Mother's Knowledge and Attitudes about KADARZI with Toddler Nutritional Status

Rizki Maulidya[*], Elvi Maisara, Khayatol Fadhilah, Shaburin Syakur, Yusri

STIKes Muhammadiyah Lhokseumawe, Aceh, Indonesia

Corresponding Author

Abstract: Housewives' knowledge about KADARZI is essential to improving the nutritional status of toddlers aged 1–5. Toddlers at that age are especially vulnerable to nutritional issues like malnutrition. The purpose of this study was to see the relationship between mothers' knowledge and attitudes about nutritionally conscious families KADARZI and the nutritional status of toddlers. This study used an analytical survey research design with a cross-sectional approach. Sampling using purposive sampling techniques in 103 respondents of children under five aged 1-5 years. Data collection using questionnaires is followed by data analysis using chi-square tests. Data collection using questionnaires with data analysis using chi-square tests. The results obtained that of the 103 respondents of housewives who have toddlers, 64 of them predominantly have knowledge of good KADARZI with good nutritional status totaling 63 people (98.4%) and poor nutritional status totaling very few only 1 person (1.6%). Furthermore, after conducting statistical tests with bivariate analysis, a p-value of 0.001 was obtained, which showed a p-value of $0.001 < \alpha$ (0.05), which means that there is a relationship between knowledge about KADARZI and nutritional status in toddlers. Then, the relationship between attitudes about KADARZI and the nutritional status of toddlers with a total of 103 respondents among housewives was obtained from 73 respondents, among whom predominantly had a positive attitude about (KADARZI) with good nutritional status in toddlers totaling 62 people (84.9%) and malnutrition status totaling 11 people (15.1%). After conducting statistical tests with bivariate analysis, a p-value of $0.002 < \alpha$ (0.05) was obtained, so it can be concluded that there is a relationship between attitudes about (KADARZI) and nutritional status in toddlers.

Keywords: Knowledge, Attitude, Nutritional status of toddlers

I. Introduction

Nutrition is one determinant of the quality of human resources. The decline in the quality of human resources at a young age will result in the loss of most of the potential for nation-building. Malnutrition results in a decrease in the level of intelligence of the child, because nutrition at the beginning of life will affect the quality of the next life. Malnutrition in toddlers will have an impact in the short and long term. In the short term, it is impaired brain development, intelligence, impaired physical growth and metabolic disorders in the body. Meanwhile, in the long run, the bad consequences that can be caused are decreased cognitive ability and learning achievement, decreased immunity so that it is easy to get sick, and a high risk for the emergence of heart and blood vessel disease, cancer, stroke, and disability in old age (Kementerian Kesehatan RI, 2018).

Data obtained from the World Health Organization (WHO) shows that malnutrition is the leading cause of death for toddlers in the world, such as in sub-Saharan Africa by as much as 28%, Latin America by as much as 7%, and Asian toddlers by as much as 50%. WHO also stated that in developing countries in 2017, there were 14% of children under five who were underweight. Based on WHO data in 2017, more than half of the under-five deaths were caused by preventable and treatable diseases through simple and affordable interventions. Malnourished children, especially those with acute malnutrition, have a higher risk of death. Factors related to nutritional status contribute to approximately 45% of deaths in children under the age of 5 years (World Health Organization, 2017).

Based on the 2018 National Basic Health Research, the prevalence of malnourished toddlers decreased from 14.43% in 2016 to 14.00% in 2017. According to the results in Indonesia in 2018, the percentage of malnutrition was 17.7%. Nationally, malnutrition in children under five in Indonesia is still a public health problem and is approaching a high prevalence, while the 2019 Sustainable Development Goals (SDGs) target is 17% (Kementerian Kesehatan RI, 2018). Some problems that hinder the application of KADARZI behavior are beliefs, customs, and negative myths in the family. For example, there are still various families who abstain from some types of food and have a negative attitude toward certain types of food that are actually very beneficial for nutritional intake. One indicator of KADARZI is to provide exclusive breastfeeding until the baby is six months old. Just breastfeeding without any additional food is sufficient for the nutritional needs of babies up to six months old. Various problems, such as when breast

milk does not come out, the baby's mother works, the baby still cries after being breastfed, and low knowledge causes unsuccessful exclusive breastfeeding until the baby is six months old.

