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Original Article

Family Determinants Causing Children Suffering From Wasting In Jambi City

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ABSTRACT

Background: Toddlers who experience wasting will experience delayed growth and development if it occurs in the long term, a decrease in the immune system, are susceptible to infectious diseases, and can cause death if they experience severe wasting for a long time. This study aims to determine the family determinants of wasting in toddlers in Jambi City.

Method: This study is a descriptive-analytical study with a Cross-Sectional research design. The study was conducted on 35 toddlers experiencing wasting who were treated at the Community Health Center in Jambi City and did not experience congenital abnormalities, were not undergoing steroid treatment, or did not experience other chronic diseases. The mothers of children suffering from wasting were given questionnaires, and interviews were conducted.

Result: The results of the study showed that 45.7% were aged 31 to 40 years, 48.6% of mothers' education graduated from high school, 57.1% family income was less than 2 million, 82.9% of mothers did not work, 45.7% of drinking water sources came from PDAM water, the number of children in the family ≤ 2 children was 62.9%, and there was a relationship between maternal age, maternal education, family income, employment history, drinking water sources and number of children with wasting events (p-value <0.05).

Conclusion: This study concludes that family determinants influence the incidence of wasting in toddlers in Jambi City.

INTRODUCTION

Wasting in toddlers is a major nutritional problem in Indonesia and many countries. The prevalence of wasting in the world 2019 has reached 47 million toddlers.[1] According to research conducted by Harding et al. in 2018, wasting can seriously threaten child development because wasting can play a role in causing long-term developmental disorders in children.[2] Based on research conducted by Aguayo in 2017, wasting can cause children to experience decreased cognitive function.[3] Wasting can also cause a decrease in the immune system and cause children to have a higher risk of experiencing infectious diseases.[4] Based on research conducted by Derso in 2017, wasting in toddlers can even impact decreased work productivity as adults, reducing human resources' quality.[5]

Because there are many impacts caused by wasting and the still high percentage of wasting in Jambi City, and there has been no research in Jambi Province that examines this wasting, researchers are interested in reviewing the determinants of wasting in Jambi City, so it is expected to be initial data as a follow-up to reduce the percentage of wasting in Jambi City in particular.

METHOD

This study uses a descriptive-analytical research design with a Cross-Sectional research design. This study assessed the determinants of wasting causes and their influence on wasting in toddlers in Jambi City. The research location was the Jambi City Health Center, which was a place to examine children's nutritional status, conduct interviews, and fill out questionnaires from parents of patients. The study was conducted from March 2023 to October 2023. The inclusion criteria for patients were toddlers who experienced wasting based on data from the Jambi City Health Office, and the exclusion criteria were toddlers who had congenital abnormalities, were undergoing steroid treatment, or had other chronic diseases.

RESULT

This study was conducted on 35 toddlers who experienced wasting based on data from the Health Office in August 2023. The patient sample consisted of 20 female toddlers and 15 male toddlers. This study assessed the family determinants that caused wasting in toddlers in Jambi City. The characteristics of family determinants that cause wasting in Jambi City are as seen Table 1.

Table 1. **Characteristics of Family Determinants Causing Wasting in Jambi City**

Variable (N=116)	Frequency (N)	Percentage (%)
Mother's Age		
21-30 years	15	42,9
31-40 years	16	45,7
41-50 years	4	11,4
Mother's Education		
Did Not Finish School	1	2,9
Elementary School Graduated	3	8,6
Junior High School Graduated	11	31,4
High School Graduated	17	48,6
S1 Graduated	3	8,6
Family Income		
< Rp. 2.000.000	20	57,1
Rp. 2.000.000-4.000.000	13	37,1
Rp. 4.000.000	2	5,7
Mother's Job		
Working	6	17,1
Not Working	29	82,9
Drinking Water Source		
PDAM	16	45,7
Refill Water	12	34,3
Well	7	20
Number of Children in Family		
≤ 2 people	22	62,9
2 People	13	37,3
Total	35	100

Based on Table 3.1, it is known that based on the mother's age, the majority are 31 to 40 years old, namely 45.7%, 21 to 30 years old, as many as 42.9%, and 41 to 50 years old, as many as 11.4%. Based on the mother's education, it is known that the majority have graduated from high school. Namely, 48.6% graduated from junior high school, as many as 31.4% graduated from elementary school, 8.6% graduated with a bachelor's degree, 8.6%, and did not graduate from school as many as 2.9%. Based on family income, it is known that there are 57.1% of families with an income of less than 2 million rupiahs, there are 37.1% of families with an income of 2 million to 4 million rupiahs, and 5.7% with an income of more than 4 million rupiahs. Based on job characteristics, 82.9% of mothers with children experience wasting in Jambi City who do not work, and 17.1% of mothers work. Based on the source of drinking water, it is known that 45.7% use PDAM, 34.3% use refilled water, and 20% come from wells. Based on the number of children, 62.9% of families have ≤ 2 children, and 37.1% have > 2 children in one family.

Based on bivariate analysis, the family determinants that influence wasting in toddlers in Jambi City are as follows Table 2.

Table 2. Frequency Distribution of Pre-test and Post-test Anatomy Practicum grades

Groups	*Mean*	*SD*	*Confidence Interval 95%*		*p-value*
			Lower Limit	Upper Limit	
Mother's Age	0,54	0,131	0,27	0,81	<0,001
Mother's Education	2,3	1,03	2,07	0,72	<0,001
Family Income	0,34	0,76	0,08	0,6	0,012
Mother's Occupation	0,68	0,47	0,52	0,84	<0,001
Source of Drinking Water	0,6	0,8	0,32	0,87	<0,001
Number of Children in the Family	0,22	0,59	0,02	0,43	0,03

Based on Table 3.2, it is known that there is a relationship between family determinants and wasting, there is a relationship between the mother's age and nutritional status, namely p-value <0.001, there is a relationship between the mother's education and nutritional status, namely p-value <0.001, there is a relationship between family income and nutritional status, namely p-value = 0.012, there is a relationship between mother's work and drinking water sources with nutritional status, which is assessed from the p-value <0.001, and there is a relationship between the number of children in the family and nutritional status, which is known from the p-value = 0.03 (p-value <0.05).

