# The Relationship Between Family Coping and Toddler Nutritional Status in the Kepanjen Community Health Center Area, Malang

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***Abstract***- Stunting remains a major public health problem in Indonesia, particularly in East Java, where prevalence rates exceed the national average. This study aimed to analyze the relationship between family coping mechanisms and the nutritional status of toddlers in the working area of the Kepanjen Community Health Center, Malang Regency. A cross-sectional design was employed with a total of 278 families selected through stratified random sampling. Family coping was measured using the Family Crisis Oriented Personal Evaluation Scales (F-COPES), while child nutritional status was assessed using WHO AnthroPlus height-for-age z-scores. Results showed that 68.7% of families demonstrated adaptive coping mechanisms, while 31.3% relied on maladaptive coping. The prevalence of stunting remained high, with 152 toddlers (54.7%) classified as stunted. Bivariate analysis revealed a significant association between family coping and stunting status ($\chi^2$=58.479; p<0.001). Children from families with maladaptive coping had a significantly higher risk of stunting (OR=0.084; 95% CI: 0.041–0.173). These findings indicate that effective family coping plays an important supporting role in reducing stunting risk, although other factors such as income, education, and family structure also contribute significantly. Strengthening family coping capacity should be considered as part of comprehensive stunting prevention strategies.

***Index Terms***- Family coping, nutritional status, stunting, toddlers, Kepanjen

## I. INTRODUCTION

Toddlerhood is a golden period of growth and development for children, crucial for the quality of their future human resources. During this period, toddlers are vulnerable to nutritional problems, one of which is stunting, a condition characterized by growth failure due to long-term chronic malnutrition. Stunting not only impacts physical growth but can also affect cognitive development, intelligence, and productivity in adulthood. Therefore, stunting prevention is a priority in Indonesia's health development program.

One indicator of the success of achieving health in the SDGs is the assessment of the nutritional status of toddlers. The World Health Organization (WHO) estimates that 54% of infant and child deaths are due to poor nutrition (Lisbet, 2013). Meanwhile, stunting, a condition of chronic malnutrition, is experienced by around a quarter of toddlers worldwide (Masrul, 2018). Globally, there are more than 2 million deaths of children under 5 years old directly related to malnutrition, especially due to stunting and wasting. According to the 2014 Global Nutrition Report, out of 117 countries, Indonesia is among the 17 countries that have three nutritional problems in toddlers: stunting (37.2%), wasting (12.1%), and overweight (11.9%) (Sukoco et al., 2015). To achieve this target, the Indonesian government prioritizes nutritional issues in children through the Healthy Indonesia Program (PIS-PK) (Rasni, Susanto, Nur, & Anoegrajekti, 2019), which in this case requires family support to be active in implementing the program.

The prevalence of stunting in Indonesia in 2019 was 27.6%, meaning the stunting rate was successfully reduced by 3.1% from the 2018 prevalence of 30.8% (Riskesdas, 2018). In 2019, the prevalence of stunting in toddlers in East Java was recorded at 36.81%, much higher than the national stunting rate (East Java Health Office, 2019). Meanwhile, stunting and malnutrition problems in Jember Regency are still common. Research results from the Growth and Development Health Promotion Program in 144 toddlers in Panti District showed problems of stunting and malnutrition, where family function plays a crucial role in fulfilling toddler nutrition (Susanto et al., 2019). The latest data in August 2019 shows that in Panti District there were 699 stunted toddlers with 476 toddlers in the short stunting category and 223 toddlers with very short stunting (Panti Health Center Data, 2019).

One important factor influencing a toddler's nutritional status is the role of the family. Families, especially parents, have primary responsibility for meeting nutritional needs, providing healthcare, and providing daily care. Facing various pressures, limitations, and challenges, families utilize coping mechanisms as a form of adaptation. These coping mechanisms can include problem-solving strategies,

seeking social support, and managing emotions to deal with difficult situations. Effective coping mechanisms are expected to support families in providing optimal care for toddlers, including ensuring adequate nutrition.

Parents play a crucial role in providing for their children's needs to achieve optimal growth and development. The role of parents and family is essential for children to live optimally, even when facing health challenges. Research shows that child well-being is influenced by family well-being, and harmonious relationships between family members significantly contribute to child well-being (Maiyanti et al., 2011). Positive family coping strategies are essential for problem-solving, including family health issues.

