

# Analysis of factors affecting mothers' behavior in selecting nutritious food for toddlers from the perspective of sharia financial literacy

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## ARTICLE INFO

### Article history:

Received Apr 24, 2026

Revised May 8, 2026

Accepted May 15, 2026

### Keywords:

Food Access  
Nutritious Food Selection  
Sharia Financial Literacy  
Stunting  
Toddlers

## ABSTRACT

The selection of nutritious foods for toddlers is one of the key factors in stunting prevention and is strongly influenced by mothers' ability to manage household resources. This study aimed to analyze the relationship between Sharia financial literacy and mothers' behavior in selecting nutritious foods, as well as to identify the factors that most strongly influence such behavior. This study employed an analytic quantitative design with a cross-sectional approach involving 108 mothers with toddlers in Gresik Regency. The sample was selected using purposive sampling, and data were collected through a Google Form-based questionnaire. Data analysis was conducted through univariate, bivariable, and multivariable analyses using Spearman's rank test and logistic regression. The results showed that the majority of respondents had moderate Sharia financial literacy (59.3%) and fair nutritious food selection behavior (50.9%). There was a significant relationship between Sharia financial literacy and nutritious food selection behavior ( $p < 0.05$ ). In the multivariable analysis, access to nutritious food and Sharia financial literacy were shown to have significant effects, with access to nutritious food emerging as the most dominant factor. This study indicates that strengthening Sharia financial literacy and improving access to nutritious food are important in supporting mothers' behavior in selecting nutritious foods for toddlers.

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## INTRODUCTION

Toddlerhood is a highly important period in a child's life cycle because this phase is characterized by rapid physical growth, cognitive development, and biological maturation. The quality of food intake received by children in early life, particularly during the first 1,000 days of life, strongly determines their nutritional status and quality of growth and development in subsequent stages.

Therefore, the fulfillment of nutritious food needs among toddlers is not only a family health issue but also an essential component of human capital development.

Globally, stunting remains one of the most serious chronic nutritional problems among children under five years of age. The 2025 edition of the Joint Child Malnutrition Estimates published by WHO, UNICEF, and the World Bank Group reports global stunting trends up to 2024 and emphasizes that the world is still not on a sufficiently rapid trajectory to achieve the 2030 target. The report also stresses the need for more intensive efforts to reduce the number of stunted children worldwide (World Health Organization et al., 2025).

In the Indonesian context, stunting remains a strategic public health issue. The Ministry of Health of the Republic of Indonesia reported that the national prevalence of stunting declined from 21.5% in 2023 to 19.8% in 2024 (Kemenkes RI, 2025). At the provincial level, East Java recorded a stunting prevalence of 14.7% in 2024, which was lower than the national average, although the absolute number of affected toddlers remained high (Tim Percepatan Penurunan Stunting/ TPPS, 2026). Meanwhile, the Gresik Regency Government reported that the prevalence of stunting based on the 2023 Indonesian Health Survey remained at 15.4%. This series of data indicates that stunting remains a real problem from the national to the local level; therefore, prevention efforts need to be directed more specifically toward factors influencing the fulfillment of children's nutritional needs at the household level (Pemerintah Kabupaten Gresik, 2024).

One of the key determinants in stunting prevention is family behavior in providing nutritionally valuable food for children (Munawaroh et al., 2022)(Dini, 2023)(Anfhal et al., 2025). Within the household, mothers generally play a central role in decision-making related to family food provision, including the selection of nutritious foods for toddlers (Iwansyah & Juraidin, 2025)(Peran & Balita, n.d.)(Lukitasari et al., 2025). The behavior of selecting nutritious foods is influenced not only by nutritional knowledge but also by mothers' ability to consider food quality, price, availability, access, and household priority needs. Accordingly, mothers' decisions in selecting nutritious foods represent a complex form of behavior involving knowledge, economic conditions, the food environment, and family resource management (Hülßen et al., 2024).

In addition to nutritional issues, a family's ability to manage economic resources is also an important aspect of meeting toddlers' nutritious food needs. The Financial Services Authority reported that the 2024 National Survey of Financial Literacy and Inclusion showed that Indonesia's Sharia financial literacy index was 39.11%, while the Sharia financial inclusion index was 12.88%. More broadly, Bank Indonesia (2025) reported that the 2025 Islamic Economic Literacy Index reached 50.18%, based on a survey of 4,266 respondents across 18 provinces representing 90% of Indonesia's Muslim population. These data indicate that although awareness of the Islamic economy has begun to develop, public mastery of Sharia financial aspects still requires broader and deeper strengthening.

