

MORE THAN JUST FOOD: EXPLORING CULTURAL, EMOTIONAL, AND PRACTICAL REALITIES OF COMPLEMENTARY FEEDING IN WASTED CHILDREN

Rahayu Widaryanti^{1*}, Martha I. Kartasurya², Mohammad Z. Rahfiludin², Sri A. Nugraheni²

¹Doctoral Program in Public Health, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia

²Public Health Nutrition Department, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia

*Corresponding author: rwidaryanti@respati.ac.id

ABSTRACT

Background: The prevalence of stunting in Indonesia has decreased, but there is an increase in wasting cases. Children who experience wasting have a 3 times higher risk of becoming stunted compared to children with normal nutritional status. Wasting is not only caused by a lack of food intake, but also influenced by various factors. This study aims to explore the practice of complementary feeding from various aspects from the perspective of mothers who have wasting children.

Method: In-depth interviews (IDI) were conducted with 16 parents of children aged 6-24 months with wasting nutritional status in 4 areas in Sleman Regency. The triangulation method was conducted by interviewing the family, including husband and grandmother, and health cadres.

Result: There were four main themes influencing complementary feeding practices, namely: 1) Cultural aspects including traditions, perceptions of food, and family roles; 2) Emotional and psychological aspects such as maternal rejection or acceptance of wasting; 3) Practical realities, including access to food ingredients and mother's time; and 4) Maternal nutrition understanding and experience with educational programs. Mothers who accepted their child's wasting condition were more open to education and tended to make changes to their complementary feeding practices.

Conclusion: Addressing wasting cannot be done solely with nutritional interventions, but requires an approach that considers the cultural, emotional, and practical context faced by mothers. Empathetic and contextualized nutrition education is key to saving children from wasting that progresses to stunting.

Keywords: Complementary Feeding; Cultural; Emotional; Wasting

INTRODUCTION

Malnutrition in children under five is still a global problem, including Indonesia (Kementrian Kesehatan RI, 2020). Globally, stunting cases have decreased in the last 10 years. In 2022 there were 22.3% of Children under five years of age experienced stunting (UNICEF et al., 2023). Based on the Indonesian Nutrition Status Survey (SSGI) in 2022, there were 21.6%, which represents a decrease compared to 2021, which was 24.4% (Kemenkes RI, 2022). It should be noted that there is an increase in wasting cases in 2022 to 7.7% when compared to 2021, of 7.1% (Kemenkes RI, 2022).

Children who experience wasting have three times the risk of becoming stunted compared to children with normal nutritional status (Choudhary et al., 2024). So this condition, if not handled properly, will add new cases of stunting. Wasting harms child growth and development, because wasting reduces endurance and increases the risk of infectious diseases and even death (Noori et al., 2022).

One of the efforts to deal with wasting cases is to provide appropriate complementary food according to the age and nutritional needs of the child (Ayuningrum, 2018; Chhabra et al., 2021). However, the practice of providing complementary foods is not as simple as increasing food intake. Research findings show that complementary feeding practices in

various communities are influenced by cultural values, socioeconomic status, and maternal knowledge (Shahbaz et al., 2024) gender roles in childcare, and maternal emotional factors such as guilt, lack of confidence, fatigue, and other psychological factors (Sousa & Virella, 2024). In addition, there are also challenges in providing complementary foods to mothers who have limited time, limited access to nutritious food ingredients, and a lack of information and support from family, health cadres, and health workers, so that they cannot provide complementary foods optimally (Tully, 2019).

Stunting and wasting are distinct but interrelated conditions that sometimes occur simultaneously in child populations, yet stunting and wasting are sometimes treated separately by programs, policies, and financing (Sadler et al., 2022). Many interventions focus on children who are already stunted, while children who are wasted also require treatment (Wells et al., 2019).

A policy study in Lombok Timur showed that the government's primary focus on reducing stunting rates did have an impact on the success of the stunting program, but the problem of wasting remained high, indicating an imbalance of priorities in the implementation of nutrition programs (Taofik et al., 2024). In addition, government programs focus more on stunting, through food assistance and care for children at risk of stunting. However, there is no specific emphasis on wasting, indicating that wasting is still not a major concern in intervention policies (Rokhmah et al., 2024)

Research on appropriate complementary feeding practices according to World Health Organization recommendations (WHO, 2023). Specifically, minimum dietary diversity (MDD) (Anato et al., 2022), Minimum Acceptable Diet (Abebe et al., 2021), Animal protein consumption (Traoré, 2024), barriers to complementary feeding practices have been conducted, but data on the cultural, emotional,

and practical realities of complementary Feeding in wasting children are limited. Understanding these conditions can provide useful information to determine empowerment methods according to the needs of mothers and can prevent children from progressing to stunting.

