The Influence of Community and Societal Factors on the Occurrence of Wasting in Children Aged 3-5 Years

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ABSTRACT

***Background**: Nutritional problems in toddlers remain a serious issue in several regions in Indonesia, including the working area of Songgon Health Center in Banyuwangi Regency. **Aims**: This study aims to analyze the influence of community and societal factors on wasting in children aged 3-5 years. **Methods**: The study uses a case-control approach with the entire population of toddlers in the working area of Songgon Primary Health Center as the target population. A cluster random sampling technique was used to obtain a sample of 166 individuals (83 wasting cases and 83 controls). Data were collected using a questionnaire that had passed validity and reliability testing. The collected data were analyzed through bivariate analysis using the chi-square test, and multivariate analysis using logistic regression. **Results**: The research results on wasting showed the following p-values: t for family income 0.520 > a (0.05); occupation 0.263 > a (0.05 access to healthcare 0.121 > a (0.05); f immunization status 0.064 > a (0.05); education 0.436 > a (0.05); maternal knowledge 0.148 > a (0.05); family support 0.931 > a (0.05), and food security 0.430 > a (0.05), thus it can be interpreted these do not have a significant influence on wasting incidence. However, environmental sanitation has a significant influence on wasting incidence, as the p-value is 0.002 < a (0.05). **Conclusion**: The most influential factor in wasting incidence is environmental sanitation. Meanwhile, factors that have no influence are family income, mother's occupation, healthcare access, immunization, education, knowledge, family support, and food safety.*

***Keyword**: Children, Sanitation, Wasting*

INTRODUCTION

Wasting in toddlers remains a significant nutritional problem in many countries, especially in developing countries, including Indonesia. Undernutrition poses a serious challenge in developing countries (Khamis *et al.*, 2019) and wasting poses a serious threat to the survival and development of children (Hasanah *et al.*, 2022). The age of 36-59 months is a critical period for a child's growth and development. Children between the ages of 36-59 months are more cooperative in communication compared to those under 36 months (Komalasari *et al.*, 2023).

Based on data from UNICEF/WHO/World Bank and Estimates (2021), the prevalence of wasting in 2020 was 6.7% or 45.4 million toddlers worldwide. In Asia, where the majority of children with nutrition problems reside, there were 31.9 million toddlers (8.9%) suffering from wasting. In Southeast Asia, wasting cases were reported in 4.6 million toddlers (8.2%) (UNICEF, 2021).

The World Health Organization (WHO) has set guidelines for each country and province regarding the prevalence of wasting, which should not exceed 5% in toddlers. Thus, if the prevalence of wasting is ≤ 5%, it is considered acceptable or within tolerable standards. However, nationally, wasting in Indonesia is considered acute as 27 provinces have a wasting prevalence of≥ 5%, with the national wasting prevalence being 7.1% (SSGI, 2021). The prevalence of wasting in East Java Province is 6.4%, while in Banyuwangi, it is 7.4% (SSGI, 2021). The latest data in February 2022 show that the working area of Songgon Primary Health Center in Banyuwangi Regency has an increasing number of wasting cases each year, with 122 toddlers (5.5%) in

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2020, 152 toddlers (6.1%) in 2021, and 188 toddlers (6.5%) in 2022.

Other research conducted on wasting children under 5 years old in Southeast Asia by Harding (2018) states that boys are more prone to wasting than girls. Additionally, factors such as a child's history of infections, caregiving practices, and birth weight also influence the occurrence of wasting (Harding, 2018). The impact of wasting includes an increased risk of illness, mortality, suboptimal brain development, motoric and mental delays, and susceptibility to non-communicable diseases and degenerative diseases. One of the non-communicable diseases is cancer, where children with cancer who experience wasting are at higher risk than those with optimal nutritional status (Unicef Indonesia, 2020).

Efforts to prevent and address nutrition problems, including wasting, in the working area of Songgon Primary Health Center, include various activities such as Posyandu (integrated health services post), prenatal examinations and immunizations, supplementary feeding for malnourished pregnant women and toddlers, family planning services, iron supplementation for adolescent girls and pregnant women, deworming, antenatal care classes, nutrition-aware family activities (kadarzi), nutritional case management, counseling on exclusive breastfeeding and the four gold food standards, as well as introducing supplementary feeding at posyandu. In 2020, the health department conducted stunting prevention convergence activities with various sectors.

