



The Relationship Between Family Food Security and The Nutritional Status of Toddlers in Tamalate Sub-District, Makassar City

Isymiarni Syarif^{1*}, Suriati Lubis², Ai Nurhayati³, Muntasir⁴, Nur Agustin Mardiana⁵

¹ Nursing Sciences, Faculty of Health Sciences, Makassar Islamic University, South Sulawesi, Indonesia.

² Midwifery, Darmo Health Sciences High School, North Sumatera, Indonesia.

³ Culinary Education, Family Welfare Department, Indonesian Education University, West Java, Indonesia.

⁴ Departement of Public Health, Nusa Cendana University, East Nusa Tenggara, Indonesia.

⁵ Poultry Product Processing Study Program, State Community College Putra Sang Fajar, East Java, Indonesia.

Received: November 20, 2023

Revised: March 08, 2024

Accepted: May 25, 2024

Published: May 31, 2024

Corresponding Author:

Isymiarni Syarif

isymiarnisyarif@gmail.com

DOI: [10.29303/jppipa.v10i5.6184](https://doi.org/10.29303/jppipa.v10i5.6184)

© 2024 The Authors. This open access article is distributed under a (CC-BY License)



Abstract: Food security is a condition where food is sufficiently available for one's body. The magnitude of the impact caused by the lack of food security makes it necessary to pay attention to its availability because this can cause problems of malnutrition so that health status decreases. The purpose of this study was to determine the relationship between family food security and the nutritional status of toddlers in Tamalate sub-district, Makassar City. The method used is observational using the design *case-control* with descriptive research design using quantitative and qualitative approaches. Data collection was carried out by means of observation, interviews with mothers who have children aged 23-60 months as many as 73 toddlers. The results showed that toddlers who experienced Normal Nutrition were as many as 24 toddlers with Food Resilience, followed by Light Food Insecurity 12 toddlers with Malnutrition status with a value of $0.05 P\text{-Value} = 0.045 < 0.05$ and it can be concluded that there is a relationship between food security and the nutritional status of toddlers in the Tamalate Health Center environment which is located in Kel. Pr Tambung Kec. Tamalate Makassar City. This research can then be used as information material for further related research.

Keywords: Food Security; Nutrition Status; Toddlers

Introduction

The current health focus focuses on food security where with food security that is obtained for a person's body properly can have an impact on good body condition (Kristiawan, 2021; Pradipta, 2019). The food security that is meant is a condition where food is available sufficiently for a person's body. This food security can also be fulfilled by someone both physically and economically (Mbow et al., 2020; Roberts et al., 2020; WHO, 2020). The focus of food security must be provided at the regional, local and household levels so that the nutritional needs of each individual can be met

(Arenawati et al., 2021). The availability of food security also aims to end hunger and improve nutrition so that it can improve sustainable agriculture. This goal will be achieved if people have avoided hunger (Agarwal, 2018; Ashar, 2021; Nicolétis et al., 2019).

The impact of this unavailability of food security is that malnutrition can occur. Malnutrition is also called the impact of a status condition in the short or long term. One form of malnutrition is stunting (Suhaimi, 2019; Ussyifa, 2022). Malnutrition where the nutritional status needed in the body is not obtained sufficiently so that it can cause malnutrition (Amirullah et al., 2020; Fitriani, 2020). Stunting often occurs in toddlers due to

How to Cite:

Syarif, I., Lubis, S., Nurhayati, A., Muntasir, & Mardiana, N. A. (2024). The Relationship Between Family Food Security and The Nutritional Status of Toddlers in Tamalate Sub-District, Makassar City. *Jurnal Penelitian Pendidikan IPA*, 10(5), 2642-2647. <https://doi.org/10.29303/jppipa.v10i5.6184>

nutritional problems (Achmad, 2022; Do Rosario et al., 2017; Utami et al., 2019). Measures of stunting nutritional status need to pay attention to height or length, gender and age of toddlers (Abreha et al., 2020; Kurniawati & Yulianto, 2022). There are still many people who have not routinely measured the height and weight of toddlers, which makes stunting difficult to realize, making stunting a nutritional improvement problem that must be resolved until 2025 (Khan et al., 2019; Murti et al., 2022; Sineke et al., 2023).