The low national level of Sharia financial literacy has important implications for household consumption behavior, particularly in families with toddlers. Limited understanding of Sharia-based financial principles may reduce families' ability to manage income, set consumption priorities, avoid unnecessary expenditure, and allocate sufficient resources for nutritious food (Setyowati et al., 2018; Wijaya et al., 2024). In the context of child nutrition, this condition may affect the quality of food provided to toddlers because food selection is not determined solely by nutritional knowledge, but also by household financial decision-making and the ability to prioritize essential needs (Hülßen et al., 2024).

In household life, Sharia financial literacy is not only related to the ability to understand Sharia-based financial products and services, but also reflects the ability to manage household budgets wisely, set priority needs, avoid wastefulness, and use resources responsibly in accordance with the principle of public benefit (*maslahah*) (Setyowati et al., 2018; Wijaya et al., 2024). From the perspective of Islamic economics, the concept of *maslahah* emphasizes that household consumption behavior should be directed toward achieving welfare, preventing harm,

and prioritizing essential needs in accordance with *maqashid al-shariah*. In Islamic consumption theory, the fulfillment of basic needs that support the preservation of life and health (*hifz al-nafs*) is considered a primary objective of household expenditure. Therefore, in families with toddlers, *maslahah* values encourage mothers to prioritize nutritious food expenditure over non-essential consumption. In this context, Sharia financial literacy may contribute not only to better household financial management, but also to more responsible, balanced, and benefit-oriented food consumption decisions that support toddler growth and stunting prevention (Hamdi, 2022).

In the context of families with toddlers, this ability has the potential to influence mothers' decisions in allocating household expenditure for food needs, including the selection of nutritionally valuable food ingredients (Yükçü & Demircioğlu, 2024). In other words, Sharia financial literacy may be a relevant factor in explaining the behavior of selecting nutritious foods, particularly in communities with strong religious characteristics. This concept is also consistent with the National Strategy for Financial Literacy of Indonesia 2021-2025, which places knowledge, skills, attitudes, and behavior as essential elements of financial literacy (Otoritas Jasa Keuangan, 2024).

On the other hand, mothers' behavior in selecting nutritious foods cannot be separated from other socioeconomic factors. Maternal education level may influence the ability to receive and understand information about child nutrition. Household income determines the family's purchasing power for higher-quality food products. Access to nutritious food is also an important environmental factor because the availability of and ease of obtaining healthy foods greatly influence family consumption decisions. This indicates that the behavior of selecting nutritious foods among mothers of toddlers needs to be understood as the result of an interaction between individual factors, household economics, and food access conditions in the residential environment (Prasetyo et al., 2023).

A number of previous studies have highlighted the relationship between socioeconomic status, nutritional knowledge, and family consumption behavior in relation to children's nutritional status. However, studies that specifically position Sharia financial literacy as a variable associated with mothers' behavior in selecting nutritious foods for toddlers remain relatively limited. In fact, the low national index of Sharia financial literacy indicates that this aspect remains a real issue in strengthening household capacity. In addition, few studies have simultaneously analyzed Sharia financial literacy together with maternal education, household income, and access to nutritious food within a single analytical model of food selection behavior among mothers of toddlers. This gap is what makes the present study important to conduct (Hülßen et al., 2024; Yunitasari et al., 2022).

Most previous studies have focused primarily on conventional determinants of child nutrition, such as maternal education, household income, nutritional knowledge, and food security. Although these factors are important, limited attention has been given to the role of Sharia financial literacy in shaping household food consumption behavior, particularly among mothers with toddlers. Existing studies on financial literacy have generally examined financial well-being and household economic management without specifically linking Sharia-based financial values to nutritious food selection behavior for children. Furthermore, few studies have simultaneously analyzed Sharia financial literacy together with socioeconomic factors and access to nutritious food within a single analytical framework. Therefore, this study addresses an important research gap by integrating Islamic financial literacy perspectives with household nutrition behavior in the context of stunting prevention.