METHODS

Research design

This study used a cross-sectional survey design that utilized in-depth interview (IDI) methods to collect information in the form of opinions or experiences in complementary feeding practices, and explore socio-cultural beliefs among mothers, husbands, grandmothers, and health cadres in sub-urban areas. This study has obtained ethical approval from the ethics committee of health research, Universitas Respati Yogyakarta.

Participant Selection

Data were collected in four villages in the Sleman district. This area has a large number of wasting cases and has low dietary diversity and animal protein consumption. This study involved 16 main informants, namely parents who have children aged 6-24 months with wasting nutritional status. In addition to interviewing mothers, it was also necessary to explore the perspectives of husbands, grandmothers, and health cadres to enrich the data and for triangulation. The selection of informants was done purposively, namely mothers who have children with wasting nutritional status, but do not have a history of congenital abnormalities or a history of chronic infectious diseases such as tuberculosis, HIV, Helminthiasis, and are willing to be interviewed in depth regarding socio-cultural and complementary feeding practices.

Instrumen pengumpulan data

In-depth interviews lasted 40-60 minutes and were conducted directly by researchers and assisted by enumerators to conduct

documentation. Open-ended questions were asked, which consisted of 3 themes, namely: 1). Cultural aspects, 2). Emotions and psychology in complementary feeding, 3). Practical realities, 4). Health and nutrition. In-depth interviews were conducted with 16 main informants and 8 triangulation informants until no new themes emerged, which means that data saturation can be concluded. Interviews were conducted after informants gave informed consent and without coercion.

Data analysis

Transcripts of the in-depth interviews were prepared verbatim by the research assistants. Subsequently, the research team validated the transcripts by comparing them with the voice recordings and field notes. Qualitative data analysis was conducted using the approach developed by Helvi Kyngäs (Kyngäs, 2020), which includes three main stages: identification of initial codes from the data, grouping of codes into categories, and development of key themes to explore the deep meaning of the phenomenon under study. The validity of the research findings was strengthened by using criteria from Lincoln and Guba (1985), which include: credibility through data triangulation and verification by participants, transferability through presenting the research context in detail, dependability through analysis by independent researchers who were not involved in data collection, and confirmability through complete documentation of the analysis process (Lincoln & Guba, 1985). To maintain data objectivity, researchers also used voice recordings and field notes as sources of verification. The analysis process was conducted by analysts who are competent in qualitative research and not directly involved in the data collection process.

RESULTS AND DISCUSSION

The practice of complementary feeding in wasting children does not only focus on the process of feeding, but more than that many

things affect the practice of complementary feeding, such as cultural aspects, emotion and psychology, practical reality, health, and nutrition.

Table 1. Themes and sub-themes of complementary feeding practices in wasting children

| Theme | Sub Theme |
|-----------------------------|--|
| Cultural Aspects | 1. Local Traditions and Customs 2. Cultural influences on food choices for children 3. The role of family and community |
| Emotional and psychological | Parents' feelings about Complementary feeding for wasting children |
| Practical Reality | 1. Challenges faced by parents in providing complementary food 2. Accessibility and availability of food ingredients in the neighborhood |
| Health and Nutrition | 1. Parents' understanding of the nutritional needs of wasting children. 2. Parents' experience with nutrition programs or support from policymakers |

3.1. Cultural Aspects

This theme examines the cultural aspects that influence complementary feeding, where local traditions and customs, cultural influences on food choices, and the role of family and community in complementary feeding practices.

3.1.1. Local traditions and customs

The tradition of early complementary feeding is still an issue in the community, hence the need for continuous education to provide age- age-appropriate complementary feeding.

