

INFORMASI ARTIKEL

Received: January, 21 2026

Revised: January, 29, 2026

Available online: January, 30, 2026

at : <https://e-jurnal.ipohrr.com/index.php/mchc>

Fish eating behavior among toddlers

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto

Corresponding author: *Email: khusnul@stikesbch.ac.id

Abstract

Background: Fish is a major source of essential nutrients, including omega-3 fatty acids, vitamin D, iodine, and high-quality protein, which are vital for healthy growth and development during childhood. The World Health Organization (WHO) and other international organizations recommend that infants begin consuming fish between 6 and 9 months of age and continue to consume it regularly once a week. However, there is slight variation among guidelines regarding the quantity and frequency of fish consumption for children. Based on data from the Food and Agriculture Organization (FAO), the average global per capita fish consumption tends to increase, with the latest data estimates showing around 20.5 kilograms per person per year. Global consumption of fish, excluding algae, has increased significantly.

Purpose: to determine the fish-eating behavior of toddlers.

Method: This study is a quantitative descriptive observational study with a cross-sectional design conducted in Adisara Village in November 2025. This study was conducted in the Adisara Village area as a fish processing center in the Banyumas region because some residents work as fish managers and sea fish sellers who fill some markets in the Banyumas Regency area. The population was all mothers of toddlers in Adisara Village totaling 152 people.

Results: While sampling was carried out using a cluster sampling approach obtained a sample of 45 people. So based on the results of the questionnaire, it was obtained that the behavior of eating fish in toddlers tends to be less, namely in the frequency question section 1-3 times and a week and one of them is also supported by the lack of information about potential allergens and concerns about contaminants. This is also supported by the fact that the majority of mothers choose to introduce fish to toddlers after 12 months of age, partly due to the informational concerns discussed above.

Conclusion: Therefore, specific education on this issue is needed to increase the quantity of fish consumed by toddlers.

Keywords: Eating Fish, Fish Eating Behavior; Toddlers.

INTRODUCTION

Fish is a major source of essential nutrients, including omega-3 fatty acids, vitamin D, iodine, and high-quality protein, which are vital for healthy growth and development during childhood (Haskell, 2021). The World Health Organization (WHO) and other international organizations recommend that infants begin consuming fish between 6 and 9 months of age and continue to consume it regularly once a week (World Health Organization, 2023). However, there is slight variation among guidelines regarding the quantity and frequency of fish consumption for children. According to data from the Food and

Agriculture Organization (FAO), the average global per capita fish consumption is trending upward, with the latest estimates showing around 20.5 kilograms per person per year. Global consumption of fish, excluding algae, has increased significantly. People now consume more than five times the amount consumed almost 60 years ago. In 2019, fish consumption Globally, consumption is estimated at 158 million tons, up from 28 million tons in 1961. Consumption has increased at an annual average rate of 3.0 percent since 1961, compared with a population growth rate of 1.6 percent. Per

capita consumption is most influenced by increases in supply, changes in consumer preferences, technological advances, and income growth. Global annual per capita seafood consumption increased from an average of 9.9 kg in the 1960s to 11.4 kg in the 1970s, 12.5 kg in the 1980s, 14.4 kg in the 1990s, 17.0 kg in the 2000s, and 19.6 kg in the 2010s, with a record high of 20.5 kg in 2019 (Food and Agriculture Organization of the United Nations, 2022).

Indonesia's fish consumption has tended to increase in recent years, reaching approximately 57.61 kg/capita/year in 2023, meeting the Ministry of Maritime Affairs and Fisheries' target. The Fish Consumption Rate (AKI) in Indonesia continues to increase, reaching approximately 56.48 kilograms per capita per year in 2023. While this figure is high compared to the global average, the Indonesian government's target for 2024 is 62.05 kg per capita. As a maritime nation, Indonesia, with a sea area of 5.8 million km², with approximately 17,504 islands and a coastline of 95,000 km, the second longest in the world, is blessed with diverse and abundant fish resources. Studies show that the potential for national fish resources reaches 65 million tons per year, with capture fisheries accounting for 7.4 million tons per year and aquaculture for 57.6 million tons per year. This is a blessing for the Indonesian nation, which can be utilized as a driver of the national economy, a provider of employment, a foreign exchange earner, and a supporter of national food and nutrition security (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2025).