Based on the foregoing, this study seeks to explain mothers' behavior in selecting nutritious foods for toddlers through a more integrative approach. The study not only describes the level of Sharia financial literacy and mothers' behavior in selecting nutritious foods, but also analyzes the relationship between the two and identifies the factors that most strongly influence such behavior. Thus, this study offers novelty by integrating the perspective of Sharia financial

literacy with socioeconomic factors and food access in explaining nutritious food selection behavior among mothers of toddlers.

Specifically, this study aims to describe the level of Sharia financial literacy and mothers' behavior in selecting nutritious foods for toddlers, analyze the relationship between Sharia financial literacy and nutritious food selection behavior, and identify the factors that most strongly influence mothers' behavior in selecting nutritious foods. The findings are expected to contribute scientifically to the development of studies on family nutrition and Sharia financial literacy, as well as to provide a basis for designing more appropriate interventions to improve mothers' ability to select nutritious foods for toddlers.

## RESEARCH METHOD

This study employed an analytic quantitative design with an observational cross-sectional approach. The population comprised all mothers with toddlers residing in Gresik Regency. The study area was categorized into two regions, namely urban and coastal areas. The urban area included Gresik City, while the coastal area comprised Bungah, Sidayu, Dukun, Panceng, and Ujungpangkah Districts. This regional classification was used to describe possible differences in socioeconomic characteristics, food access, and information exposure that could influence mothers' behavior in selecting nutritious foods.

The sample size was calculated using the Lemeshow formula. The calculation used a 95% confidence level ( $Z = 1.96$ ), a proportion of 0.5, and a precision of 10%, resulting in a minimum required sample of 96 respondents. To anticipate incomplete responses, an additional 10% was added, bringing the minimum required sample to 106 respondents. In practice, this study obtained 108 respondents who met the inclusion criteria and were subsequently analyzed.

The sampling technique used non-probability sampling with a purposive sampling approach. The inclusion criteria comprised mothers who had toddlers aged 0-59 months, resided in Gresik Regency, lived in either urban or coastal areas, were willing to participate as respondents, and completed the questionnaire fully through Google Forms. Respondents who submitted incomplete questionnaires, provided duplicate responses, or did not meet the target area criteria were excluded from the analysis.

The dependent variable in this study was mothers' behavior in selecting nutritious foods for toddlers. The primary independent variable was Sharia financial literacy. In addition, this study analyzed a number of other variables presumed to be related to nutritious food selection behavior, namely maternal age, area of residence, maternal education, maternal occupation, marital status, number of children, number of toddlers in the family, toddler age, toddler sex, family income, exposure to nutrition counseling, exposure to Sharia financial education, and access to nutritious food. Based on the measurement results, Sharia financial literacy was categorized as low, moderate, and high, while nutritious food selection behavior was categorized as poor, fair, and good. At the bivariable and multivariable analysis stages, several variables were recategorized into two groups to meet the requirements of statistical analysis.

Data were collected using a structured questionnaire designed in Google Forms. The use of Google Forms facilitated broader respondent reach and improved efficiency in data collection, particularly across geographically different areas in Gresik Regency. Online data collection platforms have been widely used in health and social research because they enable faster response collection, reduce administrative costs, and minimize manual data entry errors (Ball, 2019). To maintain data quality and validity, several control measures were implemented, including limiting one response per account, screening incomplete questionnaires, identifying duplicate submissions, and ensuring that all respondents met the inclusion criteria before analysis. In addition, automatic digital recording helped reduce transcription errors and improve data management efficiency. Nevertheless, the use of Google Forms may have introduced selection bias because participation

depended on internet access and respondents' ability to use digital devices, which may limit the representativeness of the sample (Andrade, 2020).

Data analysis was conducted in stages through univariate, bivariable, and multivariable analyses. Univariate analysis was used to describe the frequency distribution. Bivariable analysis was performed to assess the relationship between each independent variable and nutritious food selection behavior. The relationship between Sharia financial literacy and nutritious food selection behavior was analyzed using Spearman's rank test. Subsequently, relevant variables were analyzed multivariably using logistic regression to identify the factors that most strongly influenced mothers' behavior in selecting nutritious foods. All statistical analyses were performed at a 95% confidence level with a significance value of  $p < 0.05$ .