"...I was given information to give complementary food when my child was 6 months old, but my mother-in-law told me to give complementary food sooner, because my child looked thin, so I gave complementary food at 5 months..."
(IDI, mother 21 years)

Early complementary feeding may increase the risk of obesity, diabetes, and allergic diseases later in life (Wang, 2016). Feeding complementary foods that do not meet nutritional needs can lead to malnutrition (Ashraf et al., 2024). Early introduction of solids may affect children's taste preferences and future eating habits, which may impact long-term health (D'auria, 2020). Early complementary feeding is also influenced by several factors, including family and environmental influences. Education is not only given to mothers who have children, but also to all family members involved in childcare.

"...my baby only drank breast milk from birth until 4 months old, but he was underweight, so I took the initiative to feed him before 6 months old..." (IDI, Mother, 36 years old)

There needs to be more in-depth education on the correct way to breastfeed, not only the position and attachment, but it is necessary to recommend breastfeeding until the breast feels empty so that the child gets both foremilk and hindmilk. When the baby only gets foremilk, the baby's nutritional needs will not be fulfilled, and this has an impact on the child's weight. Foremilk is breast milk that comes out in the early breastfeeding sessions and is thinner because it contains more lactose and water. This foremilk serves to relieve the baby's thirst. While hindmilk is breast milk that is released at the end of the breastfeeding session, and is thicker because it contains a lot of fat (Takumi et al., 2022). Hindmilk provides energy and satiety, therefore, it is important to breastfeed until the breasts feel empty so that the baby gets both foremilk and hindmilk (Nurita, 2021).

3.1.2. Cultural influences on food choices for children

Some traditions indirectly limit the provision of animal protein when giving complementary foods because of the

perception that meat is difficult to digest, so it is not recommended to be given at the beginning of complementary foods (Saleh et al., 2023). In addition, there is also a perception that animal protein sourced from marine products, namely fish and shrimp, is at risk of causing allergies, as quoted in the following interview:

"...I still hesitate to give meat before my child is 1 year old, for fear of choking..."
(IDI, mother, 23 years old).

"...I haven't tried giving fish or shrimp for complementary food for fear of allergies, because I have a history of allergies too..."
(IDI, mother, 30 years old).

In addition to cultural factors, complementary feeding practices are also influenced by exposure to information from various media. The massive promotion of instant complementary food products in various media also influences mothers in their complementary feeding practices. Some mothers prefer to give instant complementary foods compared to homemade ones for several reasons.

"...at the first feeding I gave instant baby porridge that I bought at the supermarket..."
(IDI, mother 34 years old).

WHO recommends feeding complementary foods derived from local food ingredients, which aims to introduce the original taste of various food ingredients (WHO, 2023).

3.1.3. The role of family and community

Family and community support play an important role in complementary feeding practices (Fadilah et al., 2023). Support is not only financial but also plays a role in the provision and feeding of complementary foods. Most informants reported that their husbands provided financial support, but few were willing to be involved in the process of cooking and providing complementary foods. This is

consistent with the following interview except:

"...Husband provides financial support to buy complementary food ingredients, but is never involved in the cooking process..."
(IDI, mother, 27 years old).

...I support my wife to give homemade complementary food and entrust the cooking of complementary food to my wife because I feel that I cannot do it..."
(IDI, Husband 35 years old)

Husbands are expected to be involved in complementary feeding practices, not only providing financial support, but also expected to be involved in the process of complementary feeding (Harris et al., 2020). A study shows that increasing fathers' knowledge about child nutrition will increase support both materially and psychologically (Umugwaneza, 2021). Support from health cadres plays an important role in complementary feeding practices and wasting management. Global evidence shows that more than 85% of malnutrition in 6-59-month-olds is successfully treated at home with outpatient care. This can be successful with the role of health cadres (Blandina Rosalina Bait, 2023).

...I got information about complementary food from a health cadre, she suggested that I make complementary food using the guidance on maternal and child health books..." (IDI, mother, 25 years old)

Cadres have an important role in providing education on complementary feeding practices, but the findings in the field are that not all cadres have attended the infant and young child feeding counselor training (IYCF), so they use guidance from maternal and child health books (Widaryanti & Rahmuniyati, 2019).