The first five years of a child's life are a crucial period of growth and development, during which physical growth and changes occur very rapidly. During this time, the eating habits that are formed not only provide nutrition to support physical development but also become the basis for eating habits that are likely to continue into adolescence and adulthood (Naysilla, Tamin, Ulandari, & Suraya, 2025). Toddlers are a nutritionally vulnerable group because they are still growing. Food consumption, especially energy and protein, is one of the factors that affect nutritional status. Fish consumption rates are still low, so one of the efforts that can be made to increase fish consumption is to foster a positive attitude towards eating fish from an early age in toddlers (Rahayu & Casnuri, 2022).

Central Java Province is inhabited by a heterogeneous population with varying social statuses. This diversity influences the province's economic, social, and cultural patterns. According to 2015 Central Java Statistics Agency data, the population of Central Java Province in 2015 was 33,774,141 people spread across 35 regencies/cities, both in coastal and mountainous areas. The number of low-income residents was 458,652,834, or 13.58% of the total population. Data shows that per capita fish consumption in Indonesia at the household level

reached 25.31%. kg/capita/year, with significant differences between regions, with Maluku and Papua typically the highest, while the Special Region of Yogyakarta and Central Java are relatively low (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2023).

One source of food that is rich in energy and protein, which are needed by toddlers, is fish. Fish contains nutrients that are very important for the growth and development of toddlers. Fish is an alternative source of protein, which is even available in sufficient quantities in areas affected by floods and tsunamis (Salmayati, Hermansyah, & Agussabti, 2016). Fish, especially those consumed with their bones, are rich in calcium and phosphorus, which can aid growth in children (Sari, Juffrie, Nurani, & Sitaresmi, 2016).

Fish consumption in Central Java in 2024 reached 40.14 kg per capita per year, an increase from the previous year, but still below the national average of around 60 kg, with a daily average of only around 0.11 kg, and is considered low, especially in inland areas. (Central Java Provincial Government, 2025). According to a report in 2022 in Banyumas Regency, fish consumption data showed around 32.52 kg/capita/year (up from previous years, where the figure was below 25 kg/capita/year), but this figure is still far below the national consumption of around 56.48 kg/capita/year, with the main goal of preventing stunting and meeting children's nutritional needs. Trends and Figures Fish consumption in 2022 at 32.52 kg/capita/year (Banyumas Regency Government, 2022). Meanwhile, according to the Fisheries Service in the previous year, namely in 2018, fish consumption was 13.7 kg/capita/year. This target is expected to continue to increase to meet the nutritional needs of the community. society and achieve national targets. Challenges and efforts to overcome problems are Consumption is still low, especially compared to national and provincial figures. The program The Banyumas Regency Government actively conducts outreach, counseling to PKK mothers, and also teachers, in order to provide fish snacks at schools, spread fish seeds around the household environment, and build ponds to increase awareness and availability of fish. Overall, despite the increase, fish consumption in Banyumas still requires continuous encouragement so that people consume more fish as a primary source of protein. The benefits of fish are rich in protein and Omega-3, important for the development of the brain, eyes, heart, and prevention of stunting. Meanwhile, factors that influence children's fish-eating behavior are regular seafood consumption, knowledge, attitudes and perceptions of mothers about eating fish as their diet (McManus, Burns, Howat, Cooper, & Fielder, 2007).