This study has received ethical approval from the Research Ethics Committee of Universitas Kadiri with ethical clearance number 081.2/04/II/EC/KEP/UNIK/2026 and was declared ethically appropriate in accordance with the WHO 2011 guidelines and the CIOMS 2016 guidelines.

## RESULTS AND DISCUSSIONS

**Table 1.** Characteristics of study respondents and distribution of main variables

Characteristics	Frequency	Percentage (%)
Maternal Age		
< 35 tahun	75	69,4
≥ 35 tahun	33	30,6
Area		
Urban	34	31,5
Coastal	74	68,5
Maternal Education		
Low Education	37	34,3
Moderate Education	28	25,9
High Education	43	39,8
Maternal Occupation		
IRT	53	49,1
Employed	55	50,9
Marital Status		
Divorced	4	3,7
Widowed	5	4,6
Married	99	91,7
Number of Children		
1	25	23,1
2	38	35,2
3	27	25,0
≥ 4	18	16,7
Number of Toddlers in the Family		
1	91	84,3
2	12	11,1
3	5	4,6
≥ 4	0	0,0
Toddler Age		
< 25 bulan	31	28,7
≥ 25 bulan	77	71,3
Family Income		
Low	64	59,3
High	44	40,7
Number of Household Members Living Together		
3	12	11,1
4	21	19,4
≥ 5	75	69,4
Exposure to Nutrition Counseling		
Yes	71	65,7
No	37	34,3

Characteristics	Frequency	Percentage (%)
Exposure to Financial Education		
Yes	37	34,3
No	71	65,7
Access to Nutritious Food		
Somewhat Difficult	24	22,2
Easy	52	48,1
Very Easy	19	17,6
Difficult	13	12,0
Sharia Financial Literacy		
Low	29	26,9
Moderate	64	59,3
High	15	13,9
Mothers' Behavior in Selecting Nutritious Foods		
Poor	35	32,4
Fair	55	50,9
Good	18	16,7

Based on the study results involving 108 respondents, the majority of mothers were under 35 years of age, totaling 75 individuals (69.4%), and most resided in coastal areas, totaling 74 individuals (68.5%). In terms of education level, the largest proportion was in the high education category, with 43 respondents (39.8%), while in terms of occupation, most respondents were employed, totaling 55 individuals (50.9%). Nearly all respondents were married, totaling 99 individuals (91.7%).

In terms of the number of children, the largest category consisted of respondents who had two children, totaling 38 individuals (35.2%). The majority of respondents had one toddler in the family, totaling 91 individuals (84.3%), and most toddlers were aged 25 months or older, totaling 77 individuals (71.3%). Based on family income, most respondents were in the low-income category, totaling 64 individuals (59.3%). In addition, the majority of respondents lived with five or more household members, totaling 75 individuals (69.4%).

Regarding information exposure, most respondents had been exposed to nutrition counseling, totaling 71 individuals (65.7%), whereas the majority had not been exposed to Sharia financial education, also totaling 71 individuals (65.7%). Based on access to nutritious food, the most common category was easy access, with 52 individuals (48.1%). Meanwhile, the majority of respondents had Sharia financial literacy at a moderate level, totaling 64 individuals (59.3%), and mothers' behavior in selecting nutritious foods was most commonly in the fair category, totaling 55 individuals (50.9%).

Overall, these results indicate that the study respondents were predominantly young mothers living in coastal areas, having relatively high educational attainment, being married, having one toddler, and earning low incomes. Most had received nutrition counseling, but many had not been exposed to Sharia financial education. In addition, respondents' Sharia financial literacy tended to be in the moderate category, while nutritious food selection behavior tended to be in the fair category.

Based on the study findings, most respondents had a moderate level of Sharia financial literacy, totaling 64 individuals (59.3%), while mothers' behavior in selecting nutritious foods for toddlers was most commonly in the fair category, totaling 55 individuals (50.9%). These findings indicate that, in general, mothers had adequate basic abilities in understanding and managing household finances according to Sharia principles, although these abilities had not yet reached an optimal level. At the same time, nutritious food selection behavior indicates that most mothers were already aware of the importance of choosing better foods for toddlers, although its implementation in daily life had not yet been fully consistent.