Stunting is one of the problems of malnutrition that can be caused by the absence of nutrients entering the body, if this happens continuously it will cause chronic nutritional problems. Usually stunting is a disease that ranges from occurring in children aged <2 years, this has a very dangerous impact because it can result in death in sufferers and usually sufferers have a less optimal posture (Suhaimi et al., 2023). Several risk factors are involved in the occurrence of stunting in toddlers, namely maternal education, birth weight, height and breastfeeding (Syakur et al., 2023).

The magnitude of the impact caused by the lack of food security makes it necessary to pay attention to its availability (Blekking et al., 2020; Yu & Deng, 2022). If food security is lacking, it can cause nutritional status problems which cause nutritional status problems so that health status decreases. Food security is related to nutritional status, especially for human health, if food security in one family is very lacking, especially in a long period of time, this will have an impact on a person's nutrition. The level of household food security has a close relationship with the amount of toddlers consuming protein. This is different in the research of Putri & Muniroh (2023) characteristics of toddlers such as weight, height, socio-economic such as maternal education, family income there is no relationship with food security which causes stunting in toddlers.

In Indonesia in 2020 the incidence of stunting was 22% (149.2 million people) this figure increased in 2022 in the Asian Development Bank data where the percentage of stunted children in Indonesia was 22% *Prevalence of Stunting Among Children Under 5 Years of Age in Indonesia* to 31.8 percent. In 2022, this makes Indonesia in the 10th level where in this position the number of stunting sufferers is a lot in Southeast Asia. However, from the Ministry of Health's data, the stunting rate in Indonesia has been reduced to 21.6%. However, the target prevalence of stunting in 2024 is 14%, therefore nutrition cases in Indonesia still need to be considered so that they can decrease as expected (Direktorat PAUD, 2023).

From the results of the Indonesian Nutrition Status Survey (SSGI) of the Ministry of Health in 2022, it was found that the prevalence of stunting that occurred in

toddlers in South Sulawesi was 27.2%. South Sulawesi is also ranked in the top 10 with the highest number of stunting toddlers in Indonesia. The number of stunting is highest in Tamalate District with 681 children stunted. The high number of nutritional problems in Indonesia means that we must pay more attention to food security so that it can be fulfilled as a whole. Adequate food is a condition where everyone can receive and fulfill their food needs adequately and nutritiously. Food is defined as the basic needs that humans should have in full, fulfilling their daily needs. Based on the existing data, the researcher will examine with the title "The Relationship between Family Food Security and the Nutritional Status of Toddlers in Tamalate District, Makassar City" where Tamalate District is the highest area with the incidence of stunting.

Method

The method used in this study is observational using case-control design with descriptive analysis research design using quantitative and qualitative approaches (Sparling et al., 2022; Wingrove et al., 2021). The location of this research was conducted in Tamalate District Makassar. This location was chosen because there are still many toddlers with poor nutritional status. The population and samples used were all toddlers aged 23-60 months in the working area of the Tamalate Health Center, Tamalate District, Makassar City with a total of 73 toddlers.

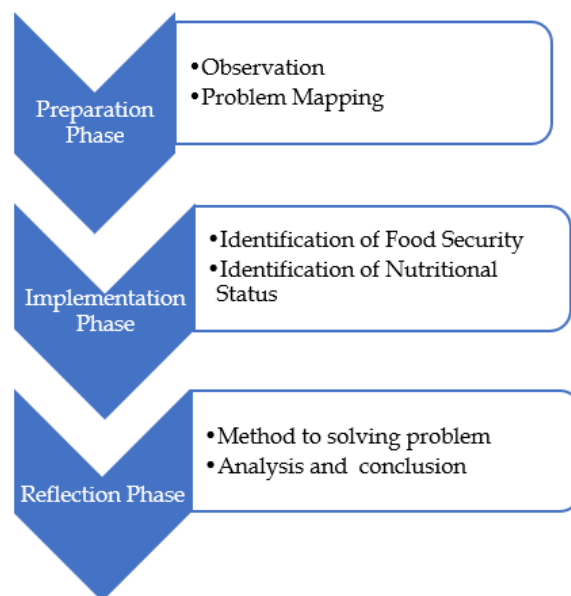


Figure 1. The flowchart of research

Data collection by distributing questionnaires and conducting interviews with the health center and several communities. Other data were also collected through

observation, documentation and interview techniques in Tamalate District Makassar related to the relationship between family food security and nutritional status in toddlers.