In April 2022, the researchers conducted a preliminary survey and interviewed nutrition health workers at Songgon Primary Health Center, obtaining information that various efforts have been made to reduce the incidence of wasting, but the problem persists, and wasting cases at Songgon Primary Health Center have been increasing every year. So far, there has been no primary data research conducted on the issue of wasting in toddlers in the working area of Songgon Primary Health Center. Considering the high prevalence of wasting among toddlers, it is essential to conduct research on the influence of community and societal factors on the occurrence of wasting in children aged 3-5 years in the working area of Songgon Primary Health Center, Banyuwangi Regency.

METHODS

This research is classified as an analytical observational study with a case-control design. The study was conducted from February to April 2023 in the working area of Songgon Primary Health Center, Banyuwangi Regency. The target population for this study was all toddlers attending posyandu (integrated health services post) in the working area of Songgon Primary Health Center, totaling 3526 toddlers. Based on sample size calculation using the Lameshow formula, the sample size for the wasting variable in each group was determined to be 83, resulting in a minimum required sample size of 166 respondents.

The sampling technique used in this study was cluster random sampling, where samples are taken randomly from the population based on certain groups or areas (Sugiyono, 2017). Researchers use this technique because the population is quite large, and the cluster random sampling method is often used in various research projects in the health sector.

Data were collected through interviews using a questionnaire as the data collection method. The research instrument has validity and reliability testing, and the results indicated that it is both valid and reliable. Bivariate analysis using the chi-square test was conducted to examine the relationship between two variables, while multivariate analysis using logistic regression was employed to explore the relationship between multiple variables and their associated risks. Ethical clearance for this study was obtained from the research ethics committee of the Faculty of Dental Medicine, Jember University, with certificate number 1849/UN25.8/KEPK/DL/2023.

RESULTS AND DISCUSSION

Based on Table 1, it is evident that the majority of toddlers come from families with low income, accounting for 63.3%. Almost all toddlers have mothers who are not employed, representing 77.7% of the respondents. Nearly half of the toddlers have reasonably accessible healthcare services, with a percentage of

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48.8%. Almost all toddlers have received complete immunizations, accounting for 95.2%. The majority of mothers have low educational levels, constituting 54.2%. The level of maternal knowledge is sufficient for 57.8% of the respondents. Almost all toddlers receive good family support, with a percentage of 88.0%. The majority of toddlers have good food security, reaching 90.4%. Lastly, 57.2% of toddlers have access to proper environmental sanitation.

Table 1. Distribution Frequency of the Respondents' Characteristics Based on the Occurence of Wasting

Variable	Frequency	%
Wasting		
Normal	83	50.0
Wasting	83	50.0
Community and Societal Factors		
Family Income		
High	61	36.7
Low	105	63.3
Total	**166**	**100**
Mother's Occupation		
Doesn't Work	129	77.7
Work	37	22.3
Total	**166**	**100**
Healthcare Access		
Easy	73	44.0
Enough	81	48.8
Difficult	12	7.2
Total	166	100
Immunization Status		
Complete	158	95.2
Incomplete	8	4.8
Total	**166**	**100**
Mother's Education		
High	76	45.8
Low	90	54.2
Total	**166**	**100**
Mother's Knowledge		
Good	45	27.1
Enough	96	57.8
Insufficient	25	15.1
Total	**166**	**100**
Family Support		
Good	146	88.0
Enough	15	9.0
Insufficient	5	3.0
Total	**166**	**100**
Food Safety		
Good	150	90.4
Insufficient	16	9.6
Total	**166**	**100**
Environment Sanitation		
Healthy	71	42.8
Unhealthy	95	57.2
Total	**166**	**100**

Based on Table 2, the bivariate analysis shows the relationship between community and societal factors and the incidence of wasting in toddlers. It was found that a higher proportion of cases came from families with low income, which accounted for 55 (66.3%) compared to 50 (60.2%) in the control group. The chi-square test yielded a p-value of 0.520, indicating that the null hypothesis (Ho) is accepted since the p-value of 0.520 > α (0.05). Therefore, it can be concluded that there is no significant influence between family income and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

More cases had working mothers, which amounted to 22 (26.5%), compared to 15 (18.1%) in the control group. The bivariate analysis using the chi-square test resulted in a p-value of 0.263 > α (0.05), indicating that the null hypothesis is accepted, suggesting that there is no significant influence between maternal employment and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Difficult access to healthcare services was more prevalent in the case group, with nine (10.3%) cases compared to three (3.6%) in the control group. The bivariate analysis using the chi-square test yielded a p-value of 0.121 > α (0.05), leading to the acceptance of the null hypothesis, suggesting that there is no significant influence between access to healthcare services and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Incomplete immunization in toddlers was more prevalent in the case group, with seven (8.4%) cases compared to one (1.2%) in the control group. The chi-square test resulted in a p-value of 0.064, leading to the acceptance of the null hypothesis, suggesting that there is no significant influence between immunization status and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Mothers with low levels of education were more in the case group, constituting 48 (57.8%), compared to 31