The predominance of the moderate category in Sharia financial literacy may be understood as indicating that mothers were familiar with the basic principles of financial management, such as

setting priority needs, spending wisely, and using household resources responsibly; however, not all had a sufficiently strong capacity to apply these principles more broadly in family consumption decisions. This condition is consistent with national data showing that the level of Sharia financial literacy among the Indonesian population remains relatively limited. The Financial Services Authority reported that Indonesia's Sharia financial literacy index in the 2024 SNLIK was 39.11%, while the Sharia financial inclusion index was 12.88% (Otoritas Jasa Keuangan, 2024). On the other hand, the framework of the National Strategy for Financial Literacy of Indonesia emphasizes that financial literacy encompasses not only knowledge, but also prudent financial attitudes and behaviors (Otoritas Jasa Keuangan, 2021). In the context of this study, this condition influenced food selection behavior because mothers' decisions in providing nutritious food were determined not only by knowledge of nutrition, but also by the ability to manage the household budget according to priority needs.

Meanwhile, the predominance of nutritious food selection behavior in the fair category indicates that mothers generally had an initial understanding of the importance of nutritious foods for toddlers, but still faced various limitations in realizing this optimally. This may be influenced by socioeconomic conditions, food affordability, access to nutritious food, and the information exposure received by mothers. These findings are consistent with the review by Hashemzadeh et al. (2024), which showed that maternal food and nutrition literacy plays a role in helping households make better nutritional choices, including under conditions of limited resources. In addition, (UNICEF, 2020) emphasized that diet and care are direct determinants of children's nutritional status, but the quality of both is strongly influenced by broader household and environmental conditions. Accordingly, the results of this study confirm that nutritious food selection behavior is the result of an interaction among financial management capacity, knowledge, and the household environment; therefore, improvement efforts need to be carried out through a comprehensive approach, not only through nutrition education but also through strengthening Sharia financial literacy and improving support for access to nutritious food.

**Table 2.** Relationship between sharia financial literacy and mothers' behavior in selecting nutritious foods in Gresik regency, 2026

Category	Mothers' Behavior in Selecting Nutritious Foods						Total		
	Poor		Fair		Good		n	%	
	n	%	n	%	n	%			
Sharia Financial Literacy	Low	15	51,7	14	48,3	0	0,0	29	100,0
	Moderate	20	31,3	36	56,3	8	12,5	64	100,0
	High	0	0,0	5	33,3	10	66,7	15	100,0
Spearman Rank Correlation test p-value = 0.000 (< 0.05)									

Based on Table 2, most respondents had a moderate level of Sharia financial literacy, totaling 64 individuals (59.3%), while 29 respondents (26.9%) were in the low category and 15 respondents (13.9%) were in the high category. Among respondents with low Sharia financial literacy, most demonstrated poor nutritious food selection behavior, totaling 15 individuals (51.7%), while 14 individuals (48.3%) were in the fair category, and no respondents were in the good category.

Among respondents with moderate Sharia financial literacy, the majority had fair nutritious food selection behavior, totaling 36 individuals (56.3%), followed by the poor category with 20 individuals (31.3%) and the good category with 8 individuals (12.5%). Meanwhile, among respondents with high Sharia financial literacy, most had good nutritious food selection behavior, totaling 10 individuals (66.7%), while 5 individuals (33.3%) were in the fair category, and no respondents were in the poor category.

Spearman's rank correlation test yielded a p-value of 0.000 (< 0.05), indicating a significant relationship between Sharia financial literacy and mothers' behavior in selecting nutritious foods.

In general, these findings indicate that the higher the mother's level of Sharia financial literacy, the better her behavior in selecting nutritious foods for toddlers tends to be.

**Table 3.** Bivariable analysis of factors affecting mothers' behavior in selecting nutritious foods in Gresik regency, 2026

