



Analysis of the Relationship between Maternal Characteristics and Food Choice Motives for Toddlers

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ABSTRACT

Maternal food choices are important determinants of toddlers' dietary quality and nutritional status. Maternal characteristics, such as education, nutritional knowledge, and household income, may influence the motives underlying food selection for children. However, evidence on this relationship remains limited in Indonesia. This study aimed to analyze the relationship between maternal characteristics and food choice motives among mothers of toddlers in Pagesangan Timur Village, Mataram City, West Nusa Tenggara. A mixed-method study with a cross-sectional quantitative design supported by qualitative data was conducted among 50 mothers of toddlers aged 12–59 months selected through simple random sampling. Quantitative data were collected using structured questionnaires, while qualitative data were obtained through observations and in-depth interviews. Spearman's rank correlation test was used to analyze the relationship between maternal characteristics and food choice motives. Most respondents were housewives (76%), aged 31–35 years (34%), and had completed senior high school education (48%). The majority had moderate food consumption frequency (72%) and dietary diversity (80%). Spearman correlation analysis showed very weak relationships between maternal characteristics and food choice motives. Nutritional knowledge ($r=0.087$; $p=0.546$), education ($r=-0.115$; $p=0.422$), and household income ($r=0.073$; $p=0.061$) were not significantly associated with food choice motives ($p>0.05$). In Conclusion Maternal education, nutritional knowledge, and household income were not significantly associated with food choice motives among mothers of toddlers.

INTRODUCTION

Improving child nutrition remains one of the major public health priorities in Indonesia because nutritional status during early childhood substantially influences physical growth, cognitive development, educational attainment, and future productivity (1). Malnutrition among children under five years of age continues to be a significant challenge despite ongoing national nutrition programs. According to the 2023 Indonesia Health Survey, 21.5% of Indonesian children under five were stunted, 15.9% were underweight, and 8.5% suffered from wasting, indicating that childhood malnutrition remains a persistent public health problem (2). These conditions not only increase the risk of morbidity and mortality but also contribute to long-term economic and social burdens through reduced human capital development (3).

The burden of child malnutrition is particularly concerning in eastern Indonesia, including West Nusa Tenggara, where nutritional problems remain prevalent (2). Previous studies have identified NTB as one of the provinces with a relatively high burden of child nutritional disorders, placing children at greater risk of impaired growth and developmental outcomes (4). Although food availability is an important determinant of nutritional status, evidence suggests that child malnutrition is not solely caused by inadequate food access (5). Behavioral, socioeconomic, and caregiving factors within households, particularly those related to maternal decision-making, also play a crucial role in determining children's dietary quality and nutritional outcomes (6).

Mothers are generally the primary decision-makers regarding food purchasing, preparation, and feeding practices within households (7). Consequently, maternal characteristics such as education, nutritional knowledge, and household income may influence the motives underlying food selection for children. Food choice motives refer to the reasons individuals choose specific foods, including health considerations, affordability, convenience, familiarity, sensory appeal, and cultural preferences (8). These motives subsequently shape dietary patterns, meal frequency, and food diversity among children. Previous studies have demonstrated that parental food choice motives significantly influence

children's dietary preferences and consumption patterns. Parents who prioritize health-related motives tend to provide healthier foods and encourage greater fruit and vegetable consumption, whereas choices driven primarily by convenience or children's preferences may result in less nutritious dietary patterns (9).

Current literature has extensively examined the relationship between maternal education, nutritional knowledge, feeding practices, and child nutritional status (10). However, most studies have focused directly on feeding behavior and nutritional outcomes, while relatively limited attention has been given to understanding the underlying food choice motives that mediate the relationship between maternal characteristics and children's dietary practices. Furthermore, evidence from developing-country settings, particularly in Indonesia, remains scarce. Existing studies have generally assessed maternal knowledge or socioeconomic status as independent determinants of child nutrition without exploring how these factors influence food selection motives that ultimately shape children's food consumption behavior (11).

