal efficiency but also poses a risk to maternal mental health, subsequently leading to somatic symptoms. Research by Naaz (2021) further highlights that mothers with high parity are at greater risk of mental health disorders, such as anxiety and depression. This problem can be exacerbated when the intervals between pregnancies are too short. Therefore, although reproduction remains a primary function of the family, serving as a justification for its existence (Friedman et al., 2010), family planning and ensuring adequate spacing between pregnancies are essential for the well-being of mothers and their children.

The mental health of mothers with stunted children is characterized by symptoms of depression, with a prevalence of 90.2%. These symptoms include difficulty thinking, feelings of unhappiness, frequent crying, difficulty enjoying daily activities, and other indicators of depression. One contributing factor to maternal depression may be marital status. This study revealed that 1.4% of mothers were divorced. Being a single parent can increase the burden of responsibility, as mothers must care for their children alone without full support from a partner, making parenting more challenging (Friedman et al., 2010). According to devan et al. (2020), single mothers are more likely to experience mood disorders compared to married mothers. This is due to the dual challenges they face in managing daily life problems while also taking on the added responsibilities of childcare without partner support. To address this issue, enhancing communication with other family members is essential. For instance, open discussions about childcare and role division can be encouraged. Furthermore, participating in community support groups can provide mothers with the social support they need to navigate their challenges effectively.

Stunting among Children in the Rambipuji, Ledokombo, and Sumber Jambe Health Centers in Jember Regency

This study reveals that stunted children at the Rambipuji, Ledokombo, and Sumber Jambe Health Centers in Jember Regency predominantly exhibit short stature (76%), while the proportion of children with severely short stature is lower. This may be influenced by factors such as exclusive breastfeeding for six months and household income. In this study, the majority of children (94%) received exclusive breastfeeding for six months. Exclusive breastfeeding for this duration supports optimal child growth. Conversely, breastfeeding for less than six months increases the risk of growth disorders and exacerbates stunted child growth (Muche & Dewau, 2021).

Therefore, family assistance by health workers is essential to educate families about the importance of exclusive breastfeeding for six months. Another factor influencing stunting in children is family income, where the majority of families (83%) have incomes below the minimum wage. Low family income affects various aspects, including vulnerability to food insecurity, which hampers the fulfillment of children's nutritional needs, as well as limited access to health services when children fall ill. Research by Akombi et al. (2017) indicates that children from poor households have a higher risk of stunting and severe stunting compared to those from wealthy households. Children from low-income families are more susceptible to malnutrition. Thus, family assistance by health workers is crucial to provide education on nutritious diets tailored to a limited budget, as well as the utilization of local nutrient-rich resources to optimally meet children's nutritional needs.

This study identified that 44% of mothers experienced mental health problems; however, it is possible that the actual number of mothers with mental health issues is higher than this finding. This discrepancy may be attributed to limitations in identifying maternal mental health problems, particularly due to the sensitivity of mental health issues within society. Therefore, further efforts are required to develop more effective identification methods that align with the cultural and contextual characteristics of mothers in Indonesia, ensuring more accurate measurements of maternal mental health. Additionally, this study employed a measurement tool that assessed maternal mental health over the past 30 days, which may limit the ability to capture long-term mental health conditions. Consequently, changes or fluctuations in maternal mental health beyond this period could not be detected. Future research should consider adopting a longitudinal approach to monitor periodic changes or fluctuations in maternal mental health over time

CONCLUSION

The majority of mothers in this study were found to have good mental health. There is a significant relationship between maternal mental health and the incidence of stunting in children in the working areas of Rambipuji, Ledokombo, and Sumberjambe Public Health Centers, Jember Regency, Indonesia. Good maternal mental health is one of the factors that contribute to preventing the severity of stunting in children. Mothers with good mental health are better equipped to care for and nurture their children, particularly in providing adequate nutrition that supports optimal growth and development.

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REFERENCE

Akombi, B. J., Agho, K. E., Hall, J. J., Merom, D., Astell-Burt, T., & Renzaho, A. M. N. (2017). Stunting and severe stunting among children under 5 years in Nigeria: A multilevel analysis. *BMC Pediatrics*, *17*(1), 1–16. https://doi.org/10.1186/s12887-016-0770-z

Alligood, R. . (2017). Pakar Teori Keperawatan Edisi Indonesia. In *Karya Medika*.

Folayan, M. O., Oginni, A. B., El Tantawi, M., Adeniyi, A., Alade, M., & Finlayson, T. L. (2023). Association between maternal decision-making and mental health and the nutritional status of children under 6 years of age in sub-urban Nigeria. *BMC Public Health*, *23*(1), 1–11. https://doi.org/10.1186/s12889-023-16055-2

Friedman, M. M. (2014). Buku Ajar Keoerawatan Keluarga (Riset, teori, dan

praktik) Edisi 5. *5*.

Kemenkes RI. (2023). *Survei Kesehatan Indonesia Tahun 2023*.

Khan, A. M. (2022). Maternal mental health and child nutritional status in an urban slum in Bangladesh: A cross-sectional study. *PLOS Global Public Health*, *2*(10), e0000871. https://doi.org/10.1371/journal.pgph.0000871

Mediani, H. S., Setyawati, A., Hendrawati, S., Nurhidayah, I., & Firdianty, N. F. (2023). Pengaruh Faktor Maternal terhadap Insidensi Stunting pada Anak Balita di Negara Berkembang: Narrative Review. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *7*(2), 1868–1886. https://doi.org/10.31004/obsesi.v7i2.4160

Nakamura, C., Ishii, A., Matsuo, T., Ishida, R., Yamaguchi, T., Takada, K., Uji, M., & Yoshikawa, T. (2020). Neural effects of acute stress on appetite: A magnetoencephalography study. *PLoS ONE*, *15*(1), 1–17. https://doi.org/10.1371/journal.pone.0228039

Saeed, Q., Shah, N., Inam, S., & Shafique, K. (2017). Maternal depressive symptoms and child nutritional status: A cross-sectional study in the socially disadvantaged Pakistani community. *Journal of Child Health Care*, *21*(3), 331–342. https://doi.org/10.1177/1367493517721063

Supadmi, S., Laksono, A. D., Kusumawardani, H. D., Ashar, H., Nursafingi, A., Kusrini, I., & Musoddaq, M. A. (2024). Factor related to stunting of children under two years with working mothers in Indonesia. *Clinical Epidemiology and Global Health*, *26*(May 2023), 101538. https://doi.org/10.1016/j.cegh.2024.101538

Susanto, T., Ade, G. V. A. K., & Rasni, H. (2023). Validitas Kuesioner Kesadaran Gizi Keluarga Pada Ibu Dengan Anak Stunting di Kabupaten Jember. *Madago Nursing Journal*. https://doi.org/10.33860/mnj.v4i1.2072

Susanto, T., Rasni, H., & Susumaningrum, L. A. (2021). Prevalence of malnutrition and stunting among under-five children: A cross-sectional study family of quality of life in agricultural areas of Indonesia. *Mediterranean Journal of Nutrition and Metabolism*, *14*(2), 147–161. https://doi.org/10.3233/MNM-200492

Susanto, T., Yunanto, R. A., Rasny, H., Susumaningrum, L. A., & Nur, K. R. M. (2019). Promoting Children Growth and Development: A community-based cluster randomized controlled trial in rural areas of Indonesia. *Public Health Nursing*, *36*(4), 514–524. https://doi.org/10.1111/phn.12620

Zuloaga, A. (2023). *What to Know About Maternal Mental Health What is maternal mental health ? January 2016*.

Jember Maternal and Child Health Journal

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