3.2. Emotional and psychological

3.2.1. Parents' feelings about complementary feeding for wasting children

Various responses were given by parents when they found out that their children were wasting. Some mothers refuse if their children experience wasting, but there are also responses from mothers who accept it despite experiencing sadness. This is according to the following interview excerpt:

"...my third child is thin just like my first and second child, but still active, so I am not worried, indeed my child is difficult to feed, but I have given formula milk to meet his nutritional needs..."
(IDI, Mother 36 years old)

"...I am sad that my child is said to be thin by the health worker, but I admit that my child does like to choose food..."
(IDI, mother, 33 years old)

Mothers who deny that their children are wasting will find it more difficult to improve complementary feeding practices, because they feel that their children's condition is hereditary, so there is no effort to improve their diet. A study in Vietnam showed that only 34.5% of parents were able to identify a healthy body shape often; parents do not realize that their child is malnourished (Le Thi Tuyet & Nguyen, 2023). Whereas mothers who have accepted their child's condition will find it easier to evaluate whether their complementary feeding practices have been appropriate or not. Mothers will be more open to getting information on how to give the right complementary food so that their children no longer experience wasting (Nafista et al., 2023).

3.3. Practical Reality

3.3.1. Challenges faced by parents in providing complementary foods.

One of the challenges faced by mothers is the limited time to make complementary foods, in addition to the mother's overly high expectations of the child when consuming food also has an impact on the practice of providing complementary foods, as quoted in the

following interview:

"...I sometimes feel sad when I have taken the time and effort to cook complementary foods, but my child does not eat them..."
(IDI, mother, 23 years old).

Often parents have the expectation that their children will eat voraciously when mothers cook complementary foods, so that mothers are willing to take the time even though busy working, but sometimes mothers become disappointed when children only eat a little (Hässig-Wegmann et al., 2024).

3.3.2. Accessibility and availability of food ingredients in the neighborhood.

Ease of access and availability of foodstuffs are one of the factors that affect the nutritional status of children. In some areas, it is found that children are malnourished due to the inability to access foodstuffs, but in Sleman Regency, the fact is that most children who are malnourished do not come from poor families, but from families with good economic status.

"...I have no difficulty in accessing food ingredients for complementary feeding, but I have difficulty in ensuring that my child will consume the food with gusto..."
(IDI, mother 35, years old).

"...Our family income in one month is equivalent to the regional minimum wage, but because we still have a mortgage and my husband also smokes, I cannot often buy meat for complementary food, so I replace it with eggs..." (IDI, mother, 23 years old).

Family economic capacity has an impact on the ability to access diverse foods (Wolfson et al., 2019). In addition, there needs to be awareness to manage money wisely to prioritize meeting the needs of complementary foods rather than buying cigarettes (Muchlis et al., 2023). The adverse effects of cigarettes not only directly affect children's health due to the content of harmful substances, but also have an indirect impact, namely reducing the allocation

of family finances to buy healthy food (Astuti et al., 2020).

3.4. Health and Nutrition

3.4.1. Parents' understanding of the nutritional needs of wasting children

Parents' understanding of their children's nutritional needs plays an important role in children's nutritional status. A study in Indonesia found that the mother's education level was a significant factor influencing the practice of providing complementary feeding to children, indicating the importance of education in improving complementary feeding practices (Nurriszka et al., 2021). In this interview, mothers were found to be concerned about the nutritional Adequacy.

"...I am sometimes not sure whether the complementary food I give is sufficient for my child's needs..."
(IDI, mother, 21 years old)

"...To overcome the problem of my child who is difficult to eat, so I give food according to the child's request, even though I know the food is not healthy..."
(IDI, mother, 30 years old)

"...my child is a poor eater and a picky eater, so I give him formula milk to fulfill his nutritional needs, a day my child can consume 8 bottles of formula milk..."
(IDI, Mother, 36 years old)

Maternal concerns about children's nutritional adequacy can be minimized through comprehensive education on recommended complementary feeding practices (Forh et al., 2022). Formula feeding without a medical indication may interfere with the child's food intake as it provides satiety before the child receives solid food (Haschke et al., 2013).

3.4.2. Parents' experience with nutrition programs or support from policymakers

"...I have participated in educational activities

*conducted by nutritionists and volunteers, and
the information provided is very useful, and
this helps me in dealing with children who like
to eat picky food. It was hard to implement at
first, but I will keep trying..."*
(IDI, mother 24 years old)

Nutrition education has been provided through posyandu activities by health cadres, but due to the limited knowledge and skills of cadres, it is necessary to collaborate with nutritionists from the health center and volunteers. Malnutrition prevention programs are still focused on children who have already experienced stunting, such as providing food assistance, education on how to fulfill nutrition and parenting practices. Many interventions focus on children who are already stunted, even though children who are wasting also need treatment (Wells et al., 2019).