Good family coping strategies and processes are vital processes and mechanisms; through these processes and mechanisms, family function will become evident. Without effective family coping mechanisms, family function will also not be achieved adequately (Iswanti et al., 2007). The incidence of stunting in toddlers is also closely related to the ongoing implementation of family functions. Friedman, Bowden, & Jones (2010) explained that one of the family functions is the health care function, where the family is the primary unit where disease prevention and treatment are carried out. Family factors are important in preventing malnutrition in children. Family functioning is essential for the welfare of family members, including in meeting children's nutritional needs (Hanifah et al., 2016).

The Kepanjen Community Health Center (Puskesmas) area in Malang Regency is one of the areas still facing stunting issues. Social, economic, and cultural factors also play a role in child care patterns and nutritional needs. Therefore, it is important to examine the extent to which family coping mechanisms are related to the nutritional status of toddlers in this area. The results of this study are expected to provide insight into the importance of strengthening family capacity to manage stress and daily challenges, thereby supporting stunting prevention efforts and improving child health.

Research by Suryati (2010) demonstrated a significant relationship between parental coping strategies and growth and development in toddlers with chronic illnesses. Optimal parental involvement is essential for children with chronic illnesses to achieve optimal health. Therefore, further research into family coping strategies related to stunting in toddlers is needed. This study will analyze the relationship between family coping strategies and stunting in toddlers in Kepanjen, Malang.

## II. RESEARCH AND COLLECT IDEA

A structured literature review was conducted to identify existing evidence on (a) determinants of stunting, (b) family functioning and family coping strategies, and (c) measurement instruments for family coping (F-COPES) and child nutritional status (WHO z-scores for height-for-age). Key national and international sources reviewed included Riskesdas/Kemenkes reports, UNICEF/TNP2K policy documents on stunting, WHO growth standards, and prior empirical studies linking family coping to child growth and development. The rationale for selecting F-COPES and WHO AnthroPlus for anthropometric conversion is documented in the project report.

The literature review emphasized studies from Indonesia and comparable LMIC settings to ensure contextual relevance (e.g., research on family support, socio-economic determinants, and community interventions reported in the project's bibliography). Systematic searches were performed on Google Scholar, PubMed, and official institutional websites (Kementerian Kesehatan RI, WHO, UNICEF) using keywords such as: "stunting Indonesia", "family coping / F-COPES", "height for age z-score", "determinants of stunting", and "family function and child nutrition". These searches helped refine the study variables, select validated instruments, and identify plausible confounders (education, income, family structure, sanitation). The choice of variables and cut-offs (e.g., TB/U z-score $< -2$ SD for stunting) follows WHO and national guidance

Based on gaps identified in the literature (limited empirical studies linking family coping profiles to measured stunting prevalence in the study locus), and on local prevalence data, the research question was refined to: "Is there a relationship between family coping mechanisms and the incidence of stunting in toddlers in the Kepanjen Community Health Center work area?" The cross-sectional design, sample size (n=278), and stratified random sampling were chosen to provide sufficient power for bivariate association testing (Chi-Square) while remaining feasible within the fieldwork constraints.

A targeted literature and policy review, systematic online searches, consultation of local program documents, and operationalization of core concepts (stunting via WHO z-scores; family coping via F-COPES) informed the study design and measurement strategy for the present cross-sectional investigation in Puskesmas Kepanjen.

## III. RESULTS

The results of this study provide an overview of respondent characteristics, family coping mechanisms, and the nutritional status of toddlers in the Kepanjen Community Health Center (Puskesmas) work area, Malang Regency. Data obtained from 278 families demonstrate variations in social, economic, and educational backgrounds that influence families' ability to cope with health challenges. Further analysis highlights the relationship between family coping mechanisms and the incidence of stunting in toddlers, providing a deeper understanding of the supporting and inhibiting factors in stunting prevention efforts.

### *A. Characteristics of Respondents*

A total of 278 families with children aged 1–5 years participated in this study. The majority of respondents were mothers (90.6%), while only 9.4% were fathers. Most parents had an educational background of junior high school (41.7%), followed by elementary school (33.5%), high school (20.5%), and higher education (1.8%). In terms of occupation, the majority of respondents were housewives (80.6%), with the rest being farmers (7.2%), entrepreneurs (11.9%), and civil servants (0.5%). Most families lived in extended family households (62.5%) and nearly all had monthly incomes below the local minimum wage (97.8%).

For the children, the average age was 33.3 months (range 23–45 months). Slightly more were female (52.2%) than male (47.8%). The average height was 84.07 cm (SD=15.3; range 48–133 cm).