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(37.3%) in the control group. The bivariate analysis using the chi-square test yielded a p-value of 0.436 > α (0.05). Therefore, the null hypothesis is accepted, suggesting that there is no significant influence between maternal education and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Less knowledge of the mother was more common in the case group with 17 (20.5%), compared to eight (9.6%) in the control group. The chi-square test resulted in a p-value of 0.148 > α (0.05), leading to the acceptance of the null hypothesis; it means that there is no significant influence between maternal knowledge and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Family support found a higher proportion of cases experienced inadequate family support, with three (3.6%), compared to one (1.2%) in the control group. The chi-square test yielded a p-value of 0.931, indicating that the null hypothesis is accepted. Therefore, it can be concluded that there is no significant influence between family support and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Food security was more or less common in the case group, 10 (12.0%), compared to six (7.2%) in the control group. The bivariate analysis using the chi-square test yielded a p-value of 0.430, which indicates that the null hypothesis is accepted. Consequently, it can be concluded that there is no significant influence between food security and the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

Unhealthy environmental sanitation was more prevalent in the case group, with 58 (69.9%) cases compared to 37 (44.6%) in the control group. The chi-square test resulted in a p-value of 0.002, which is less than α (0.05). Therefore, the null hypothesis is rejected, indicating that there is a significant influence between environmental sanitation and the incidence of wasting. Based on the odds ratio calculation, the value obtained is 0.347 (1/0.347=2.8), which means that toddlers with healthy environmental sanitation have a 2.8 times smaller chance of experiencing wasting compared to toddlers with unhealthy environmental sanitation.

Table 2. Bivariate Analysis Results of the Influence of Community and Societal Factors on the Incidence of Wasting in Toddlers Aged 3-5 Years in the Working Area of Songgon Primary Health Center

Variable	*Occurrence of Wasting*				Total		*p-value*	*OR* (CI 95%)
	Normal		*Wasting*					
	N	%	N	%	n	%		
Community and Societal Factors								
Family Income								
High	33	39.8	28	33.7	61	36.7	0.520	-
Low	50	60.2	55	66.3	105	63.3		
Total	83	100	83	100	166	100		
Mother's Occupation								
Not Working/Unemployed	68	81.9	61	73.5	129	77.7	0.263	-
Working/Employed	15	18.1	22	26.5	37	22.3		
Total	**83**	**100**	**83**	**100**	**166**	**100**		
Healthcare Access								
Easy	41	49.4	32	38.6	73	44.0		
Enough	39	47.0	42	50.6	81	48.8	0.121	-
Difficult	3	3.6	9	10.8	12	7.2		
Total	**83**	**100**	**83**	**100**	**166**	**100**		
Immunization Status								
Complete	82	98.8	76	91.6	158	95.2	0.064	-
Incomplete	1	1.2	7	8.4	8	4.8		
Total	**83**	**100**	**83**	**100**	**166**	**100**		
Mother's Education								
High	35	42.2	41	49.4	76	45.8	0.436	-
Low	48	57.8	42	50.6	90	54.2		
Total	**83**	**100**	**83**	**100**	**166**	**100**		

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Mother's Knowledge								
Good	24	28.9	21	25.3	45	27.1		
Sufficient	51	61.4	45	54.2	96	57.8	0.148	-
Insufficient	8	9.6	17	20.5	25	15.1		
Total	**83**	**100**	**83**	**100**	**166**	**100**		
Family Support								
Good	79	95.2	67	80.7	146	88.0		
Adequate	2	2.4	13	15.7	15	9.0	0.931	-
Insufficient	2	2.4	3	3.6	5	3.0		
Total	**83**	**100**	**83**	**100**	**166**	**100**		
Food Safety								
Good	77	92.8	73	88.0	150	90.4	0.430	-
Poor	6	7.2	10	12.0	16	9.6		
Total	**83**	**100**	**83**	**100**	**166**	**100**		
Environmental Sanitation								
Healthy	46	55.4	25	30.1	71	42.8	0.002	0.347 (0.183-0.656)
Unhealthy	37	44.6	58	69.9	95	57.2		
Total	**83**	**100**	**83**	**100**	**166**	**100**		