The results of a preliminary survey in the working area at the Gilingan Surakarta Community Health Center found that the coverage of babies given exclusive breastfeeding in February 2014 indicated only 12 (10.5%) exclusive breastfeeding babies up to 6 months out of a total of 114 babies. This is the same as the research conducted by Rahmawati, Bahar, and Salam (2013), which found that the majority of respondents did not breastfeed exclusively (87.5% of respondents), and only 12.5% of respondents gave their babies exclusively breast milk.

The prevalence of national toddler nutritional status based on the results of the SSGI in 2021 is categorized into underweight, wasting, and stunting status in 2019 to 2021, namely malnutrition in 2019 as much as 16.3%, in 2020 as much as 16.3%, and in 2021 as much as 17.0%. Meanwhile, malnutrition in 2019 was 7.4%, in 2020 it was 7.4%, and in 2021 it was 7.1%. and stunting in 2019 by as much as 27.7%, in 2020 by as much as 26.9%, and in 2021 by as much as 24.4% (Kementerian Kesehatan RI, 2021).

Based on data from the Aceh Provincial Health Office in 2020, the number of nutritional status problems in Aceh is very high, with the prevalence of stunting reaching 37%, underweight toddlers as high as 23%, and undernourished toddlers (wasting) as high as 11%. The Aceh health office noted that 51.4% of children in Aceh Province suffer from nutritional problems, namely stunting. The highest data, namely in East Aceh, East Aceh Regency, recorded 8,583 people stunted in the area, and they found the lowest figure in the Sabang area, namely 476 children stunted. Based on the acquisition of statistical data from the 2012 Aceh Province Nutritional Status Monitoring Survey Report, the prevalence of stunting toddlers (height according to age) was 31.2%, the prevalence of wasting toddlers (weight according to height) was 24.3%, and the prevalence of overweight toddlers (weight according to height) was 1.9% (Dinas Kesehatan Aceh, 2020).

One factor that affects nutritional status (underweight, wasting, stunting, and overweight) in toddlers is the knowledge of parents in choosing and delivering food. Most parents, when meeting food supplies for their toddlers, do not think about what nutrients are needed for their toddlers. The level of knowledge and attitudes of parents about nutrition greatly affect the behavior and attitudes of subsequent children. Ignorance of foods that have good nutrients will lead to the wrong selection of foods, and low nutrition contained in those foods causes the child's nutritional status to be deficient (Maulana et al., 2018). The thing that can affect the nutritional status of toddlers is the level of knowledge and attitudes of a mother, which is a factor in the problem of choosing improper foodstuffs. The selection of foodstuffs and the availability of a sufficient amount of food in a variety of forms are influenced by the level of knowledge and attitudes of the mother about food and its nutrition. Poor maternal knowledge and poor maternal attitudes will affect or have an impact on the nutritional status of toddlers, slow their development, and have an impact on their health (Maharani et al., 2019).

Relevant research related to the knowledge and attitudes of housewives about KADARZI with the nutritional status of toddlers is a study conducted by Simon and Anggoro (2020), with the title the relationship of maternal knowledge and behavior about nutritionally conscious families KADARZI with the nutritional status of toddlers at Posyandu Teratai, Sanansari Hamlet, Srimartani, Bantul D.I Yogyakarta" shows that there is a significant relationship between maternal knowledge and behavior about Kadarzi and Nutritional Status Toddlers with a *p*-value of $p < 0.005$.