Result and Discussion

Characteristics

This study focuses on the Tamalate Health Center which is located in Pr Tambung Sub-district, Tamalate City Makassar which has sample characteristics presented in Table 1 and Table 2. Obtaining these characteristics by conducting Univariate Tests on all variables including Age, Gender, Family Food Security and Nutritional Status.

Table 1. Characteristics of Toddlers based on Age

Age	Toddler Children	
	Total	Percentage (%)
23 - 35	19	26.00
36 - 47	41	56.00
48 - 60	13	18.00
Total	73	100.00

Table 1 shows that the majority (56%) of children under the age of five were between 36 and 47, followed by 23 to 35 at 26% and 48 to 60 at 18%. Table 2 shows that 63% of male toddlers and 37% of female toddlers.

Table 2. Characteristics of Toddlers by Gender

Gender	Total	Percentage (%)
Male	46	63.00
Female	27	37.00
Total	73	100.00

Family Food Resilience

Family Food Resilience can be obtained from respondents' answers with several criteria including Food Resilience, food insecurity at mild, moderate and

high (severe) levels. The data acquisition table is shown in Table 3.

Table 3. Family Food Resilience

Food Resilience	Toddlers	
	Total	Percentage (%)
Food resistant	25	34.20
Food Insecure Mild	48	65.80
Total	73	100.00

Table 3 shows that most of the families' food security is food security at 34.2% and food insecurity at 65.8%.

Nutrition Status

Table 4. Nutritional Status of Toddlers

Nutrition Status	Total	Percentage (%)
Bad	26	35.60
Less	18	24.70
Normal	29	39.70
Total	73	100.00

Table 4 most of the nutrition in toddlers is 39.7% Normal Nutrition, 35.6% Malnutrition and 24.7% Malnutrition. This nutrition calculation is guided by the Weight / Height Index, namely:

Table 5. Toddler Weight/Height Index

Nutrition Status	Indeks (SD)
Bad	< - 3
Less	-3 s/d < -2
Normal	-2 s/d +1
Overnutrition	>+ 2 s/d +3
Obesity	>+ 3

Family Food Security and its Relationship with the Nutritional Status of Toddlers

The relationship between family food security and the nutritional status of toddlers is shown in Table 6.

Table 6. Relationship between Family Food Security

Family Food Security	Nutritional Status of Toddlers			Total	Value X ²	P-Value
	Bad	Less	Normal			
Food Resistant	14	10	24	48	6.192	0.045
Mild Food Insecurity	12	8	5	25		
Total	26	18	29	73		

Table 6 shows that most toddlers experience Normal Nutrition, namely as many as 24 toddlers with Food Resilience, followed by Light Food Prone 12 toddlers with Malnutrition status. Based on the results *Chi Square test* has obtained the value of X² = 6,192 and value *P-Value* = 0,045 where the value < 0,05 from this value, it means that there is a relationship between

Family Food Security and the Nutritional Status of Toddlers in the Tamalate Health Center environment which is located in Kel. Pr Tambung Kec. Tamalate Makassar City.