The strength of this study lies in the use of a qualitative design that allows in-depth exploration of complex phenomena related to complementary feeding practices, including cultural, emotional, and practical realities. However, this study has limitations as it has not thoroughly explored the eating patterns or habits of children with wasting.

CONCLUSION

Addressing wasting cannot be done solely with nutritional interventions, but requires an approach that takes into account the cultural, emotional, and practical context faced by mothers. Empathic and contextualized nutrition education is key to saving children from wasting that progresses to stunting.

ACKNOWLEDGMENT

The author's appreciation goes to the Sleman Regency Health Office, Kalasan Health Center staff, and the head of LKK Posyandu, who have been willing to facilitate this research, and

to health cadres who have assisted in collecting informant data.

CONFLICT OF INTEREST

All authors declare no conflict of interest in this article. This research was funded by the Indonesian Education Scholarship, Ministry of Education, Culture, Research and Technology, Year 2023 Number: 00922/BPPT/BPI.06/9/2023.

AUTHOR'S CONTRIBUTION

All authors contributed their thoughts to the preparation of the article. RW: conceptualization, writing—original draft, methodology, coding, transcript verbatim. MIK: Methodology, writing, review and editing, and supervision. MZR: Data curation, validation, writing, review, and editing supervision. SAN: conceptualization, formal analysis, writing, review, and editing.

REFERENCES

- Abebe, H., Gashu, M., Kebede, A., Abata, H., Yeshaneh, A., Workye, H., & Adane, D. (2021). Minimum acceptable diet and associated factors among children aged 6–23 months in Ethiopia. *Italian Journal of Pediatrics*, 47(1). <https://doi.org/10.1186/s13052-021-01169-3>
- Anato, A., Baye, K., & Stoecker, B. J. (2022). Suboptimal feeding practices and impaired growth among children in largely food-insecure areas of north Wollo, Ethiopia. *Journal of Nutritional Science*, 11(4), e81. <https://doi.org/10.1017/jns.2022.79>
- Ashraf, I., Bestman, P. L., Assiri, A. A., Kamal, G. M., Uddin, J., Luo, J., Orayj, K. M., & Ishaqui, A. A.

- (2024). Status of Inappropriate Complementary Feeding and Its Associated Factors Among Infants of 9–23 Months. *Nutrients*, 16(24), 4379.
<https://doi.org/https://doi.org/10.3390/nu16244379>
- Ayuningrum, I. Y. (2018). Exclusive breastfeeding, complementary feeding, low birthweight, and wasting in children under five: A path analysis evidence from Indonesia. *Asian Journal of Pharmaceutical and Clinical Research*, 11(12), 174–178.
<https://doi.org/10.22159/ajpcr.2018.v11i12.28068>
- Blandina Rosalina Bait. (2023). *Mobilisasi Masyarakat untuk Penanganan Balita Wasting di Indonesia* (p. 14). 14 United Nations Children's Fund (UNICEF).
- Chhabra, P., Gupta, A., & Thakur, N. (2021). Complementary feeding practices and nutritional status of children (6–23 months) in an urban resettlement colony of East Delhi. *Indian Journal of Community Medicine*, 46(3), 528–532.
https://doi.org/10.4103/ijcm.IJCM_1046_20
- Choudhary, T. S., Manapurath, R., Chowdhury, R., Taneja, S., Daniel, A., Johnston, R., De Wagt, A., & Bhandari, N. (2024). Prevalence of Wasting and Its Associated Factors among Children Under 5 Years of Age in India: Findings from the Comprehensive National Nutrition Survey. *Indian Journal of Public Health*, 68(1), 89–94.
https://doi.org/10.4103/ijph.ijph_1284_22
- D'auria, E. (2020). Complementary feeding: Pitfalls for health outcomes. In *International Journal of Environmental Research and Public Health* (Vol. 17, Issue 21, pp. 1–19).
<https://doi.org/10.3390/ijerph17217931>
- Fadilah, A. L., Muniroh, L., & Atmaka, D. R. (2023). Family supports and maternal factors of complementary feeding self-efficacy for children aged 6–24 months. *Action: Aceh Nutrition Journal*, 8(2), 176–185.
<https://doi.org/10.30867/action.v8i2.656>
- Forth, G., Apprey, C., & Frimpomaa Agyapong, N. A. (2022). Nutritional knowledge and practices of mothers/caregivers and their impact on the nutritional status of children 6–59 months in Sefwi Wiawso Municipality, Western-North Region, Ghana. *Heliyon*, 8(12).
<https://doi.org/10.1016/J.HELIYON.2022.E12330>
- Harris, H. A., Jansen, E., & Rossi, T. (2020). 'It's not worth the fight': Fathers' perceptions of family mealtime interactions, feeding practices and child eating behaviours. *Appetite*, 150, 104642.
<https://doi.org/https://doi.org/10.1016/j.appet.2020.104642>
- Haschke, F., Haiden, N., Detzel, P., Yarnoff, B., Allaire, B., & Haschke-Becher, E. (2013). Feeding patterns during the first 2 years and health outcomes. *Annals of Nutrition and Metabolism*, 62(SUPPL. 3), 16–25.
<https://doi.org/10.1159/000351575>
- Hässig-Wegmann, A., Román, S., Sánchez-Siles, L., & Siegrist, M. (2024). Complementary feeding challenges: Insights from Swiss parents' perspectives. *Appetite*, 202, 107638.
<https://doi.org/https://doi.org/10.1016/j.appet.2024.107638>
- Kemenkes RI. (2022). *Survei Status Gizi Indonesia (SSGI)* (p. 156). Badan