Based on the results of the initial survey that researchers have conducted based on interviews with 10 housewives / respondents who have toddlers aged 6-59 months in Gampong Reuleut Barat, it was found that 7 housewives knew what KADARZI and KADARZI indicators were, and 7 people had a positive attitude towards KADARZI indicators, one of which was that they routinely took their children to the Integrated Service Post to weigh weight, and they also agreed to give Exclusive Breastfeeding to their child. Meanwhile, 3 other housewives did not know about KADARZI, and they had a negative attitude towards the KADARZI indicator; namely, 2 housewives said they did not weigh their toddlers for the past month, and 1 more person said they did not know a good toddler's diet and served food that was not variegated. Then the author also measured the nutritional status of toddlers with (BB/U), where out of the 10 toddlers, as many as 8 toddlers had normal weight and as many as 2 more toddlers were underweight.

II. Method

The design of this study is to use an analytical survey with a cross-sectional approach. The population in this study was all housewives who had toddlers aged 1-5 years with sampling using purposive sampling techniques of 103 respondents.

III. Result And Discussion

3.1. Univariate Analysis

3.1.1 Demographic Data of housewives

Table 1. Demographic Frequency Distribution.

No	Demographic Data	Frequency (F)	Percentage (%)
1	Age		
	24-35 years	58	56,3
	36-44 years	45	32,7
	Total	103	100
2	Final Education		
	Primary school	3	2,9
	Secondary School	28	27,2
	High School	69	67,0
	College	3	2,9
	Total	103	100

Based on Table 1 above, it can be explained that most of the age of respondents with a range of 24-35 years is 58 respondents (56.3%) and judging from the last aspect of education, many of them have high school education, namely 69 respondents (67.0%).

3.1.2 Toddler Demographic Data

Table 2. Demographic Frequency Distribution (n=103).

No	Demographic Data	Frequency (F)	Percentage (%)
1	Age		
	1-2,9 years	46	44,7
	3-5 years	57	55,3
	Total	103	100
2	Gender		
	Woman	53	51,5
	Man	50	48,5
	Total	103	100

Based on Table 2 above, it can be explained that toddlers in the age range of 3-5 years are 57 respondents (55.3%), and seen from the genders of many who are female, namely 53 respondents (51.5%).

3.1.3 Knowledge

Table 3. Frequency Distribution of Housewives' Knowledge about KADARZI (n=103).

No.	Housewives' Knowledge	Frequency (F)	Percentage (%)
1	Good	64	62,1
2	Enough	16	15,5
3	Less	23	22,3
Total		103	100

Based on table 3 above, it can be explained that there are more respondents who have good knowledge about Kadarzi: 64 respondents with a percentage of (62.1%), compared to respondents who have sufficient knowledge (15.5%) and respondents who have less knowledge (22.3%).

3.1.4 Attitudes

Table 4. Frequency Distribution of Housewives' Attitudes about KADARZI (n=103).

No.	Housewives' Attitudes	Frequency (F)	Percentage (%)
1	Positive	73	70,9
2	Negative	30	29,1
Total		103	100

Based on Table 4 above, it can be explained that more respondents have a positive attitude about Kadarzi, which is 73 respondents with a higher percentage (70.9%) compared to respondents who have a negative attitude (29.1%).

3.1.5 Nutritional Status of Toddlers

Table 5. Frequency Distribution of Nutritional Status of Toddlers (n=103).

No.	Nutritional Status of Toddlers	Frequency (F)	Percentage (%)
1	Good Nutrition	79	76,7
2	Malnutrition	24	23,3
Total		103	100

Based on Table 5 above, it can be explained that most toddlers aged 1-5 have better nutritional status as many as 79 people (76.7%) than toddlers who have malnourished status (23.3%).

3.2. Bivariate Analysis

a. The Relationship of Knowledge about Kadarzi with the Nutritional Status of Toddler

Table 6. The Relationship of Knowledge about Kadarzi with the Nutritional Status of Toddler (n = 103)

| Knowledge | Nutritional Status | | Total | *P- Value* |
	Good Nutrition (-2 to +2 SD)	Malnutrition (-3 to <-2 SD)		
Good	63 (98,4%)	1 (1,6%)	64 (100%)	
Enough	13 (81,2%)	3 (18,8%)	16 (100%)	0,001
Less	3 (13,0%)	20 (87,0%)	23 (100%)	
Total	79 (76,7%)	24 (23.3%)	103 (100%)	