Table 1. Characteristics of Parents (n=278)

| Characteristics | n (%) |
|---|---|
| Gender (Female) | 252 (90.6) |
| Education (Junior High School) | 116 (41.7) |
| Occupation (Housewife) | 224 (80.6) |
| Family Structure (Extended) | 174 (62.5) |
| Income < UMK | 272 (97.8) |

### *B. Family Coping Mechanism*

Family coping mechanisms were measured using the F-COPES instrument. The median total score was 112 (P25=88; P75=127), indicating that most families had adaptive coping mechanisms.

Among the five coping indicators, the highest was information seeking (median=28.00), suggesting families actively searched for health information. Support from social and spiritual sources was also relatively high, while reframing and passive acceptance scored lower.

Overall, 68.7% of families demonstrated adaptive coping, while 31.3% relied on maladaptive strategies

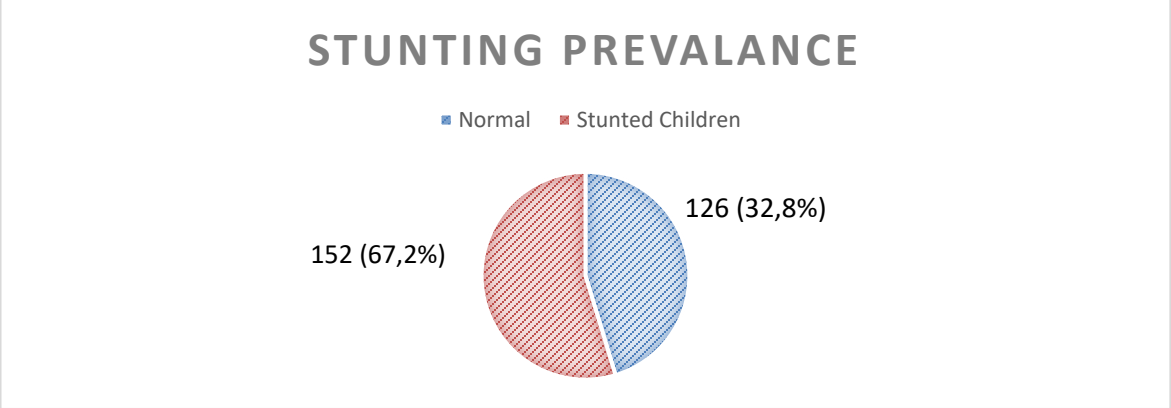
Table 2. Distribution of Family Coping Mechanism Scores (n=278)

| Indicator | Median (P25-P75) | p-value |
|---|---|---|
| Social Support | 35.50 (25.00-43.00) | 0.012 |
| Spiritual Support | 23.00 (20.00-26.00) | < 0.001 |
| Information Seeking | 28.00 (22.00-34.00) | 0.146 |
| Reframing | 13.00 (9.00-15.00) | < 0.001 |
| Passive Acceptance | 11.00 (10.00-13.00) | < 0.001 |
| Total Score | 112 (88-127) | 0.015 |

### *C. Nutritional Status of Children (Stunting Prevalence)*

Based on the height-for-age (TB/U) z-scores calculated using WHO AnthroPlus, the prevalence of stunting among children was high. The mean z-score was −1.7646, with a minimum of −5.94 and maximum of +3.96

Figure 1. Incidents in Toddlers in the Work Area of the Kepanjen Community Health Center, Malang Regency




### *D. Relationship between Family Coping and Child Stunting*

Bivariate analysis using the Chi-Square test revealed a significant association between family coping mechanism and stunting status ($\chi^2$=58.479; p<0.001). Among families with adaptive coping, 39.2% of children were stunted and 60.8% were not stunted. And

Among families with maladaptive coping, 88.5% of children were stunted and only 11.5% were not stunted. The odds ratio (OR) was 0.084 (95% CI: 0.041–0.173), indicating that children from families with maladaptive coping were significantly more likely to experience stunting

Thus, the results of the study show that family coping mechanisms are significantly related to the nutritional status of toddlers, where families with maladaptive coping have a higher risk of having stunted children.

### *E. Family Coping Mechanisms in Kepanjen District, Malang Regency*

The study results show that 68.7% of families in Kepanjen District, Malang Regency, have adaptive coping mechanisms. This is possible because family characteristics significantly influence coping abilities in facing challenges, one of which is the difference in income earned by each family. Income significantly impacts a family's quality of life. A high family income indirectly improves the family's ability to meet various family needs, particularly regarding food consumption.

Other family characteristics that can influence a family's coping ability include family structure or size and educational background. Larger families are more likely to experience economic stress and decline in family well-being. Furthermore, higher education levels mean greater knowledge of financial management, all of which impact a family's coping ability (Firdaus and Sunarti, 2009).