Discussion

From the results of observations with a total sample size of 73 toddlers, most of the toddlers have normal nutrition status, namely 24 with the Food Resistant category, then 12 toddlers have malnutrition status with the category of Light Food Insecurity. Based on the Chi Square test, the value $X^2 = 6,192$ and value P -value where this value is smaller than $\alpha = 0,05$ so it is concluded that Family Food Security has a close relationship with the nutritional status of toddlers. This is in accordance with research conducted by Sutyanawan et al. (2019) family food security has a close relationship with the nutritional status of toddlers because it is proven that if a household has met food security so that it can provide diverse foods and has good nutrition so that this can achieve more optimal nutrition. Similarly, Sutriningsih & Lasri (2017) stated that food security and nutritional status of toddlers are interrelated. Food insecurity that occurs in families is influenced by the level of nutritional adequacy or energy and protein and nutritional status in toddlers (Afiatna & Maryanto, 2021; Housni et al., 2022; Jun et al., 2021; Masthalina et al., 2021).

Family food security is the fulfillment of food in the family in sufficient quantity and quality consistently. If food security in a family is not sufficiently fulfilled or is still classified as low, this will certainly cause the food consumed to be inappropriate portions and result in poor family health. This condition will produce a less qualified generation, which will threaten the future of the country's resilience (Wado et al., 2019). One of the causes of malnutrition in toddlers is the food security factor that is owned in the family, so that what can be done to overcome it is to increase food security, one of which is to utilize the yard or yard to plant food such as tuber plants, spinach or kale vegetables and so on that can be used as food. The importance of increasing knowledge of family food security aims to support health status, especially in the case of optimal toddler nutrition so that parents or families can utilize their yard as a medium for planting food that can meet family food needs (Afandi et al., 2024; Barai et al., 2023; Rohmawati et al., 2023; Sanggelorang & Malonda, 2021).

Conclusion

From the explanation above, it can be concluded that the importance of maintaining family food security to improve family nutrition not only for toddlers, so in this case the family plays an important role in its processing. The ability of a family to meet their nutritional and dietary needs on a regular and sustainable basis is referred to as family food security. Family food security encompasses a range of characteristics and practices that help families to cope

with food insecurity, economic shifts and other unforeseen events. Family food security depends on a family's ability to obtain good food, both geographically and financially. This includes access to markets, supermarkets or local food sources, as well as the ability to purchase food at reasonable prices. Food security requires the availability of a diverse and balanced diet. One of the ways that can be done is by planting food such as tubers, vegetables around the home yard so that if the family is short in terms of costs to buy food for daily consumption, the family still provides other food available in the yard. So that in addition to this reducing expenses, it is also certainly healthier because these plants do not use chemicals so it is safe for consumption by toddlers and other family members.

Acknowledgments

We would like to thank all the authors and those involved in this research for their support so that this research can be completed properly.

Author Contributions

The authors listed in this article contributed to the development of the article, and have read, approved the published manuscript.

Funding

This article did not receive any external funding.

Conflicts of Interest

In writing this article, the authors do not have any conflict of interest.

References

- Abreha, S. K., Walelign, S. Z., & Zereyesus, Y. A. (2020). Associations Between Women's Empowerment and Children's Health Status in Ethiopia. *PloS One*, 15(7).
<https://doi.org/10.1371/journal.pone.0235825>
- Achmad, W. (2022). Social Reality Stunting Prevention in Cianjur District. *Jurnal EduHealth*, 13(02), 467-477. Retrieved from <http://ejournal.seaninstitute.or.id/index.php/>
- Afandi, T. Y., Irmayanti, E., Arifin, Z., Surindra, B., Prastyaningtyas, E. W., Lukiani, E. R. M., Palupi, N. D. A., Alamsyah, F. L., & Anggraini, A. S. N. (2024). Support for The Use of Vacant Land for Catfish Farming with Simple Media as an Effort to Increase Community Food Security. *International Journal of Community Service Implementation*, 1(4). Retrieved from <https://afdifaljournal.com/journal/index.php/ijcsi/article/view/192>
- Afiatna, P., & Maryanto, S. (2021). Parents' Feeding Style on the Adequacy of Energy and Protein in Children