Based on Table 6 above, it can be explained that out of 103 respondents, the results were obtained, most of the 64 respondents had knowledge of good KADARZI with good nutritional status totaling 63 people (98.4%) and malnutrition status totaling very few

only 1 person (1.6%), furthermore seen from the knowledge of housewives about KADARZI enough amounted to 16 respondents with good nutritional status totaling 13 people (81.2%) and malnutrition status totaling 3 people (18.8%), while judging from the knowledge of housewives about KADARZI less amounted to 23 respondents with good nutritional status totaling 3 people (13.0%) and malnutrition status totaling 20 people (87.0%). The results of the statistical test were obtained with a p-value (0.001 < α 0.05) so that Ho was rejected, so there is a relationship between housewives' knowledge about KADARZI and the nutritional status of toddlers in Gampong Reuleut Barat, Muara Batu District.

b. **The Relationship of Attitudes about Kadarzi with the Nutritional Status of Toddlers.**

Table 7. The Relationship of Attitudes about Kadarzi with the Nutritional Status of Toddlers (n = 103)

Attitudes	Nutritional Status		Total	P- Value
	Good Nutrition (-2 to +2 SD)	Malnutrition (-3 to <-2 SD)		
Positive	62 (84,9%)	11 (15,1%)	73 (100%)	0,002
Negative	17 (56,7%)	13 (43,3%)	30 (100%)	
Total	79 (76,7%)	24 (23,3%)	103 (100%)	

Based on Table 7 above, it can be explained that out of 103 respondents, 73 respondents among them predominantly have a positive attitude about kadarzi with good nutritional status totaling 62 toddlers (84.9%) and malnutrition status totaling 11 toddlers (15.1%), while judging from the attitudes of housewives about negative kadarzi there are 30 respondents with good nutritional status totaling 17 toddlers (56.7%) and malnutrition status totaling 13 toddlers (43.3%). The results of the statistical test obtained a p-value of (0.002 < α 0.05) so that there was a relationship between the attitude of housewives about kadarzi and the nutritional status of toddlers in Gampong Reuleut Barat, Muara Batu District.

3.3. Discussion

3.3.1 The Relationship of Housewives' Knowledge about Kadarzi with the Nutritional Status of Toddlers

Based on the results of the statistical test above, it can be concluded that out of 103 housewives who have toddlers, 64 respondents among them have predominantly knowledge of KADARZI, with good nutritional status in toddlers totaling 63 people (98.4%) and malnutrition status totaling very little, namely only 1 person (1.6%). Furthermore, it was seen from the knowledge of housewives about KADARZI that there were quite 16 respondents with good nutritional status in toddlers, totaling 13 people (81.2%) and malnutrition status totaling 3 people (18.8%), while in view of housewives' knowledge about KADARZI, less amounted to 23 respondents with good nutritional status in toddlers, totaling 3 people (13.0%), and malnutrition status totaling 20 people (87.0%), so it can be concluded that the work hypothesis was accepted and rejected, meaning that there is a statistical test, a p-value of 0.001 was obtained which showed a p-value of 0.001 < α (0.05), so it can be concluded that the work hypothesis was accepted and ho rejected, meaning that there is a relationship between knowledge about KADARZI and nutritional status in toddlers.

The outcomes of this research are similar to Aulia and Arum's prior study, "The Relationship between Knowledge and Attitudes of Toddler Mothers with Nutrition-Conscious Family Behavior KADARZI", where 86 respondents (83.7%) exhibited more Kadarzi behavior with positive knowledge (71 respondents, 88.8%), and the rest of the respondents with negative knowledge (one respondent, 16.7%). When viewed from the results of the Chi-Square test with a meaningfulness limit (α) = 0.005 and a p-value result = 0.000, which means p-value < (α), it is said that the two variables have a relationship, or (Hₐ) is accepted, so there is a relationship between maternal knowledge about nutritionally conscious families and Kadarzi behavior in the Batu Aji Health Center Working Area, Batam City, in 2018.