The novelty of the present study lies in its examination of maternal characteristics, food choice motives, and their interrelationships within the context of toddler feeding practices in West Nusa Tenggara. Unlike previous studies that primarily investigated direct associations between maternal characteristics and child nutritional status, this study explores food choice motives as an intermediate behavioral construct that may explain why mothers make particular dietary decisions for their children (11). By integrating socioeconomic characteristics, nutritional knowledge, and motivational aspects of food selection, this research provides a more comprehensive understanding of the behavioral pathways influencing toddler nutrition.

This study is important because identifying the factors that shape mothers' food choice motives may facilitate the development of more effective nutrition interventions beyond conventional nutrition education approaches (12). Understanding the determinants of food choices for toddlers can support the design of culturally appropriate and behaviorally informed nutrition programs that promote healthier feeding practices. Moreover, evidence regarding the relationship between maternal characteristics and

food choice motives remains limited in the Indonesian context, particularly in West Nusa Tenggara. Therefore, this study aims to examine the association between maternal characteristics, including education, nutritional knowledge, and household income, and food choice motives among mothers of toddlers. The findings are expected to contribute to evidence-based strategies for improving dietary quality and reducing the burden of child malnutrition in Indonesia

MATERIAL AND METHOD

Study Design and Setting

This study employed a mixed-method approach with a cross-sectional quantitative design supported by qualitative data. The research was conducted from September to December 2025 in Pagesangan Timur Village, Mataram City, West Nusa Tenggara Province, Indonesia. The mixed-method approach was used to obtain a comprehensive understanding of the relationship between maternal characteristics and food choice motives for toddlers. Quantitative data were used to examine statistical relationships among variables, while qualitative data provided contextual explanations regarding mothers' food selection behaviors and feeding practices.

Population and Sample

The target population consisted of mothers who had toddlers aged 12–59 months residing in Pagesangan Timur Village. The inclusion criteria were mothers who had at least one toddler, were permanent residents of the study area, and were willing to participate in the study. Mothers who were absent during the data collection period or unable to complete the questionnaire were excluded. The sample size was determined using Slovin's formula with a 10% margin of error and a 90% confidence level. Based on the calculation, the minimum required sample size was 50 respondents.

Data Sources and Variables

Both primary and secondary data were utilized in this study. Primary data were collected directly from respondents through structured questionnaires, observations, and in-depth interviews. Secondary data were obtained from village administrative records, Posyandu reports,

health center records, government publications, and relevant scientific literature.

The independent variables included maternal characteristics, namely age, education level, occupation, household income, and nutritional knowledge. The dependent variable was food choice motives for toddlers. Food choice motives were assessed based on factors such as health considerations, convenience, affordability, sensory appeal, familiarity, and availability of food. Additional variables examined included food consumption frequency and dietary diversity among toddlers.

Research Instrument

Quantitative data were collected using a structured questionnaire adapted from previous studies on food choice motives and child feeding practices. The questionnaire consisted of four sections: respondent characteristics, nutritional knowledge, food choice motives, and feeding practices for toddlers. Nutritional knowledge was measured through a series of multiple-choice questions, while food choice motives were assessed using Likert-scale statements ranging from strongly disagree (1) to strongly agree (5).

Prior to data collection, the questionnaire underwent validity and reliability testing involving ten mothers who were not included in the final study sample. The pilot test was conducted at Posyandu Anggrek, Banjar Village, Ampenan District, Mataram City. This location was selected because it shared similar socio-demographic characteristics with the study area. Item validity was assessed using Pearson Product Moment correlation, while reliability was evaluated using Cronbach's Alpha coefficient. Questionnaire items with correlation coefficients greater than the critical value (r -table) were considered valid, and a Cronbach's Alpha value of ≥ 0.70 was considered acceptable for reliability.

Qualitative Data Collection

Qualitative data were collected through direct observations and in-depth interviews with key informants, including village midwives and Posyandu cadres. These informants were selected purposively based on their involvement in maternal and child health services and their familiarity with community feeding practices. The interviews explored mothers' perceptions of child nutrition, factors influencing food selection,

barriers to providing nutritious foods, and community perspectives regarding toddler feeding practices.