Furthermore, the research results showed that the family's coping mechanism, specifically the ability to seek information, was the indicator with the highest score. This is possible because the average respondent, who was a mother who worked as a housewife, had full time to interact with their toddler. This allows a mother to quickly seek information from within and outside the family if a problem arises with her toddler. Family goals are more easily achieved when there is clear and direct communication. This communication facilitates conflict resolution and problem-solving (Sutini, 2010). In this study, the family's ability to seek and receive information can influence family coping, as evidenced by families being more open and seeking opinions from relatives and neighbors regarding the family's condition or problems.

The results of the study showed that the social support source indicator also showed a fairly high value with an average value of 35.50. Families often use social support from within and outside the family environment to overcome their problems. Community support is very important in overcoming stress levels within the family (Friedman et al., 2010). Family groups that provide mutual support to other families have been shown to improve coping and problem-solving abilities in families, especially mothers as caregivers (Sutini 2010). Social support can have a positive impact on individuals and help individuals in dealing with problems, resulting in adaptive coping mechanisms and families can find good solutions to existing problems.

The study found that the average use of spiritual support sources by families was 23.00. In Kepanjen District, Malang Regency, religious activities are still prevalent, but families are less aware that religious activities can reduce the burden and stress experienced by families. Families can utilize spiritual resources to reduce stress experienced through religious means, as spiritual support sources can improve a person's mental state in dealing with stress (Sutini, 2010). The higher the level of family spirituality, the lower the potential for experiencing anxiety, which can lead to adaptive family coping abilities (Arwati et al., 2020).

The research results show that families' use of reframing indicators in dealing with problems is relatively low, with an average score of 13.00. The study found that only a small number of families became open about their abilities after undergoing reframing activities. The use of reframing techniques is one way to reduce stress in families, allowing families to realize their potential to improve their coping skills in dealing with various problems (Sutini, 2010).

Furthermore, the research results show that the passive acceptance indicator of family coping mechanisms showed low scores. Passive acceptance of a problem is something families should avoid. Passive acceptance focuses on the distractions families use to cope, such as watching television and diverting the problem by engaging in other activities. From this explanation, it can be concluded that family coping mechanisms play a crucial role in supporting good family functioning, as good family functioning will influence the growth and development of toddlers.

### *F. Stunting Incidence in Toddlers in Kepanjen District, Malang Regency*

Based on the results of a study of 278 respondents, stunting was found in 152 toddlers in Kepanjen District, Malang Regency. This was indicated by the z-score results, which showed that height/age was low (stunting). Stunting in toddlers can be caused by several factors, including low parental education, as listed in the respondent characteristics. The majority of parents in Kepanjen District (41.7%) were junior high school graduates.

It is known that the economic condition of the family such as a sufficient level of income will make it easier for parents to distribute good food to their children, in this study the majority of the income level of toddler caregivers in the Kepanjen Community Health Center Work Area, Malang Regency, is less than the UMK of Rp. 2,355,662.91 by 97.8%. Families with low economic limitations are one of the indirect risk factors due to variations in family income levels and poverty. Family income can affect the nutritional status of toddlers, if a family has sufficient income then the family's needs will be met.

Family structure and the number of family members also influence the incidence of stunting. The study found that from a total of 278 families in the Kepanjen Community Health Center in Malang Regency, the number of extended families was 62.5%. Children living in extended families are more likely to have stunting than those living in nuclear families. This finding suggests that to reduce the incidence of stunting, parents as caregivers must optimize their family functions to ensure the growth and development of toddlers is not hampered.

## IV. CONCLUSION

The final results of the study indicate a significant relationship between family coping mechanisms and the incidence of stunting in toddlers in the Kepanjen Community Health Center, Malang Regency. These findings align with Suryati's (2010) study, which demonstrated a significant relationship between parental coping and toddler growth and development. Good family functioning, supported by effective family coping, will contribute to optimal growth and development in toddlers.

The research identified that family coping mechanisms are largely adaptive, yet the incidence of stunting in Kepanjen District, Malang Regency, remains relatively high. This is due to numerous other factors contributing to the continued rise in stunting rates, including inadequate nutritional intake for toddlers, poor parenting, limited access to healthcare, poor environmental sanitation and clean water facilities, low levels of education, and the economic crisis that impacts a family's food security. Family coping mechanisms do not directly impact a toddler's nutritional status, but family coping skills are a supporting factor for proper family functioning. Families whose roles and functions function effectively can reduce the rise in stunting rates. Therefore, regular screening of toddlers' nutritional status is necessary to reduce the incidence of stunting.

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