Category		Nutritious Food Selection Behavior				Total		P (Sig)
		Poor		Good		n	%	
		n	%	n	%			
Maternal Age	< 35 year	24	32,0	51	68,0	75	100,0	0,982
	≥ 35 year	11	33,3	22	66,7	33	100,0	
Areas	Coastal	27	36,5	47	63,5	74	100,0	0,181
	Gresik City	8	23,5	26	76,5	34	100,0	
Education	Low	29	45,3	35	54,7	64	100,0	0,001
	High	6	13,6	38	86,4	44	100,0	
Mother's Job	Not employed (housewife)	19	35,8	34	64,2	53	100,0	0,453
	Employed	16	29,1	39	70,9	55	100,0	
Marital Status	divorced	31	31,3	68	68,7	99	100,0	0,420
	Married	4	44,4	5	55,6	9	100,0	
Number of Children	< 3 child	16	25,4	47	74,6	63	100,0	0,065
	≥ 3 child	19	42,2	26	57,8	45	100,0	
Number of Toddlers in the Family	1 toddler	27	29,7	64	70,3	91	100,0	0,160
	≥ 2 toddler	8	47,1	9	52,9	17	100,0	
Toddler Age	< 25 month	10	32,3	21	67,7	31	100,0	0,983
	≥ 25 month	25	32,5	52	67,5	77	100,0	
Toddler Sex	Male	21	33,9	41	66,1	62	100,0	0,706
	Female	14	30,4	32	69,6	46	100,0	
Family Income	Low	28	43,8	36	56,3	64	100,0	0,002
	High	7	15,9	37	84,1	44	100,0	
Exposure to nutrition counseling	Not exposed	16	43,2	21	56,8	37	100,0	0,082
	Exposed	19	26,8	52	73,2	71	100,0	
Exposure to Sharia financial education	Not exposed	23	32,4	48	67,6	71	100,0	0,997
	Exposed	12	32,4	25	67,6	37	100,0	
Access to nutritious food	Difficult	19	51,4	18	48,6	37	100,0	0,002
	Easy	16	22,5	55	77,5	71	100,0	
Sharia Financial Literacy	Low	15	51,7	14	48,3	29	100,0	0,025
	High	20	26,0	57	74,0	77	100,0	

Based on Table 3, the bivariable analysis showed that not all respondent characteristics had a significant relationship with mothers' behavior in selecting nutritious foods. Maternal age, area of residence, maternal occupation, marital status, number of children, number of toddlers in the family, toddler age, toddler sex, exposure to nutrition counseling, and exposure to Sharia financial education did not show significant relationships.

Conversely, several variables showed significant relationships with mothers' behavior in selecting nutritious foods, namely education level ( $p = 0.001$ ), family income ( $p = 0.002$ ), access to nutritious food ( $p = 0.002$ ), and Sharia financial literacy ( $p = 0.025$ ), indicating that mothers' ability to better understand and manage finances is associated with a tendency to choose foods of higher nutritional value for toddlers.

A subsequent analysis was conducted to determine which factors most strongly influenced mothers' behavior in selecting nutritious foods.

**Table 4.** Multivariable analysis of factors affecting mothers' behavior in selecting nutritious foods

Variable	B	S.E.	p-value	OR = Exp(B)	95% CI
Maternal education	22,815	23746,715	0,999	8,097E+9	0,000- -
Family income	-21,617	23746,715	0,999	0,000	0,000- -
Access to nutritious food	1,614	0,518	0,002	5,025	1,822-13,858
Sharia financial literacy	1,367	0,540	0,011	3,924	1,362-11,305

Based on Table 4, logistic regression was used to identify which variables had the strongest influence on the dependent variable. The logistic regression analysis showed that access to nutritious food significantly influenced mothers' behavior in selecting nutritious foods, with  $p = 0.002$  and  $OR = 5.025$  (95% CI: 1.822-13.858). Sharia financial literacy also had a significant effect, with  $p = 0.011$  and  $OR = 3.924$  (95% CI: 1.362-11.305). Meanwhile, maternal education and family income did not show significant effects. In the multivariable model, maternal education and family income showed unstable estimates with extremely large standard errors and non-informative confidence intervals, suggesting model instability. Therefore, these variables were interpreted cautiously and were not considered reliable independent predictors in the final model.

Overall, these findings indicate that access to nutritious food is the most dominant factor influencing mothers' behavior in selecting nutritious foods, followed by Sharia financial literacy. These results confirm that mothers' behavior in choosing nutritious foods is influenced not only by the ability to understand and manage finances, but also strongly determined by the ease of obtaining nutritious food items in the surrounding environment.

Based on the bivariable analysis, not all respondent characteristics showed significant relationships with mothers' behavior in selecting nutritious foods. Maternal age, area of residence, maternal occupation, marital status, number of children, number of toddlers in the family, toddler age, toddler sex, exposure to nutrition counseling, and exposure to Sharia financial education had  $p$ -values greater than 0.05, indicating no significant relationships. These findings suggest that nutritious food selection behavior is not merely shaped by basic demographic characteristics, but is more strongly influenced by factors directly related to mothers' capacity to understand, access, and allocate household resources for toddlers' food needs.