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto
Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356

RESEARCH METHOD

The purpose of this study is to determine the fish-eating behavior of toddlers in Adisara Village. This study is a quantitative descriptive observational study with a cross-sectional design conducted in Adisara Village in November 2025. This study was conducted in the Adisara Village area as a fish processing center in the Banyumas region because some residents work as fish managers and sellers of marine fish who fill some markets in the Banyumas Regency area. The population is all mothers of toddlers in Adisara Village, totaling 152 people. While sampling was carried out using a cluster sampling approach, a sample of 45 people was obtained. This study is a quantitative descriptive research design. This type of quantitative descriptive research includes data collection using questionnaires to test the hypothesis in order to answer questions regarding the latest status of the research subjects.

The questionnaire consisted of five main sections. The first section collected demographic information such as parental age, education level, and household income. The second section assessed the timing and frequency of fish introduction during the complementary feeding period. The third section focused on parental perceptions of fish, including nutritional benefits, potential allergens, and concerns about contaminants.

The fourth section included questions about mothers' fish consumption habits during pregnancy. The final section specifically addressed whether parents received any medical recommendations regarding fish consumption during pregnancy and the period of complementary feeding. These questions aimed to assess the role of health workers and other healthcare professionals in shaping parental attitudes and practices. Several items in the questionnaire were used to explore key factors influencing and inhibiting fish consumption during the complementary feeding period. Mothers of toddlers were also asked about their reasons for not including fish in their children's diets. The survey also examined topics such as preferred fish types, preparation methods, and the use of alternative products such as fish oil.

This questionnaire a comprehensive review of relevant literature and their clinical experience. A draft version of the questionnaire was then reviewed by other co-authors, and necessary revisions were made to improve clarity and content validity. Following these revisions, the final questionnaire was administered to participants. A preliminary evaluation was conducted after responses from the first 50 participants were collected; however, no further modifications were deemed necessary, and the same version was then used for the entire study sample.

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto

Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356

RESEARCH RESULTS

Table Frequency Distribution of The Questionnaire (N=45)

Toddler fish eating behavior		Category	Results
Part 1	Age	< 20 years	11/24.4
		20-35 years	21/46.7
		> 35 years	13/29.0
	Education	Elementary-Middle School	14/31.1
		SENIOR HIGH SCHOOL	23/51.1
		Diploma / degree	8/17.8
	Income	Small (500.000-1.500,000)	2/4.0
		Medium (1.500,000 – 3.000,000)	26/58.0
		High (> 3.000.000)	17/38.0
Part 2	Time to introduce fish when giving complementary feeding	6-12 months	12/26.7
		12-24 months	33/73.3
	Frequency of introducing fish when providing complementary feeding	1-3 times a week	25/55.6
		> 3 in a week	20/44.4
Part 3	parents' perceptions of fish	Not good	0/0
		Not good	0/0
		Pretty good	13/29.0
		Good	20/44.4
		Very good	12/26.7
	benefits of fish	Less	0/0
		Enough	11/24.2
		Good	34/75.5
	Fish nutrition	Less	3/6.67
		Enough	18/40.0
		Good	24/53.3
	potential allergens	Less	12/26.7
		Enough	19/42.2
		Good	14/31.1
	concerns about contaminants	Not enough	11/24.4
		Enough	19/42.2
		Good	15/33.2
Part 4	Mother's fish consumption habits during pregnancy	1-3 times a week	35/78.0
		> 3 in a week	10/22.0
Part 5	Medical recommendations received by parents regarding fish consumption during pregnancy and the period of complementary feeding	Never	19/42.0
		Once	26/58.0