- with Stunted Nutritional Status. *E3S Web of Conferences*, 317, 4027. <https://doi.org/10.1051/e3sconf/202131704027>
- Agarwal, B. (2018). Gender Equality, Food Security And The Sustainable Development Goals. *Current Opinion In Environmental Sustainability*, 34, 26-32. <https://doi.org/10.1016/j.cosust.2018.07.002>
- Amirullah, A., Putra, A. T. A., & Al Kahar, A. A. D. (2020). Deskripsi Status Gizi Anak Usia 3 Sampai 5 Tahun Pada Masa Covid-19. *Murhum: Jurnal Pendidikan Anak Usia Dini*, 1(1), 16-27. <https://doi.org/10.37985/murhum.v1i1.3>
- Arenawati, A., Widyastuti, Y., & Prafitri, N. (2021). *Ketahanan Pangan Berbasis Role Of Household Structure*. CV. AA Rizky, Kota Serang-Banten. Retrieved from <https://eprints.untirta.ac.id/8517/>
- Ashar, H. N. (2021). Strategi Masyarakat Miskin Dalam Menghadapi Kerawanan Pangan di Desa Trimurti, Kabupaten Bantul. *Jurnal Penelitian Kesejahteraan Sosial*, 20(1), 13-30. <https://doi.org/10.31105/jpks.v20i1.2334>
- Barai, S. A., Nurmahfuzhah, N., & others. (2023). Cultivating Sustainability: Exploring the Relationship between Homestead Gardening, Land Property, and Family Economic Pressure in Household with Stunting Children. *Journal of Family Sciences*, 8(2), 190-203. <https://doi.org/10.29244/jfs.v8i2.51324>
- Blekking, J., Waldman, K., Tuholske, C., & Evans, T. (2020). Formal/informal employment and urban food security in Sub-Saharan Africa. *Applied Geography*, 114. <https://doi.org/10.1016/j.apgeog.2019.102131>
- Direktorat PAUD. (2023). *Prevalensi Stunting Tahun 2022*. In Direktorat Pendidikan Anak Usia Dini.
- Do Rosario, P. C., Picauly, I., & Sinaga, M. (2017). Health, Food Consumption, Social Economy, And Stunting Incidency In Timor Leste. *KEMAS: Jurnal Kesehatan Masyarakat*, 13(2), 261-269. <https://doi.org/10.15294/kemas.v13i2.11248>
- Fitriani, R. (2020). Hubungan Antara Pengetahuan Gizi Seimbang, Citra Tubuh, Tingkat Kecukupan Energi dan Zat Gizi Makro dengan Status Gizi pada Siswa SMA Negeri 86 Jakarta. *Journal Health & Science: Gorontalo Journal Health and Science Community*, 4(1), 29-38. <https://doi.org/10.35971/gojhes.v4i1.5041>
- Housni, F. E., Saenz-Pardo-Reyes, E., Larios, M. de J. L., Cañedo, C. L., Cervantes, V. G. A., & Lares-Michel, M. (2022). Association between nutritional status, deficiency of protein, iron and vitamins, caloric intake and food security in Mexi-can school children. *PROGRESS IN NUTRITION*, 24(1). Retrieved from <https://www.mattioli1885journals.com/index.php/progressinnutrition/article/view/10900>
- Jun, S., Cowan, A. E., Dodd, K. W., Tooze, J. A., Gahche, J. J., Eicher-Miller, H. A., Guenther, P. M., Dwyer, J. T., Potischman, N., Bhadra, A., & others. (2021). Association of food insecurity with dietary intakes and nutritional biomarkers among US children, National Health and Nutrition Examination Survey (NHANES) 2011--2016. *The American Journal of Clinical Nutrition*, 114(3), 1059-1069. <https://doi.org/10.1093/ajcn/nqab113>
- Khan, S., Zaheer, S., & Safdar, N. F. (2019). Determinants Of Stunting, Underweight And Wasting Among Children< 5 Years Of Age: Evidence From 2012-2013 Pakistan Demographic And Health Survey. *BMC Public Health*, 19(1), 1-15. <https://doi.org/10.1186/s12889-019-6688-2>
- Kristiawan, S. P. (2021). *Ketahanan Pangan*. Scopindo Media Pustaka.
- Kurniawati, N., & Yulianto, Y. (2022). Pengaruh Jenis Kelamin Balita, Usia Balita, Status Keluarga Dan Pendapatan Keluarga Terhadap Kejadian Pendek (Stunted) Pada Balita Di Kota Mojokerto. *Pengembangan Ilmu Dan Praktik Kesehatan*, 1(1), 76-92. <https://doi.org/10.56586/pipk.v1i1.192>
- Masthalina, H., Santosa, H., Sudaryat, E., & Zuskar, F. (2021). Household Food Insecurity, Level of Nutritional Adequacy, and Nutritional Status of Toddlers in the Coastal Area of Central Tapanuli Regency. *Open Access Macedonian Journal of Medical Sciences*, 9(E), 1371-1375. <https://doi.org/10.3889/oamjms.2021.7571>
- Mbow, C., Rosenzweig, C. E., Barioni, L. G., Benton, T. G., Herrero, M., Krishnapillai, M., & Diouf, A. A. (2020). *Food security*. Special Report on Climate Change and Land. Retrieved from https://www.ipcc.ch/site/assets/uploads/sites/4/2020/06/IPCCJ7230-Land_SM5_200226.pdf
- Murti, P. D. B., Hartono, A. P., Purwanto, D. E., Mahardika, A., Hapsari, M. W., Anggraeni, N., & Rizkaprilisa, W. (2022). Permen Jelly Dengan Penambahan Ikan Cakalang Guna Mengatasi Stunting: Sebuah Tinjauan Pustaka. *Science Technology and Management Journal*, 2(2), 71-76. <https://doi.org/10.53416/stmj.v2i2.96>
- Nicolétis, É., Caron, P., El Solh, M., Cole, M., Fresco, L. O., Godoy-Faúndez, A., & Zurayk, R. (2019). *Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. HLPE Report. Retrieved from <http://www.fao.org/cfs/cfs-hlpe>
- Pradipta, L. (2019). *Peralihan Pangan Pokok Dari Sagu*