Conversely, the study results showed that maternal education had a significant relationship with nutritious food selection behavior ( $p = 0.001$ ). Respondents with higher education levels tended to demonstrate better food selection behavior than respondents with lower education levels. These findings are consistent with a systematic review and meta-analysis showing that maternal education is positively associated with child growth and nutritional status during the first two years of life, because education enhances mothers' ability to understand health information, evaluate food choices, and make more appropriate decisions for children (Rezaeizadeh et al., 2024). These findings are also in line with research published in *Science Midwifery*, which reported that parental knowledge, parenting, and economic conditions are related to stunting prevention efforts in children, indicating that mothers' cognitive capacity remains an important element in fulfilling children's nutritional needs (Alwan et al., 2023).

Family income was also shown to be significantly related to mothers' behavior in selecting nutritious foods ( $p = 0.002$ ). Respondents with higher incomes were more likely to fall into the good behavior category than respondents with lower incomes. These findings indicate that household purchasing power remains an important factor in determining the family's ability to provide more diverse and nutritionally valuable foods. However, this relationship must be understood cautiously, because child food poverty is not determined solely by low income, but also by the food environment and feeding practices at the household level. UNICEF reported that child food poverty is influenced by limited access to nutritious foods, feeding practices, and broader environmental conditions; thus, better income does not necessarily and automatically produce optimal food selection behavior unless it is accompanied by sound knowledge and household practices (UNICEF, 2024).

Access to nutritious food in this study also showed a significant relationship with mothers' behavior in selecting nutritious foods ( $p = 0.002$ ). Respondents who had easier access to nutritious food tended to demonstrate better food selection behavior than those who faced difficult access. This finding is important because it indicates that mothers' decisions in choosing healthy foods depend not only on intention or knowledge, but also on environmental conditions that enable or constrain such choices. This result is in line with the study by Sudarianti et al. (2022), which

showed a relationship between maternal knowledge and stunting prevention behavior through complementary feeding among infants aged 6–24 months, indicating that child nutrition fulfillment practices are strongly influenced by mothers' capacity to translate knowledge into everyday behavior. Thus, ease of obtaining nutritious food items in the residential environment becomes an important prerequisite for ensuring that mothers' knowledge and motivation can be translated into actual behavior.

In addition to education, income, and food access, Sharia financial literacy was also shown to be significantly related to mothers' behavior in selecting nutritious foods ( $p = 0.025$ ). These findings indicate that mothers' ability to understand and manage household finances based on Sharia principles is associated with a tendency to choose foods of greater nutritional value for toddlers. This relationship can be understood because Sharia financial literacy encompasses not only knowledge, but also the ability to set priorities, avoid waste, and allocate household expenditures more responsibly. Overall, these findings confirm that mothers' behavior in selecting nutritious foods is the result of an interaction among cognitive, economic, and environmental factors; therefore, effective interventions need to consider these three dimensions simultaneously.

Based on the multivariable analysis, access to nutritious food and Sharia financial literacy were the two variables shown to significantly influence mothers' behavior in selecting nutritious foods. Access to nutritious food had a  $p$ -value of 0.002 with OR = 5.025 (95% CI: 1.822–13.858), while Sharia financial literacy had a  $p$ -value of 0.011 with OR = 3.924 (95% CI: 1.362–11.305). These findings indicate that mothers who had better access to nutritious food were more likely to demonstrate good nutritious food selection behavior, and a similar tendency was found among mothers with higher levels of Sharia financial literacy. Thus, food environment factors and household financial management capacity appear to be stronger determinants than basic demographic characteristics in explaining nutritious food selection behavior in this study.

The finding that access to nutritious food was the most dominant factor confirms that healthy food selection behavior depends not only on mothers' knowledge or intentions, but also on whether easily accessible nutritious food options are available. In this context, mothers living in environments with better food access tend to be more capable of translating knowledge and preferences into actual food decisions. This finding is consistent with the UNICEF report emphasizing that child food poverty is strongly influenced by the food environment, including the affordability and availability of nutritious food; therefore, a family's ability to provide a healthy diet for children cannot be separated from the surrounding environmental conditions (UNICEF, 2024).