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto

Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356

Based on the research results, it is known that the questionnaire in part 1 shows that most mothers of toddlers are aged 20-35 years, namely 21 people (46.67%), then the majority of mothers' education is high school, namely 23 people (51.11%), and most respondents have a moderate income, namely around IDR 1.000.000 to IDR 3.000.000, namely 26 people (57.78%). In section 2, regarding the time of introduction of fish when giving complementary feeding, the most respondents were at 12-24 months, namely 33 people or around 73.33%, while the frequency of introduction of fish when giving complementary feeding, respondents answered 1-3 times a week. In section 3, the results of respondents' answers regarding parents' perceptions of fish were mostly good, namely 20 people or 44.44%, and answered about the benefits of fish answered 34 people or 75.56%, on the question of fish nutrition, the most respondents answered 53.33% or around 24 people and on the question of potential allergens, the most respondents answered sufficient, namely 19 people or 42.22%. Questions about concerns about contaminants were mostly sufficient, namely 19 people or 42.22%. In section 4, regarding mothers' fish consumption habits during pregnancy, the highest number of respondents, 35 people (77.78%), answered 1-3 times a week. In section 5, which asked whether medical personnel had ever recommended fish consumption to parents during pregnancy and the period of complementary feeding, the most respondents answered yes, at 26 people (57.78%).

DISCUSSION

Part 1 shows that most mothers of toddlers are aged 20-35 years, namely 21 people (46.67%), then the majority of mothers' education is high school, namely 23 people (51.11%). This is in accordance with the fact that the level of education and parental health guidance greatly influence the behavior of fish consumption in toddlers. Most respondents have a middle income, which is around IDR 1.000.000 to IDR 3.000.000, namely 26 people (57.78%) (Yigit, Santafliglu, Kilic, Celebier, & Kalayci, 2025). This is in accordance with previous research in adults which shows that a number of factors influence the frequency of fish and seafood consumption, including taste, cooking skills, perceived health benefits, age, education level, and geographic location; these factors have not been explored in children. However, it is known that parents play a major role in influencing children's dietary habits and perceptions from an early age, which suggests that parents' preferences and perceptions about fish and seafood consumption may contribute to their children's fish and seafood consumption (Burns, Bhattacharjee, Darlington, Haines, Ma, & The Guelph Family Health Study, 2023).

In part 2, the best time to introduce fish when giving complementary foods is 6-12 months, this is in accordance with research by the Food and Nutrition Board stated that the introduction time starts from 6 months. Meanwhile, based on the results of this study, most introductions were made at an age of more than 12 months. Introduction at 6 months can help toddlers recognize and accept the taste of fish. Based on the Dietary Guidelines for America (DGA) also includes recommendations to introduce seafood, in this case fish, to children when they are around 6 months old. Habituating fish by parents before the toddler is 1 year old will have a greater influence on the toddler's ability to accept the fishy taste of fish (Food and Agriculture Organization of the United Nations, 2024). Factors influencing the timing of fish introduction during the complementary feeding period and the frequency of fish consumption in children were studied. The main findings

showed that education significantly influenced these practices. Guidance provided by health workers, especially regarding fish consumption, was strongly associated with increased family and child fish consumption and earlier fish introduction, namely when starting complementary feeding. The main obstacles included concerns about fish bones, allergies, and heavy metal contamination were the biggest fears of introducing fish at the age of 6 months. Despite these challenges, health guidance by health workers on fish consumption was significantly associated with higher intake and earlier introduction (Yigit et al., 2025). Although according most studies examining the relationship between seafood and cognition have focused on fish consumption during pregnancy and its impact on the baby (Nel, Emmett, Golding, & Taylor, 2025).

In section 3, the results of respondents' answers regarding parents' perceptions of fish were mostly positive, namely 20 people or 44.44%, and answered about the benefits of fish answered 34 people or 75.56%. On the question of fish nutrition, the most respondents answered 53.33% or around 24 people and on the question of potential allergens, the most respondents answered sufficient, namely 19 people or 42.22%. Questions about concerns about contaminants were mostly sufficient, namely 19 people or 42.22%. This is in accordance with stated that the level of respondent perception shows that most mothers have a good perception of the health benefits of fish (66.7%), as well as fish cooking techniques (76.2%). Maternal responses to the organoleptic properties of fish including taste, aroma, and color were almost the same, both in positive and negative responses. This perception can influence the eating behavior of toddlers (Dailami, Rahmawati, Saleky, & Toha, 2021).