Table 3. Multivariate Analysis Results of the Influence of Community and Societal Factors on the Incidence of Wasting in Toddlers Aged 3-5 Years in the Working Area of Songgon Primary Health Center

Variable	Sig	Exp (B)	95% C.I for EXP (B)	
			Lower	Upper
Environmental Sanitation	0.001	0.347	0.183	0.656

The multivariate analysis results indicate that the environmental sanitation variable (p-value = 0.001) is the most influential factor in the incidence of wasting in the working area of Songgon Primary Health Center. Toddlers with healthy environmental sanitation have a 2.8 times lower chance of experiencing wasting compared to families with unhealthy environmental sanitation.

Family Income Influence on the Occurrence of Wasting

Family income does not have a significant influence on the incidence of wasting in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This finding is consistent with a study conducted by Rukmana (2023), which stated that there is no significant relationship between family income and wasting incidence in the working area of Titi Papan Primary Health Center in Medan City, with a p-value of 0.80. Research (Danso & Appiah, 2023) shows there is no significant relationship between socioeconomic status and wasting in Nkwanta South Municipality, Ghana.

According to Kesmas Kemkes (2019) socioeconomic status reflects an individual's standard of living. Socioeconomic status is determined by factors such as education, occupation, income, and living environment. Socioeconomic factors can affect various aspects of life, including daily eating habits. Based on the researcher's assumption, family income does not have a significant effect on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center because not all of the total family income is used to meet dietary needs. Therefore, income does not have a direct correlation with the nutritional status of toddlers. This is because there is no tendency for respondents with higher income to allocate more for high dietary needs, and vice versa, there is no tendency for those with lower income to allocate less for dietary needs.

Mother's Employment Status on the Occurrence of Wasting

Based on the research findings, there is no significant influence of the mother's employment status on the incidence of wasting in toddlers aged 3-5 years in the Working Area of Songgon Primary Health Center. This result is consistent with a study conducted by Soedarsono (2021), which stated that there is no significant relationship between the mother's employment status and wasting incidence in the working area of Simomulyo Primary Health Center in Surabaya, with a p-value of 0.747 (p>0.05). Studies by Getu *et al*. (2023) reveal that housewives are more likely to

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have wasted children 17 (3.9%) than working mothers.

Parental occupation is related to family income, and, therefore, it can be said that the type of occupation can also determine someone's ability to meet the nutritional needs of the family. Working mothers have less time to care for their children compared to non-working mothers. This can affect the quality of child care and subsequently influence the nutritional status of the child. Working mothers with full-time jobs may not have enough time to pay attention to their child's food and nutritional needs (Fauzia *et al*., 2019). In this study, almost all (77.7%) of the mothers of the toddlers were working as housewives, yet many children still experienced wasting.

According to the researcher's assumption, there is no influence of the mother's employment status on wasting incidence in toddlers aged 3-5 years in the Working Area of Songgon Primary Health Center. This may be attributed to the fact that working mothers mostly have higher levels of education while non-working or housewives mostly have lower levels of education. Even though non-working mothers have more time to take care of their children, if they have a lower level of education, they may face challenges in understanding nutritional information and struggle to apply the knowledge acquired in child feeding practices. On the other hand, highly educated mothers are more likely to comprehend nutritional information and apply it in child care and feeding practices, even with limited time available.

Access to Health Services Influence on the Occurrence of Wasting

Based on the research findings, there is no significant influence of access to health services on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This result is consistent with a study conducted by Asri et al. (2019), which stated that there is no significant relationship between access to health services and wasting incidence in the working area of Simomulyo Primary Health Center in Surabaya, with a p-value of 0.817 (p>0.05).

Access to health services is determined by factors such as distance, travel time, and cost required to reach health facilities. The distance is a measure of the proximity of one's home to the nearest health service. The distance from the respondent's residence to the health service is one of the obstacles to utilizing health services (Kamila, 2022). Studies by Tariq *et al*. (2018) reveal that these factors range from maternal literacy, household income and utilization of healthcare services influence wasting.

According to the researcher's assumption, access to health services does not influence wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center because half of the respondents have access to health services that are already quite affordable. The affordability of access in this study is assessed based on distance, travel time, and ease of transportation to reach health services. Access to health services is easier because the majority of respondents already have transportation means to reach health facilities, so they do not face difficulties in accessing health services even if the distance traveled is relatively far, more than 2 km, for a small fraction of respondents who still find it challenging to access health services.