Data Collection Procedure

Data collection was conducted after obtaining permission from village authorities and health service providers. Eligible respondents were approached during Posyandu activities and household visits. After providing informed consent, respondents completed the questionnaire under the supervision of trained enumerators. Interviews with key informants were conducted separately using a semi-structured interview guide and were audio-recorded with participants' permission.

Data Analysis

Quantitative data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) software version 25. Descriptive statistics were used to summarize respondent characteristics, food choice motives, and feeding practices. Continuous variables were presented as means and standard deviations, while categorical variables were reported as frequencies and percentages.

The relationship between maternal characteristics and food choice motives was analyzed using Spearman's rank correlation test because the data were not normally distributed. Statistical significance was determined at a p-value of less than 0.05.

Qualitative data obtained from observations and interviews were transcribed verbatim and analyzed using thematic content analysis. The qualitative findings were used to complement and explain the quantitative results.

RESULTS

The respondents in this study were mothers with toddlers in Pagesangan Timur Village, Mataram City, West Nusa Tenggara. The total number of respondents was 50 people from 50 different households.

Respondent Age

The majority of respondents in this study were aged 31-35 years, amounting to 34.0 percent (17 people) of the total 50 respondents. Then Table 4.9 shows that respondents aged 26-30

years amounted to 28.0 percent (14 people) and mothers aged >45 years were a minority because they amounted to 2.0 percent of mothers (1 person). In this study, the dominant age of respondents was in the middle age group, namely 31-35 years, amounting to 34%.

Table 1. Number and percentage of respondents by age

Mother's Age	Number (n)	Percentage (%)
21-25	6	12
26-30	14	28
31-35	17	34
35-40	8	16
41-45	4	8
>45	1	2
Total	50	100

Respondent's Occupation

This study found that some mothers were employed and some were unemployed. Some mothers also worked as teachers, traders, or private employees. The following presents complete data on respondents by occupation. The majority of respondents in this study were housewives, at 76%.

Table 2. Number of respondents based on occupation in the study in Pagesangan Timur Village

Mother's Job	Number (n)	Percentage (%)
Housewife	38	76
Honorary Teacher	1	2
Trader	7	14
Private	4	8
Total	50	100

Respondent Education

Education level is the level of formal education completed by respondents. Formal education is divided into four groups: those who did not complete elementary school/equivalent, those who completed elementary school/equivalent, those who completed junior high school/equivalent, and those who completed senior high school/equivalent. The educational level of respondents in Pagesangan Timur Village can be seen more clearly in the following table.

Table 3. Number of respondents based on education level in research in Pagesangan Timur Village

Level of education	Number of people	Percentage (%)
Did not finish elementary school	1	2

Level of education	Number of people	Percentage (%)
Elementary School	8	16
JUNIOR HIGH SCHOOL	10	20
High School/Equivalent	24	48
Diploma/Bachelor's Degree	7	14
Total	50	100

Respondent's Family Income

Family income in this study is the sum of the income earned by husband and wife in a family. Based on field data, respondents' family incomes varied considerably. Referring to the Mataram City minimum wage of Rp 2,184,450 per month, more than 50% of respondents still face financial hardship, earning less than two million rupiah per month. The complete data is presented in the following table.

Table 4. Number of respondents based on monthly family income in research in Pagesangan Timur Village

Family Income	Number of people	Percentage (%)
Rp. 500,000 – Rp. 999,000	6	12
Rp. 1,000,000 – Rp. 1,499,999	8	16
Rp. 1,500,000 – Rp. 1,999,999	12	24
Rp. 2,000,000 – Rp. 2,499,999	4	8
Rp. 2,500,000 – Rp. 3,000,000	15	30
> Rp. 3,000,000	5	10
Total	50	100

Frequency of Consuming Food

Food consumption frequency is the amount of food a person consumes in a given period. This study will measure the frequency of food consumption by mothers to their toddlers within a period of 1 week. The analysis in this discussion is carried out by asking questions about how often mothers give certain types of food (both healthy and unhealthy/junk food) to their toddlers. For questions about the frequency of consuming healthy food, for example, the question "How often did your child eat fruit in the last 1 week?", and for questions about the frequency of consuming

unhealthy food such as "How often did your child eat junk food (Indomie, fried chicken, nuggets, etc.) in the last 1 week?". According to the book Nutrition in the Life Cycle, respondents are considered to be in the low category if they consume food 0-2 times a week, those who consume food 3-5 times a week are in the medium category, and those who consume food 6-8 times a week are in the high category. The data for this sub-variable are as follows.