DISCUSSION

A person's level of knowledge partly influences acceptance of information. Research conducted by Ni'mah in 2015 found a significant relationship between wasting and mothers with low education levels.6 Based on research conducted by Rahayu in 2018, it was found that wasting occurred 4 times more in mothers with low education levels.[7]

Research conducted by Amirah in 2019 found that working mothers had more children who experienced wasting than non-working mothers.[8] Another opinion from research conducted by Soedarsono in 2021 found no significant relationship between the mother's employment status and the incidence of wasting.[9] Eshete expressed the same opinion in 2017; it was found that non-working mothers usually have more time to pay attention to their children's food intake, so it significantly affects the child's nutritional status.[10]

Family income is also a factor that influences the adequacy of family member nutrition. This is supported by research conducted by Hasyin in 2017, which shows a significant relationship between family income

and the incidence of wasting.[11] Low family income will impact low purchasing power for food, and the amount of food available is also limited, thus affecting the nutritional status of family members.[12] The source of drinking water consumed by the family also influences the occurrence of wasting. According to research conducted by Noflidaputri in 2022, it is known that there is a significant relationship between poor sanitation and the incidence of wasting.[13]

CONCLUSION

This study concludes that family determinants, namely maternal age, maternal education, family income, maternal occupation, drinking water sources, and the number of children in the family, significantly affect the incidence of wasting in toddlers in Jambi .

REFERENCES

1. *United Nations Children's Fund, World Health Organization, & World Bank Group. 2020. Levels And Trends In Child Malnutrition: Key Findings Of The 2020 Edition Of The Joint Child Malnutrition Estimates. World Health Organization. https://www.who.int/publications/i/item/jme-2020-edition.*
2. *Harding, K. L., Aguayo, V. M., & Webb, P. 2018. Factors associated with wasting among children under five years old in South Asia: Implications for action. PLOS ONE, 13(7), e0198749. https://doi.org/10.1371/journal.pone.0198749*
3. *Aguayo, V. M., Badgaiyan, N., Dzed, L. 2017. Determinants of child wasting in Bhutan. Insights from nationally representative data. Public Health Nutrition, 20(2), 315–324. https://doi.org/10.1017/S1368980016002111*
4. *Bourke, C. D., Berkley, J. A., & Prendergast, A. J. 2016. Immune Dysfunction as a Cause and Consequence of Malnutrition. Trends in Immunology, 37(6), 386–398. https://doi.org/10.1016/j.it.2016.04.003*
5. *Derso, T., Tariku, A., Biks, G. A., & Wassie, M. M. 2017. Stunting, wasting and associated factors among children aged 6– 24 months in Dabat health and demographic surveillance system site: A community-based cross-sectional study in Ethiopia. BMC Pediatrics, 17(1), 96. https://doi.org/10.1186/s12887-017- 0848-2*
6. *Ni'mah, C., & Muniroh, L. 2016. The Relationship between Education Level, Knowledge Level, and Mother's Parenting Patterns with Wasting and Stunting in Toddlers from Poor Families. Indonesian Nutrition Media, 10(1), 84–90. https://doi.org/10.20473/mgi.v10i1.84-90*
7. *Rahayu, R. M., Pamungkasari, E. P. and Wekadigunawan, C. 2018. The Biopsychosocial Determinants of Stunting and Wasting in Children Aged 12-48 Months, Journal of Maternal and Child Health, 3(2), pp. 105–118. doi: 10.26911/thejmch.2018.03.02.03*
8. *Amirah, A. N. and Rifqi, M. A. 2019. Characteristics, Maternal Nutrition Knowledge, and Toddler Nutritional Status (BW/H) Age 6-59 months. Amerta Nutrition, 3(3), p. 189-193. doi: 10.20473/amnt.v3i3.2019.189-193.*
9. *Soedarsono, A. M., Sumarmi, S. 2021. Factors Affecting the Incidence of Wasting in Toddlers in the Simomulyo Health Center Work Area, Surabaya. Media Gizi Kesmas, 10(2), 237–245 . https://doi.org/10.20473/mgk.v10i2.2021.237-245.*
10. *Eshete, H., Abebe, Y., Loha, E., Gebru, T. & Tesheme, T. 2017. Nutritional Status and Effect of Maternal Employment among Children Aged 6 – 59 Months in Wolayta Sodo Town, Southern Ethiopia: A Cross-sectional Study, Ethiopian Journal of Health Sciences, 2(27). doi: 10.4314/ejhs.v27i2.8*
11. *Hasyim, D. 2017. The Relationship Between Economic Status and the Incidence of Wasting in Toddlers at Surya Ceria Pringsewu Preschool. Scientific Journal of Health, 6(2), pp. 20–24. doi: 10.35952/jik.v6i1.85.*
12. *Mkhize, M. and Sibanda, M. 2020. A review of selected studies on the factors associated with the nutrition status of children under the age of five years in South Africa. International Journal of Environmental Research and Public Health, 17(21), pp. 1–26. doi: 10.3390/ijerph17217973*
13. *Noflidaputri Resty, Reni Gusti, Sari Mila. 2022. Determinant Factors Causing Wasting Incidents in the Muara Labuh Health Center Work Area, South Solok Regency.*