Immunization Status on the Occurrence of Wasting

Based on the research findings, there is no significant influence of immunization status on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This result is consistent with a study conducted by Lestari *et al*. (2022) which stated that there is no significant relationship between immunization status and wasting incidence in toddlers in the working area of Siduaori Primary Health Center, Siduaori District, South Nias Regency, with a p-value of 0.426 (p>0.05).

Immunization is an effort to provide immunity to infants and children by introducing vaccines into the body to stimulate the production of antibodies to prevent certain diseases. Vaccines are substances used to stimulate the formation of antibodies that are introduced into the body through injection (e.g., BCG, DPT, and measles) and the mouth (e.g., polio vaccine). The benefits of immunization include

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protecting infants and children from dangerous diseases, preventing severe illness, disability, or death, preventing the spread of specific diseases, and eradicating certain diseases. Immunization enhances the immune system of infants and children, enabling them to fight against preventable diseases (Nasution, 2022).

Immunization is a step to increase a person's immunity to a disease so that if they are exposed to the disease they will not get sick or only experience mild illness (Hudhah *et al.*, 2017). The research findings also indicate that out of 158 toddlers with complete immunization status, there are still 76 toddlers classified as wasted. This could be attributed to other factors causing wasting in toddlers, such as a history of infectious diseases. Infectious diseases can disrupt linear growth, first affecting the nutritional status of toddlers. If infectious diseases persist for a prolonged period and are not promptly addressed, they can reduce food intake and interfere with nutrient absorption, thereby increasing the risk of wasting in toddlers. Therefore, immunization is important and is considered to provide good benefits because the effects it produces provide protective action (Utviaputri, 2018).

According to the researcher's assumption, immunization status does not have an influence on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center because both toddlers with complete and incomplete immunization have an equal chance of experiencing wasting. The possible causes of wasting in the working area of Songgon Primary Health Center may be attributed to other factors, as wasting in children is multifactorial, including factors such as previous infections experienced by toddlers, environmental sanitation conditions, nutritional intake, and others.

Mother's Education Level Influence on the Occurrence of Wasting

Based on the research findings, there is no significant influence of the mother's education level on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This result is consistent with a study conducted by Nurlia (2021) with statistical test results showing p = 0.057 > 0.05, which means that the p-value is not statistically significant. The conclusion obtained is that there is no significant relationship between the mother's education level and wasting in toddlers in the working area of Nambo Primary Health Center, Kendari City. Research by Ngwira (2020) explains that there is no significant relationship between mother's education level and wasting in Atlanta, GA, USA, showing that levels of mother's education coefficients were negative for all three malnutrition indicators (stunting, wasting, overweight), meaning maternal education reduces the probability of the three malnutrition indicators. None of the maternal education level coefficients were significant, except the secondary education coefficient on stunting (b = _0.854; P = 0.024), which was significant.

Mother's education is fundamental to achieving good nutritional status in toddlers. The mother's education level is related to her ability to receive information about nutrition and health from external sources. Mothers with higher education levels are more likely to absorb information from external sources compared to those with lower education levels. In families facing economic limitations, the majority have lower education levels due to their inability to pursue higher education (Nurlia, 2021).

According to the researcher's assumption, the mother's education level does not influence wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This is because, in this study, mothers with lower education levels do not necessarily have more toddlers with wasting issues compared to mothers with higher education levels. The mother's education level is just one of the underlying causes of malnutrition issues, and many other factors can influence the occurrence of malnutrition, particularly wasting and stunting in toddlers, such as balanced nutritional intake, history of low birth weight, infections, and others.

Mother's Knowledge Influence on the Occurrence of Wasting

Based on the research findings, there is no significant influence of mother's knowledge on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center.

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This result is consistent with a study conducted by Sari (2022) which stated that there is no significant relationship between mother's knowledge and wasting incidence in toddlers aged 1 to 5 years in the Jortong Koto working area of Gunung Medan Primary Health Center, with a p-value of 0.805 (p>0.05).

The incidence of wasting in toddlers is related to their intake of nutrients. The daily nutrient intake of a toddler depends on their mother, thus the mother plays a crucial role in the nutritional status of the toddler. Mothers with a better level of knowledge are more likely to apply their knowledge in caring for their children, especially in providing foods that meet the nutritional needs of the toddlers, thus preventing them from experiencing malnutrition (Sari, 2022).