Mothers' behavior toward a nutrition-conscious family KADARZI will be easier if the mother knows what the benefits of a nutrition-conscious family are. The results showed that the mother's knowledge of KADARZI is good, and this good knowledge will affect the mother's behavior towards the five indicators of a nutritionally conscious family KADARZI, namely weighing weight regularly, giving exclusive breastfeeding, eating a varied diet, using iodized salt, and giving nutritional supplements to family members as recommended. By implementing the five KADARZI indicators, mothers are able to control and monitor the health of their toddlers periodically, especially their nutritional status.

According to researchers, this is because if the mother knows and has good knowledge about nutrition-conscious families, the importance of knowing the nutritional status of toddlers, and the meaning of weighing regularly, which is one indicator of a nutritionally conscious family and a tool to observe the growth and health of toddlers, then mothers can try to improve the health of their children. The knowledge that a person has is the basis for doing something, so a person's ability to do something depends on the knowledge he has, according to researchers, On the basis of knowledge of the nutritionally conscious family (KADARZI), it is possible for the mother to behave as per the five indicators of KADARZI.

3.3.2 The Relationship of Attitudes about Kadarzi with the Nutritional Status of Toddlers

Based on the results of the statistical test above, it can be explained that for the attitude variable with 103 respondents of housewives about the KADARZI nutritional status of toddlers, 73 respondents predominantly have a positive attitude about KADARZI, with good nutritional status in toddlers totaling 62 people (84.9%) and malnutrition status totaling 11 people (15.1%), while the attitudes of housewives about negative KADARZI amounted to 30 respondents, with good nutritional status in toddlers totaling 17 people (56,7%) and malnutrition status totaling 13 people (43.3%). It can be determined that more housewives have a positive attitude and a good nutritional status for toddlers, and that housewives who have a negative attitude have a better nutritional status for toddlers than housewives who have a positive attitude. After conducting statistical tests, a p-value of 0.002 was obtained, which shows a p-value of $0.002 < \alpha$ (0.05), so it can be concluded that there is a relationship between attitudes about KADARZI and nutritional status in toddlers.

This research is in line with research conducted by Indrayani, Rusmiadi, and Kartikasari (2020) with the research title "the relationship between maternal knowledge and attitudes with the nutritional status of toddlers in the UPTD area of the Cidahu Health Center, Cidahu District, Kuningan Regency". The results obtained by most toddlers show a good nutritional status of 83.3%;, some mothers of toddlers have a good knowledge of 40.6%; and most have a positive attitude of 76.0%. The results of the bivariate analysis showed a relationship between maternal knowledge about nutrition ($p = 0.006$) and attitudes ($p = 0.003$) with nutritional status in toddlers in the UPTD area of the Cidahu Health Center, Cidahu District, Kuningan Regency.

The results of this study show a significant relationship between the attitudes of housewives and nutrition-conscious family behaviors KADARZI. According to researchers, the attitude of housewives is very positive and shows that the mother's attitude is related to the behavior of mothers who have completed all five KADARZI indicators. With a positive attitude, toddler mothers will behave nutritionally consciously as the mother also has good knowledge about nutrition-conscious families, so it is very possible for mothers to behave nutritionally with good knowledge and also have a positive attitude. There are still some mothers who have poor knowledge and a negative attitude towards a nutrition-conscious family KADARZI.

Therefore, it is hoped that health services and posyandu cadres will increase socialization, counseling, and providing information about nutrition-conscious families KADARZI, so that nutrition-conscious families can be achieved. And real support is also needed, such as by inviting mothers to attend posyandu regularly so that they can detect the nutritional condition of their toddlers as stated in one of the KADARZI indicators, namely weighing regularly. The next type of support is award support. In this support system, posyandu cadres give rewards to mothers and children who obediently visit the posyandu, such as charters or gifts.

IV. Conclusion

Based on the results of statistical tests, a p-value of $0.001 < \alpha$ (0.05) can be concluded that the work hypothesis (H_a) is accepted and (H_o) is rejected, which means that there is a relationship between housewives' knowledge about KADARZI and nutritional status in toddlers. Furthermore, a p-value of 0.002 was obtained which showed a p-value of $0.002 < \alpha$ (0.05), so it can be concluded from the results of this study that there is a significant relationship between the attitudes of toddler mothers and nutrition-conscious family behavior KADARZI.