On the other hand, the continued significance of Sharia financial literacy in the final model indicates that mothers' ability to understand, prioritize, and manage household resources based on prudent financial principles also plays an important role in selecting nutritious foods. This finding reinforces the earlier bivariable results, showing that Sharia financial literacy is not merely a supporting factor, but one of the key predictors of food selection behavior.

The findings of this study are generally consistent with previous studies showing that financial literacy contributes positively to household food security and nutritional decision-making. Financial literacy enables households to allocate resources more effectively, prioritize essential expenditures, and improve food purchasing decisions, particularly under limited economic conditions. Ankrah Twumasi et al. (2023) reported that better financial literacy was significantly associated with improved household food and nutrition security because financially literate households were more capable of managing limited financial resources efficiently. Similarly, Hashemzadeh et al. (2024) found that nutrition literacy among mothers plays an important role in shaping healthier eating habits and improving children's dietary quality, especially in food-insecure households. These findings support the results of the present study, where mothers with higher levels of Sharia financial literacy tended to demonstrate better nutritious food selection behavior for toddlers. However, this study extends previous research by

integrating the perspective of Sharia financial literacy, which emphasizes values such as moderation, responsibility, prioritization of essential needs, and *maslahah* in household consumption behavior. So financial capacity can support better food and nutrition decisions at the household level, especially when resources are limited.

Meanwhile, maternal education and family income, which were significant in the bivariable analysis, no longer showed stable effects in the final model. This condition indicates possible overlap in the effects among variables, particularly because education and income may operate indirectly by improving mothers' ability to access nutritious food and manage household expenditures. Therefore, these results do not mean that education and income are unimportant; rather, they indicate that in this study, actual access to nutritious food and household financial management capacity were factors more proximal to nutritious food selection behavior than broader socioeconomic characteristics.

The implication of these findings is that efforts to improve mothers' behavior in selecting nutritious foods need to be directed toward a more comprehensive approach. Interventions should not only emphasize improving nutritional knowledge, but also strengthen household access to affordable nutritious food and enhance mothers' capacity to manage family finances effectively and responsibly. Therefore, strategies to improve toddler nutrition at the local level need to be designed in a cross-sectoral manner by integrating nutrition education, strengthening Sharia financial literacy, and improving community access to nutritious food.

The findings of this study also have important implications for family-based nutrition intervention programs in coastal areas, where most respondents in this study resided. Coastal communities may face specific challenges related to food accessibility, household economic instability, and variations in food availability, which can influence mothers' ability to provide nutritious foods for toddlers. Therefore, nutrition intervention programs in coastal settings should not focus solely on nutrition education, but also incorporate strategies to improve household financial management, strengthen Sharia financial literacy, and increase access to affordable nutritious foods. Community-based approaches involving local health centers, women's groups, and family empowerment programs may help strengthen sustainable nutritional practices among families with toddlers in coastal communities.

## CONCLUSION

Most mothers had a moderate level of Sharia financial literacy and fair nutritious food selection behavior. There was a significant relationship between Sharia financial literacy and mothers' behavior in selecting nutritious foods, indicating that the better the mother's Sharia financial literacy, the better her behavior in selecting nutritious foods for toddlers. In the multivariable analysis, access to nutritious food and Sharia financial literacy were shown to have significant effects, with access to nutritious food emerging as the most dominant factor. These findings indicate that improvement in nutritious food selection behavior among toddlers needs to be supported through strengthening Sharia financial literacy and improving access to nutritious food. These findings suggest that stunting prevention policies should adopt a multisectoral approach that combines nutrition education, food system strengthening, and household economic support. Policies focusing only on behavioral change may have limited effectiveness when structural barriers to nutritious food access remain unresolved. Further research is needed to strengthen the explanatory model of the relationship between Sharia financial literacy, access to nutritious food, and stunting prevention. Future studies are recommended to use longitudinal or mixed-method approaches to better understand causal pathways between household financial behavior and child nutritional outcomes.

## ACKNOWLEDGEMENTS

The authors gratefully acknowledge the financial support from Universitas Sunan Gresik through its internal research grant program. The authors also extend their appreciation to all respondents and everyone who contributed to the completion of this research.

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