Having a high level of knowledge does not necessarily guarantee that a mother will have a toddler with a normal nutritional status. Applying knowledge in daily life is influenced not only by the level of knowledge but also by other factors, such as socioeconomic status, sociocultural factors, and the environment (Notoatmodjo S., 2010).

According to the researcher's assumption, knowledge does not influence wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center because wasting is not solely caused by knowledge but possibly by other factors, such as the mother's feeding practices toward her child. The food intake provided to the child is not solely based on knowledge but is more influenced by the mother's habits in food preparation, resulting in the child's nutritional needs being met.

Family Support Influence on the Occurrence of Wasting

Based on the research findings, there is no significant influence of family support on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. Family support focuses on the interactions that occur within social relationships. Family support refers to the attitudes, actions, and acceptance of family members toward each other. Family members perceive supportive individuals as always ready to provide help and assistance when needed (Mahalia, 2019).

External factors influencing family support include family practices, such as how the family provides support usually through disease prevention practices, as an example, to influence other family members to do the same (Muhith & Siyoto, 2016).

According to the researcher's assumption, family support does not influence wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center because families feel responsible for caring for their children, as children are part of the family members. The research results also show that almost all families provide good support to their toddlers. Family support in taking care of the toddlers, in terms of emotional support, instrumental support, and informational support as stated in the questionnaire, has been provided by the mothers and families for both wasting and normal toddlers. Thus, nutritional status issues like wasting can still occur in toddlers despite receiving support from the family.

Food Safety Influence on the Occurrence of Wasting

Based on the research findings, there is no significant influence of food safety on wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This research is consistent with the findings of Ali *et al*. (2019) which states that there is no relationship between household food security status and waste incidence of children aged 6-59 months in rural Bangladesh.

Food safety refers to the conditions and efforts required to prevent food from potential three types of contamination, biological, chemical, and physical hazards, that could compromise, harm, or endanger human health and are consistent with the religious, cultural, and societal norms to be considered safe for consumption. Processed foods must be produced following good manufacturing practices to ensure quality and safety (DKKP, 2023).

According to the researcher's assumption, food safety does not influence wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center because almost all respondents have good food safety practices. Mothers feel responsible

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for the safety and health of their children, ensuring that the food consumed by their children is safe and healthy. This practice is observed among mothers with both normal and wasting toddlers.

Environmental Sanitation Influence on the Occurrence of Wasting

Environmental sanitation influences wasting incidence in toddlers aged 3-5 years in the working area of Songgon Primary Health Center. This research is consistent with the findings of Danso and Appiah (2023) which states that there is a relationship between environmental sanitation and waste incidence in the Municipality, of Ghana. The study explains that toddlers with poor sanitation are at a 2-fold higher risk of experiencing wasting compared to those with good sanitation. Hygiene and environmental sanitation play a dominant role in providing an environment that supports the health and growth of young children. Personal and environmental cleanliness plays a crucial role in the occurrence of diseases, which can affect their nutritional status (Anggraeni, 2019). Research by Chowdhury *et al*. (2020) explains that the causes and influencing factors of stunting and wasting among children less than two years are manifold and complex; one of them is improved sanitation facilities.

Poor sanitation conditions can lead to various types of diseases such as diarrhea, worm infections, and gastrointestinal infections. When a child suffers from gastrointestinal infections, the absorption of nutrients is disrupted, leading to nutritional deficiencies. Malnourished individuals are more susceptible to diseases, which can also hinder their growth (Andolina, 2021). From the research results in the table above, the obtained odds ratio is 0.347 (1/0.347 = 2.8), meaning that toddlers with healthy environmental sanitation have 2.8 times lower odds of experiencing wasting compared to those in an unhealthy environment. From the interviews and observations conducted by the researchers with the respondents regarding environmental sanitation, it was found that clean water sources are generally obtained from dug wells, and some still use water storage which may lead to various infectious diseases. The condition of the environment is such as poor waste and garbage management and lack of healthy toilets. Household waste is often disposed of directly into rivers or open areas behind the house. An unfavorable environment can harbor microorganisms that can attack young children who are vulnerable to diseases, leading to frequent illnesses such as diarrhea, worm infestations, typhoid, hepatitis, dengue fever, and more. Frequent illnesses in young children can hinder their growth and development.