In section 4 on maternal fish consumption habits during pregnancy, the most respondents, 35 people or 77.78%, answered 1-3 times a week. And in section 5, which contains the question of whether medical personnel have ever given recommendations to parents regarding fish consumption during

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto
Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356

Fish eating behavior among toddlers

pregnancy and the period of providing complementary foods, the most respondents answered yes, as many as 26 people or 57.78%. This is in accordance with research that health guidance for parents is significantly related to more frequent fish consumption in toddlers and earlier introduction of fish in children's diets will also influence fish eating behavior in toddlers. Children of mothers who consumed fish weekly during pregnancy were 14.9 times more likely to consume fish frequently, and families who received health guidance were 2.5 times more likely to introduce fish during complementary feeding. The guidance provided by doctors during pregnancy and the complementary feeding period has a significant impact on the nutritional habits of mothers and children. Appropriate maternal nutrition during pregnancy not only reduces adverse pregnancy outcomes but also positively influences children's health in the short and long term. Furthermore, information provided by doctors during the complementary feeding period plays a crucial role in ensuring that children receive balanced nutrition between six months and one year of age and are introduced to fish during this time. Furthermore, several studies have shown that parents' choices of fish oil are more influenced by their social environment and the media than by professional medical advice. Consistent with this, our study found that families who prefer fish oil supplementation often have children with lower fish consumption frequency. This highlights the importance of health professionals educating parents about the complementary role of fish oil as a supplement rather than a substitute for fish consumption. Public health campaigns and educational programs should emphasize the importance of fish consumption, comparing it with fish oil supplements, to raise parental awareness. Ensuring that parents understand the unique and irreplaceable nutritional benefits of fish can help improve dietary practices during the complementary feeding period. According to O'Connor (2025), seafood consumption, particularly fatty fish, can result in beneficial cognitive development in children and adolescents aged 0–18 years. This conclusion is based on short-term randomized controlled trials with low risk of bias and few concerns, which align with the results of long-term PCS. These studies were mostly conducted in Northern European populations, and seafood consumption ranged from 5 to 11 ounces/week (Yigit's et al., 2025). Meanwhile in another study, stated that evidence-based research from the University of Bristol revealed a link between fish consumption and children's behavioral development. Seafood is a source of many important nutrients for children, including omega-3 fatty acids, selenium, and iodine, as well as markers of a healthy lifestyle in general. The recommendation is that children should consume at least two portions of fish per week, with one portion being a fatty fish such as salmon or mackerel. The link between fish consumption in children and

optimal behavioral development is clear, and research strongly recommends that parents provide at least two portions of fish per week in accordance with National Health Service guidelines. We hope that the findings of this study will empower parents with the knowledge to give their children the best start in life (Nel et al., 2025).

Based on the questionnaire results, toddlers' fish-eating behavior tends to be low, with a frequency of 1-3 times a week. This is also supported by a lack of information about potential allergens and concerns about contaminants. This is also supported by the fact that the majority of mothers choose to introduce fish to toddlers aged over 12 months, which is related to the information and concerns discussed above. Therefore, special education is needed to increase the quantity of fish consumed by toddlers in Adisara Village. Interventions are needed to improve this.