- Kebijakan Pembangunan Kesehatan
Kementrian Kesehatan Republik
Indonesia.
- Kementrian Kesehatan RI. (2020). *Situasi balita pendek (Stunting) di Indonesia*. Jakarta.
- Kyngäs, H. (2020). Qualitative research and content analysis. In *The application of content analysis in nursing science research* (pp. 3–11). Springer.
- Le Thi Tuyet, T. T. M., & Nguyet, L. T. T. D. (2023). Relationship of Parental Perception of Children's Shape with Nutritional Status of Children: a Population-based study in 24–60-month-old Vietnamese Children. *Preventive Healthcare: Topical Issues of Health Risk Analysis*, 3, 79. <https://doi.org/10.21668/health.risk/2023.3.09.eng>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (vol. 75). Sage, Thousand Oaks, CA.
- Nafista, U. F., Nurhaeni, N., & Waluyanti, F. T. (2023). Improvement in maternal knowledge, attitudes, and children's weight with education on World Health Organization feeding recommendations. *La Pediatria Medica e Chirurgica*, 45(s1). <https://doi.org/https://doi.org/10.4081/pmc.2023.314>
- Noori, N., Skrip, L. A., Oron, A. P., McCarthy, K. A., Proctor, J. L., Chabot-Couture, G., Althouse, B. M., Phelan, K. P. Q., & Trehan, I. (2022). Potential Impacts of Mass Nutritional Supplementation on Measles Dynamics: A Simulation Study. *American Journal of Tropical Medicine and Hygiene*, 107(4), 863–872. <https://doi.org/10.4269/ajtmh.21-1083>
- Nurita, S. R. (2021). Keseimbangan Foremilk dan Hindmilk Asi pada Ibu Menyusui. *Jurnal Akademika Baiturrahim Jambi*, 10(1), 207–214. <https://doi.org/https://doi.org/10.36565/jab.v10i1.326>
- Nurrizka, R. H., Wenny, D. M., & Amalia, R. (2021). Complementary Feeding Practices and Influencing Factors Among Children Under 2 Years of Age: A Cross-Sectional Study in Indonesia. *Pediatric Gastroenterology, Hepatology & Nutrition*, 24(6), 535–545. <https://doi.org/10.5223/pghn.2021.24.6.535>
- Rokhmah, N. H., Kamariyah, S., Pramudiana, I. D., & Dwijosusilo, K. (2024). The Role of Government in Reducing Stunting. *Indonesian Journal of Innovation Multidisipliner Research*, 2(4), 293–303. <https://doi.org/https://doi.org/10.69693/ijim.v2i4.255>
- Sadler, K., James, P. T., Bhutta, Z. A., Briend, A., Isanaka, S., Mertens, A., Myatt, M., O'Brien, K. S., Webb, P., & Khara, T. (2022). How can nutrition research better reflect the relationship between wasting and stunting in children? Learnings from the Wasting and Stunting project. *The Journal of Nutrition*, 152(12), 2645–2651. <https://doi.org/https://doi.org/10.1093/jn/nxac091>
- Saleh, S. N. H., Agustin, A., & Sudirman, S. (2023). Cultural Determinants of Community in Giving Breast Milk Complementary Food to Babies in Kotamobagu City. *Medical Technology and Public Health Journal*, 7(2), 182–188. <https://doi.org/https://doi.org/10.33086/mtphj.v7i2.5021>
- Shahbaz, M., Saleem, J., Hameed, S., Javed,