In this research, three components of environmental sanitation were assessed, namely house components, sanitation facilities, and occupant behavior. In the house components, seven indicators are assessed, namely the ceiling/roof, walls, floor, bedroom windows, living room windows, ventilation, and sleeping smoke holes. The second component, namely sanitation facilities, has three indicators that are assessed, including clean water facilities, latrines, and wastewater disposal facilities. Meanwhile, the third component, namely occupant behavior, has five indicators that are assessed, including opening the bedroom window, opening the family room window, cleaning the house and yard, throwing baby and toddler feces into the latrine, and throwing rubbish in its place (Riskesdas, 2013).

In Table 2, it can be seen that the assessment categories are divided into healthy environments and unhealthy environments, where the percentage of unhealthy environments is higher than healthy environments. This shows that the sanitation behavior of the community in the Songgon Community Health Center working area is classified as poor based on the assessment carried out by researchers using questionnaires and direct observation in each research respondent's home. Apart from that, respondents' hand hygiene behavior is classified as poor because respondents do not know the correct steps for washing hands according to the seven steps of hand washing theory, respondents only wash their hands with water without using soap, and there is a lack of hand washing facilities equipped with running water, soap, and channels, wastewater disposal.

CONCLUSION

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Based on the results and discussion of the research on the Influence of Community and Societal Factors on Wasting Incidence in Toddlers Aged 3-5 Years in the working area of Songgon Primary Health Center, Banyuwangi Regency, the following conclusions can be drawn: environmental sanitation influences wasting incidence in toddlers and the strongest influence on wasting incidence in toddlers is environmental sanitation.

REFERENCES

Ali, N. B., Tahsina, T., Emdadul Hoque, D. M., Hasan, M. M., Iqbal, A., Huda, T. M., & El Arifeen, S. (2019). Association of food security and other socioeconomic factors with dietary diversity and nutritional statuses of children aged 6-59 months in rural Bangladesh. *PLoS ONE*, *14*(8). https://doi.org/10.1371/journal.pone.0221929

Andolina, N. (2021). Faktor Penyebab Kejadian Wasting Pada Balita 0-59 Bulan Di Kabupaten Pasaman Barat Dan Kabupaten Solok. *Initium Medica Journal*, *1*(2).

Anggraeni, A. (2019). *Besar Risiko Faktor Kecukupan Energi, Kecukupan Protein, Pekerjaan Ibu, dan Sanitasi Lingkungan Terhadap Kejadian Wasting Anak Pra Sekolah*.

Asri, Nooraeni, R., & Statistika STIS, P. (2019). *Pemodelan Determinan Kejadian Wasting Pada Balita Di Indonesia Tahun 2018 Dengan Logistik Biner (Modeling the Determinants of Wasting Incidence in Children of Age 0-59 Months in Indonesia on 2018 with Binary Logistics)*.

Chowdhury, T. R., Chakrabarty, S., Rakib, M., Afrin, S., Saltmarsh, S., & Winn, S. (2020). Factors associated with stunting and wasting in children under 2 years in Bangladesh. *Heliyon*, *6*(9). https://doi.org/10.1016/j.heliyon.2020.e04849

Danso, F., & Appiah, M. A. (2023). Prevalence and associated factors influencing stunting and wasting among children of ages 1 to 5 years in Nkwanta South Municipality, Ghana. In *Nutrition* (Vol. 110). Elsevier Inc. https://doi.org/10.1016/j.nut.2023.111996

DKKP. (2023). *Keamanan Pangan*.

Fauzia, R. N., Sukmandari, N., & Yogi Triana, K. (2019). Hubungan Status Pekerjaan Ibu Dengan Status Gizi Balita The Correlation Between Occupational Status of Mother and Nutritional Status Of Toddler. *Caring*,*3*(1).

Getu, B. D., Azanaw, K. A., Zimamu, L. Y., Adal, G. M., Tibebu, N. S., Emiru, T. D., & Atalell, K. A. (2023). Wasting and its associated factors among children aged from 6 to 59 months in Debre Tabor town, Amhara region of Ethiopia, 2019: a multicentre community-based cross-sectional study. *BMJ Open*, *13*(7), e071679. https://doi.org/10.1136/bmjopen-2023-071679

Harding. (2018). *Factors associated with wasting among children under five years old in South Asia: Implications for action*. https://doi.org/10.1371/journal.pone.0198749

Hasanah, irwanto, & Catur Adi, A. (2022). *Determinan Wasting pada Balita di Masa Pandemi COVID-19 Determinant Wasting in Children during COVID-19 Pandemic*.

Hudhah, M., Choirul Hidajah, A., Epidemiolgi, D., Kesehatan Masyarakat, F., & Airlangga, U. (2017). *Mother's Behavior In Complete Basic Immunization At Gayam Community Health Center Sumenep Regency*.