- ke Beras: Sebuah Kajian Ketahanan Pangan dan Masyarakat Adat. *Society*, 7(1), 39–51. <https://doi.org/10.33019/society.v7i1.76>
- Putri, E. H., & Muniroh, L. (2023). The Relationship Between Characteristics of Toddlers, Socio-Economic, and Household Food Security with Stunting in Kampung 1001 Malam Surabaya, Surabaya. *Media Gizi Kesmas*, 12(1), 21–29. <https://doi.org/10.20473/mgk.v12i1.2023.21-29>
- Roberts, S. B., Franceschini, M. A., Silver, R. E., Taylor, S. F., Sa, A. B., C o, R., Sonco, A., Krauss, A., Taetzsch, A., Webb, P., Das, S. K., Chen, C. Y., Rogers, B. L., Saltzman, E., Lin, P. Y., Schlossman, N., Pruzensky, W., Bal e, C., Chui, K. K. H., & Muentener, P. (2020). Effects of food supplementation on cognitive function, cerebral blood flow, and nutritional status in young children at risk of undernutrition: randomized controlled trial. *BMJ (Clinical Research Ed.)*, 370. <https://doi.org/10.1136/bmj.m2397>
- Rohmawati, N., Sari, N., Sitasari, A., & Deporos, S. R. (2023). Household food security status and food feeding culture with stunting incidence: A cross-sectional study among children 24-59 months in Indonesia. *Journal of Namibian Studies: History Politics Culture*, 34, 3825–3840. Retrieved from <https://namibian-studies.com/index.php/JNS/article/view/1935>
- Sanggalorang, Y., & Malonda, N. S. H. (2021). Edukasi Mengenai Pentingnya Ketahanan Pangan Rumah Tangga dan Model Pemanfaatan Pekarangan pada Pengurus TP-PKK Desa Dame I. *JPAI: Jurnal Perempuan Dan Anak Indonesia*, 2(2), 1–5. <https://doi.org/10.35801/jpai.2.2.2021.31385>
- Sineke, J., Ranti, I., Imbar, H., Pasambuna, M., Halawa, E., Suhardi, N., & Paruntu, O. (2023). Asupan Gizi Balita dan Kejadian Stunting Di Desa Kayumoyondi Kecamatan Tutuyan Kabupaten Bolaang Mongondow Timur. *PROSIDING SEMINAR NASIONAL*, 1, 31–38. Retrieved from <https://mail.ejurnal.poltekkes-manado.ac.id/index.php/prosiding2023/article/view/1948>
- Sparling, T. M., Deeney, M., Cheng, B., Han, X., Lier, C., Lin, Z., Offner, C., Santoso, M. V., Pfeiffer, E., Emerson, J. A., & others. (2022). Systematic evidence and gap map of research linking food security and nutrition to mental health. *Nature Communications*, 13(1), 1–11. Retrieved from <https://www.nature.com/articles/s41467-022-32116-3%22>
- Suhaimi, A. (2019). *Pangan, gizi, dan kesehatan*. Deepublish.
- Suhaimi, A., Roni, M., & Kusumayana, P. (2023). Analysis of Diversity of Food Consumption in Families of Stunting Toddlers. *Jurnal Penelitian Pendidikan IPA*, 9(10), 8251–8257. <https://doi.org/10.29303/jppipa.v9i10.5575>