References

1. Aulia, D. L. N., & Anjani, A. D. (2019). Hubungan Pengetahuan dan Sikap Ibu Balita dengan Perilaku Keluarga Sadar Gizi (KADARZI). Journal for Quality in Women's Health, 2(1), 36–42. https://doi.org/10.30994/jqwh.v2i1.25

2. Dinas Kesehatan Aceh. (2020). *Profil Kesehatan Aceh* (dr Hanif, M. K. Ferdiyus, SKM, & K. Nasri (eds.); Vol. 21, Issue 1). Dinas Kesehatan Aceh. http://www.dinkes.acehprov.go.id/

3. Indrayani, I., Rusmiadi, L. C., & Kartikasari, A. (2020). Hubungan Antara Pengetahuan dan Sikap Ibu Dengan Status Gizi Pada Balita Di Wilayah Uptd Puskesmas Cidahu Kecamatan Cidahu Kabupaten Kuningan. Jurnal Ilmu Kesehatan Bhakti Husada: Health Sciences Journal, 11(2), 224–234. https://doi.org/10.34305/jikbh.v11i2.199

4. Kementerian Kesehatan RI. (2018). Riskesdas 2018. *Laporan Nasional Riskesdas 2018*, *44*(8), 181–222. http://www.yankes.kemkes.go.id/assets/downloads/PMK No. 57 Tahun 2013 tentang PTRM.pdf

5. Kementerian Kesehatan RI. (2021). Buku Saku Hasil Studi Status Gizi Indonesia (SSGI) Tahun 2021. In *Kemenkes RI* (Vol. 2, Issue 1). https://doi.org/10.36805/bi.v2i1.301

6. Kementerian Kesehatan RI. (2022). Buku Saku Hasil Studi Status Gizi Indonesia (SSGI) Tahun 2022. In *Kemenkes RI*. https://www.litbang.kemkes.go.id/buku-saku-hasil-studi-status-gizi-indonesia-ssgi-tahun-2021/

7. Kesehatan, D. G. (2007). Pedoman Strategi KIE Keluarga Sadar Gizi (KADARZI). In S. A. Suparmanto (Ed.), *Kesehatan*. DIREKTORAT JENDERAL BINA KESEHATAN MASYARAKAT DIREKTORAT BINA GIZI MASYARAKAT.

8. Maharani, M., Wahyuni, S., & Fitrianti, D. (2019). Tingkat pengetahuan dan sikap ibu terkait makanan tambahan dengan status gizi balita di Kecamatan Woyla Barat. *AcTion: Aceh Nutrition Journal*, *4*(2), 81. https://doi.org/10.30867/action.v4i2.78

9. Maulana, L. O. A. M., Sirajuddin, S., & Najamuddin, U. (2018). Gambaran pengetahuan, sikap dan tindakan terhadap status gizi siswa SD Inpres 2 Inpres 2 Pannampu. *Jurnal Kesmas*, *2*(3), 21–24. http://repository.unhas.ac.id/bitstream/handle/123456789/4324/LA ODE ABDUL MALIK_K2108101.pdf?sequence=

10. Simon, M. E. D., & Anggoro, S. (2020). Hubungan Pengetahuan Dan Perilaku Ibu Tentang Keluarga Sadar Gizi (Kadarzi) Dengan Status Gizi Anak Balita Di Posyandu Teratai, Dusun Sanansari, Srimartani, Piyungan, Bantul,D.I. Yogyakarta Tahun 2018. Jurnal Delima Harapan, 7(1), 12–18. https://doi.org/10.31935/delima.v7i1.90

11. World Health Organization. (2017). Global Nutrition Policy Review 2016–2017 Country. In World Health Organization (Ed.), *Routledge Handbook of Global Public Health* (Issue February). World Health Organization. https://www.who.int/publications/i/item/9789241514873