Kamila. (2022). *Hubungan Akses Pelayanan Kesehatan, BBLR, Asi Eksklusif Dan Asupan Protein Dengan Kejadian Stunting Pada Balita Usia > 6-59 Bulan Di Wilayah Kerja PUSKESMAS Baitussalam Kecamatan Baitussalam Kabupaten Aceh Besar Tahun 2022*.

Kesmas Kemkes. (2019). *Tiga tahun germas : lessons learned*.

Khamis, A. G., Mwanri, A. W., Ntwenya, J. E., & Kreppel, K. (2019). The influence of dietary diversity on the nutritional status of children between 6 and 23 months of age in Tanzania. *BMC Pediatrics*, *19*(1). https://doi.org/10.1186/s12887-019-1897-5

Komalasari, R., Syafrida, R., & Nirmala Ine. (2023). *Pengaruh Media Busybook Dalam Pengenalan Identitas Gender Untuk Anak Usia 4-5*, *6*. https://doi.org/10.31604/ptk.v6i1.119-127

Received: 25-08-2023, Accepted: 12-10-2023, Published Online: 02-09-2024

Lestari, W., V Nababan, A. S., & Baene, I. S. (2022). *Faktor-Faktor Yang Memengaruhi Wasting Pada Balita Di Uptd Puskesmas Siduaori Kecamatan Siduaori Kabupaten Nias Selatan*. https://journal-mandiracendikia.com/index.php/ojs3

Mahalia. (2019). *Hubungan Pengetahuan, Sikap, Dukungan Dengan Kemandirian Keluarga Pada Anak Stunting Di Puskesmas Bulak Banteng Surabaya*.

Muhith, A., & Siyoto, S. (2016). *Pendidikan Keperawatan Gerontik*.

Nasution, E. Y. (2022). *Pemberian Imunisasi Dasar Lengkap*. PT Inovasi Pratama Internasional.

Ngwira, A. (2020). Climate and location as determinants of childhood stunting, wasting, and overweight: An application of semiparametric multivariate probit model. *Nutrition: X*, *7*. https://doi.org/10.1016/j.nutx.2020.100010

Notoatmodjo S. (2010). *Metodologi Penelitian Kesehatan*. . Rineka Cipta.

Nurlia, S. (2021). *Faktor – Faktor Yang Berhubungan Dengan Wasting Pada Anak Balita Di Wilayah Kerja Puskesmas Nambo Kecamatan Nambo Kota Kendari*.

Riskesdas. (2013). *Riset Kesehatan Dasar*.

Rukmana. (2023). *Hubungan Karakteristik Keluarga dengan Status Gizi (BB/TB) Anak Usia 6-24 Bulan di Wilayah Kerja Puskesmas Titi Papan Kota Medan*.

Sari, E. (2022). Faktor-Faktor yang Mempengaruhi Kejadian Wasting pada Balita Umur 1-5 Tahun Factors Affecting the Incidence of Wasting among Children Under Five Years of Age. *Jurnal Kesehatan Poltekkes Kemenkes RI Pangkalpinang*, *10*(1).

Soedarsono. (2021). *Faktor yang Mempengaruhi Kejadian Wasting pada Balita Di Wilayah Kerja Puskesmas Simomulyo Surabaya*.

SSGI. (2021). *Hasil Studi Status Gizi Indonesia (SSGI) Tingkat Nasional, Provinsi, Kabupaten/Kota Tahun 2021*. Kementerian Kesehatan Republik Indonesia. files/88/2021 - Hasil Studi Status Gizi Indonesia (SSGI) Tingkat N.pdf

Sugiyono. (2017). *Metode Penelitian Kuantitatif dan Kualitatif dan R & D*. Alfabeta.

Tariq, J., Sajjad, A., Zakar, R., Zakar, M. Z., & Fischer, F. (2018). Factors associated with undernutrition in children under the age of two years: Secondary data analysis based on the Pakistan demographic and health survey 2012–2013. *Nutrients*, *10*(6). https://doi.org/10.3390/nu10060676

UNICEF. (2021). *Levels and Trends In Child Malnutrion*. files/134/_.pdf

Unicef Indonesia. (2020). *Situasi Anak Di 2020 Indonesia*.

Utviaputri, L. P. (2018). *Cues To Action Effect To Complete Child Immunization In Puskesmas Kenjeran Surabaya*.

Received: 25-08-2023, Accepted: 12-10-2023, Published Online: 02-09-2024