- Sutriningsih, A., & Lasri, L. (2017). Prosiding The Relationship of Family Food Security with The Nutritional Status of Toddlers After The Eruption of Mount Bromo in Malang Regency. *Proceedings of The Health Sciences International Conference (HSIC 2017)*. <https://doi.org/10.2991/hsic-17.2017.9>
- Sutyawan, S., Khomsan, A., & Sukandar, D. (2019). Pengembangan Indeks Ketahanan Pangan Rumah Tangga dan Kaitannya dengan Tingkat Kecukupan Zat Gizi dan Status Gizi Anak Balita. *Amerta Nutrition*, 3(4), 201–211. <https://doi.org/10.20473/amnt.v3i4.2019.201-211>
- Syakur, R., Musaidah, M. M., & Handayani, N. (2023). Risk Factors for Stunting in Toddlers in the Public Health Center Working Area Embo Jeneponto, South Sulawesi. *Jurnal Penelitian Pendidikan IPA*, 9(9), 7685–7690. <https://doi.org/10.29303/jppipa.v9i9.5266>
- Ussyifa, I. (2022). *Pengaruh Penyuluhan Kesehatan Terhadap Pengetahuan Tentang Stunting Dan Status Gizi Pada Ibu Anak Usia Prasekolah*. Universitas dr. SOEBANDI. Retrieved from <http://repository.stikesdrsoebandi.ac.id/486/1/18010059ItaUssyifa.pdf>
- Utami, R. A., Setiawan, A., & Fitriyani, P. (2019). Identifying causal risk factors for stunting in children under five years of age in South Jakarta, Indonesia. *Enfermeria Clinica*, 29, 606–611. <https://doi.org/10.1016/j.enfcli.2019.04.093>
- Wado, L. A. L., Sudargo, T., & Armawi, A. (2019). Sosio Demografi Ketahanan Pangan Keluarga Dalam Hubungannya Dengan Kejadian Stunting Pada Anak Usia 1–5 Tahun (Studi Di Wilayah Kerja Puskesmas Bandarharjo Kelurahan Tanjung Mas, Kecamatan Semarang Utara, Kotamadya Semarang, Provinsi Jawa Tengah. *Jurnal Ketahanan Nasional*, 25(2), 178–203. <https://doi.org/10.22146/jkn.45707>
- WHO. (2020). *The State Of Food Security And Nutrition In The World 2020: Transforming Food Systems For Affordable Healthy Diets*. Food & Agriculture Org.
- Wingrove, K., Lawrence, M. A., & McNaughton, S. A. (2021). Dietary patterns, foods and nutrients: A descriptive analysis of the systematic reviews conducted to inform the Australian Dietary Guidelines. *Nutrition Research Reviews*, 34(1), 117–124. <https://doi.org/10.1017/S0954422420000190>
- Yu, Z., & Deng, X. (2022). Assessment of land degradation in the North China Plain driven by food security goals. *Ecological Engineering*, 183. <https://doi.org/10.1016/j.ecoleng.2022.106766>