Defining "eating behavior" and related constructs presents ambiguities in both terminology and definition regarding what constitutes "eating behavior" and related constructs in the toddler age group. Several conceptual models exist, and many constructs are related to the construct of "eating behavior," which is typically associated with an individual's regulation of appetite. Studies of toddler "eating behavior" typically assess what, how much, when, how, and why a food or drink is consumed, but rarely provide a definition of "eating behavior" itself. Toddler eating behavior is sometimes understood in terms of individual appetite, such as responses to food, picky eating, or individual responses to satiety. Many eating behaviors or appetite traits are also understood in terms of underlying processes. For example, response to food can be assessed through the individual's perception of food cues, along with the initiation of a response based on the hedonic meaning of a food (liking, preference, attractiveness) and its relationship to liking or wanting a food and the likelihood of aversion to a food taste. Furthermore, eating behavior has been understood as an ability, such as the ability to resist responding to palatable foods, or it can also be a decision about portion size, or it can also mean regulating an individual's eating speed. Other meanings are also related to an individual's personality characteristics such as anxiety or impulsivity towards food. The literature we reviewed shows that "eating behavior" is complex and multidimensional and has been defined variously. In general, eating behavior is assumed to be influenced by underlying biological processes including genetic and epigenetic factors. However, eating behavior is also shaped by environmental factors, although this process can be bidirectional. Broadly, eating behavior is assumed to include food selection, consumption and regulation of eating (what, when, why), hedonism, food reward value, food avoidance/approach, reactions to food cues, food eating speed,

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto
Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356

attitudes and beliefs/cognitions toward food, and habitual eating behavior.

Factors that influence children's eating behavior are parents and family, genetic predisposition factors, food (palatability, energy density, taste, and color), socioeconomic status, demographics, community conditions. Likewise, factors of fish-eating behavior (Scaglioni, De Cosmi, Ciappolino, Parazzini, Brambilla, & Agostoni, 2018). factors that influence the frequency of family and children's fish consumption and fish consumption during the child's complementary food period, to examine the knowledge, opinions, and attitudes of parents about this issue, and to evaluate the influence of health worker guidance on fish consumption (Yigit's et al., 2025).

Fish is one of the foodstuffs that is fairly easy to obtain in Indonesia. Given the vast potential of Indonesia's seas, coupled with abundant freshwater sources for the development of inland fisheries, fish is therefore a fairly important foodstuff for food security in Indonesia. Policies to increase fishery production are closely related to fish availability, which will ultimately support the food security system, where this component consists of the subsystems of availability, distribution, and consumption (Dewi, Widarti, & Sukraniti, 2018).