- F., Sahar, R., Khan, A., Jamshed, S., & Ijaz, F. (2024). Cultural and Socioeconomic Determinants of Mother's Complementary Feeding Practices on Nutritional Status of Children Under Five: A Cross-Sectional Study in Lahore, Pakistan: Cultural and Socioeconomic Determinants of Mother's Complementary Feeding Practi. *Pakistan Journal of Health Sciences*, 212–217. <https://doi.org/https://doi.org/10.54393/pjhs.v5i10.2454>
- Sousa, A., & Virella, D. (2024). Cultural practices impact adherence to complementary feeding guidelines in a multicultural community in Lisbon, Portugal. *Acta Paediatrica*. <https://doi.org/https://doi.org/10.1111/apa.17524>
- Takumi, H., Kato, K., Nakanishi, H., Tamura, M., Ohto-N, T., Nagao, S., & Hirose, J. (2022). Comprehensive analysis of lipid composition in human foremilk and hindmilk. *Journal of Oleo Science*, 71(7), 947–957. <https://doi.org/https://doi.org/10.5650/jos.ess21449>
- Taofik, J., Satispi, E., & Samudra, A. A. (2024). Implementation of Stunting Reduction Regulations and Policies in East Lombok Regency, Indonesia. *Journal of Law and Sustainable Development*, 12(2), e3233–e3233. <https://doi.org/https://doi.org/10.55908/sdgs.v12i2.3233>
- Traoré, F. (2024). Modelling policies to improve affordability and consumption of nutritious foods for complementary feeding in Kenya. *Maternal and Child Nutrition*, 20. <https://doi.org/10.1111/mcn.13519>
- Tully, L. (2019). Solid advice: Complementary feeding experiences among disadvantaged parents in two countries. *Maternal and Child Nutrition*, 15(3). <https://doi.org/10.1111/mcn.12801>
- Umugwaneza, M. (2021). Factors influencing complementary feeding practices in rural and semi-urban Rwanda: a qualitative study. *Journal of Nutritional Science*, 10. <https://doi.org/10.1017/jns.2021.37>
- UNICEF, WHO, & World Bank Group. (2023). *Levels and trends in child malnutrition*. <https://iris.who.int/bitstream/handle/10665/368038/9789240073791-eng.pdf?sequence=1>
- Wang, J. (2016). Introduction of complementary feeding before 4 months of age increases the risk of childhood overweight or obesity: A meta-analysis of prospective cohort studies. In *Nutrition Research* (Vol 36, Issue 8, pp. 759–770). <https://doi.org/10.1016/j.nutres.2016.03.003>
- Wells, J. C. K., Briend, A., Boyd, E. M., Berkeley, J. A., Hall, A., Isanaka, S., Webb, P., Khara, T., & Dolan, C. (2019). Beyond wasted and stunted, a major shift to fight child undernutrition. *The Lancet Child & Adolescent Health*, 3(11), 831–834. [https://doi.org/https://doi.org/10.1016/S2352-4642\(19\)30244-5](https://doi.org/https://doi.org/10.1016/S2352-4642(19)30244-5)
- WHO. (2023). *WHO Guideline for complementary feeding of infants and young children 6-23 months of age*. World Health Organization.
- Widaryanti, R., & Rahmuniyati, M. E. (2019). evaluasi pasca pelatihan pemberian makan bayi dan anak (PMBA) pada kader posyandu terhadap peningkatan status gizi bayi dan balita. *Jurnal Formil (Forum Ilmiah) KesMas Respati*, 4(2), 163–174.