REFERENCES

- Banyumas Regency Government. (2022). Ikan Sebagai Bahan Pangan. Retrieved from: <https://dinkannak.banyumaskab.go.id/read/44832/ikan-sebagai-bahan-pangan#:~:text=Saat%20ini%2C%20angka%20konsumsi%20ikan%20Kabupaten%20Banyumas%20Tahun,Jawa%20Tengah%20yang%20mencapai%2038%2C83%20kg%20%2F%20kapita.>
- Burns, J. L., Bhattacharjee, A., Darlington, G., Haines, J., Ma, D. W., & The Guelph Family Health Study. (2023). Parental Cooking Confidence is Associated with Children's Intake of Fish and Seafood. *Canadian Journal of Dietetic Practice and Research*, 85(1), 54-57.
- Central Java Provincial Government. (2025). Ateng Genjot Gemarikan, Konsumsi Ikan Naik 7.8 Persen. Retrieved from: <https://jatengprov.go.id/publik/jateng-genjot-gemarikan-konsumsi-ikan-naik-78-persen/>
- Dailami, M., Rahmawati, A., Saleky, D., & Toha, A. H. A. (2021). DNA barcoding of tilapia fish from Merauke, Papua and Malang, East Java-Indonesia. *Aquaculture, Aquarium, Conservation & Legislation*, 14(2), 849-858.
- Dewi, P. F. A., Widarti, I. G. A., & Sukraniti, D. P. (2018). Pengetahuan ibu tentang ikan dan pola konsumsi ikan pada balita di Desa Kedonganan Kabupaten Badung. *Jurnal Ilmu Gizi: Journal of Nutrition Science*, 7(1), 17-20.
- Food and Agriculture Organization of the United Nations. (2024). FAO 2024 Report: Sustainable Aquatic Food Systems Important for Global Food Security. Retrieved from: <https://effop.org/news-events/fao-2024-report-sustainable-aquatic-food-systems-important-for-global-food-security/>
- Food and Agriculture Organization of the United Nations. (2022). Consumption of Aquatic Foods. Retrieved from: <https://openknowledge.fao.org/server/api/core/bitstreams/9df19f53-b931-4d04-acd3-58a71c6b1a5b/content/sofia/2022/consumption-of-aquatic-foods.html>
- McManus, A., Burns, S. K., Howat, P. A., Cooper, L., & Fielder, L. (2007). Factors influencing the consumption of seafood among young children in Perth: a qualitative study. *BMC Public Health*, 7(1), 119.
- Ministry of Marine Affairs and Fisheries of the Republic of Indonesia. (2025). Laporan Kinerja 2024. Retrieved from: <https://kkp.go.id/download-pdf-akuntabilitas-kinerja/akuntabilitas-kinerja-pelaporan-kinerja-laporan-kinerja-direktorat-jenderal-perikanan-budi-daya-triwulan-iii-tahun-2024.pdf>
- Ministry of Marine Affairs and Fisheries of the Republic of Indonesia. (2023). Laporan Kinerja 2022. Retrieved from: <https://www.kkp.go.id/publikasi/akuntabilitas-kinerja/pelaporan-kinerja/detail/laporan-kinerja-kkp-2022664ea5c2405a8.html>
- Naysilla, A., Tamin, T. P. A., Ulandari, D., & Suraya, R. (2025). Analisis Perilaku Makan Pada Anak Balita Dan Implikasinya Terhadap Status Gizi Di Kelurahan Kotamatum IV Medan, Sumatera Utara. *Jurnal Ilmu Psikologi dan Kesehatan* E-ISSN: 3063-1467, 1(4), 237-244.
- Nel, L., Emmett, P. M., Golding, J., & Taylor, C. M. (2025). Seafood intake in children at age 7 years and neurodevelopmental outcomes in an observational cohort study (ALSPAC). *European Journal of Nutrition*, 64(3), 1-12.
- Rahayu, P. P., & Casnuri, C. (2022). Mencukupi Status Gizi Anak Dengan Gerakan Aksi "Aku Suka Makan Ikan". *The Shine Cahaya Dunia Ners*, 7(01), 22-29.

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto
Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356

Fish eating behavior among toddlers

- Salmayati, S., Hermansyah, H., & Agussabti, A. (2016). Kajian penanganan gizi balita pada kondisi kedaruratan bencana banjir di kecamatan sampoiniet kabupaten aceh jaya. *Jurnal Kedokteran Syiah Kuala*, 16(3), 176-180.
- Sari, E. M., Juffrie, M., Nurani, N., & Sitaresmi, M. N. (2016). Asupan protein, kalsium dan fosfor pada anak stunting dan tidak stunting usia 24-59 bulan. *Jurnal Gizi Klinik Indonesia*, 12(4), 152-159.
- Scaglioni, S., De Cosmi, V., Ciappolino, V., Parazzini, F., Brambilla, P., & Agostoni, C. (2018). Factors influencing children's eating behaviours. *Nutrients*, 10(6), 706.
- World Health Organization. (2023). WHO Guideline for Complementary Feeding of Infants and Young Children 6–23 Months of Age. Retrieved from: <https://iris.who.int/server/api/core/bitstreams/5abca011-4db2-4cf1-b959-45b756f7b600/content>
- Yigit, M., Santafliglu, B., Kilic, E. K., Celebier, K., & Kalayci, F. (2025). From pregnancy to plate: understanding barriers and facilitators of fish consumption during complementary feeding. *BMC pediatrics*, 25(1), 432.

Khusnul Khotimah*, Yuli Trisnawati

Bina Cipta Husada Health College, Purwokerto
Corresponding author: *Email: khusnul@stikesbch.ac.id

DOI: 10.56922/mchc.v4i10.2356