Table 5. Frequency of Food Consumption in Mothers with Toddlers in Pagesangan Timur Subdistrict

Frequency of Consuming Food	Number (n)	Percentage (%)
Low	14	28
Currently	36	72
Tall	0	0
Total	50	100

Diversity of Food Types Consumed by Toddlers

Diversity of food consumption is a variety of food groups consisting of staple foods, side dishes, vegetables and fruit and water and diversity in each food group. A diverse diet is essential for producing a nutritionally balanced diet (Ministry of Health, 2014). Diversity in food consumption is related to nutritional quality and adequacy. The higher the diversity score, the more diverse the types of food consumed by toddlers. Therefore, nutritional adequacy ultimately affects the nutritional status of toddlers (Daniels, 2006). Measuring the diversity of food consumption involves evaluating the food groups consumed over a period of time. Consuming a diverse diet is essential for the survival of an individual or group of people. The more diverse and balanced the composition of food consumed, the better the nutritional quality, because essentially no single type of food has complete and sufficient nutritional content, both in quantity and type (Bitra, 2010).

As toddlers grow older, the variety of foods given should be complete and nutritionally balanced, which is important to support growth and development and is reduced by 15-20%, so that in the future they will become humans with brain quality of around 80-85%, as well as disruption of mental development and motor development.

Table 6. Diversity of Food Types in Mothers with Toddlers in Pagesangan Timur Subdistrict

Diversity of Food Consumption	Number (n)	Percentage (%)
Low	2	4
Currently	40	0
Tall	8	16
Total	50	00

This subvariable was measured by asking questions about the types of food mothers gave their toddlers in the past week. Respondents were considered to have low food diversity if they consumed 0-2 types of food in the past week, moderate if they consumed 3-4 types of food in the past week, and high if they consumed more than 5-7 types of food in the past week. The results of the questionnaire are shown in the table 6.

Analysis of the Relationship between Maternal Characteristics, Motives, Food Choice Actions, and Nutritional Status of Toddlers

Referring to the previous chapter, this chapter discusses the results of data processing on the extent of the relationship between maternal characteristics as seen from food knowledge, education, and family income, with the motives for food choices as seen from nine motives in choosing food included in the four categories of behavioral motives discussed previously. Furthermore, these food choice motives are linked to food choice actions consisting of meal frequency and food diversity consumed. Ultimately, the relationship between these food choice actions and the nutritional status of their toddlers can be seen.

Based on the analysis conducted in this study, the three main relationship patterns outlined in the hypothesis are related to each other, although in one case the relationship was less significant. However, the Spearman correlation test still showed a relationship between the three variables. The following table summarizes the relationships between these variables, as assessed by the Spearman correlation test.

The correlation coefficient value is said 0.00 - 0.199 = very low; 0.20 - 0.3999 = low; 0.40 - 0.5999 = moderate; 0.60 - 0.799 = strong and 0.80 - 1.000 = very strong.

Table 7. Correlation coefficient and strength value between variables

Variables	Correlation coefficient	Strength Value
Characteristics of Mothers and Food Choice Motives	0.071	Weak link
Knowledge and motives	0.087	0.546
Education and motives	-0.115	0.422
Income and motives	0.073	0.061

Table 7 presents the correlation coefficients between maternal characteristics and food choice motives. Overall, the relationship between maternal characteristics and food choice motives was very weak, with a correlation coefficient of 0.071. Furthermore, the analysis showed weak positive correlations between maternal knowledge and food choice motives ($r = 0.087$) as well as between household income and food choice motives ($r = 0.073$). A weak negative correlation was observed between maternal education and food choice motives ($r = -0.115$).

However, none of these relationships were statistically significant. The p-values for the associations between knowledge and food choice motives ($p = 0.546$), education and food choice motives ($p = 0.422$), and income and food choice motives ($p = 0.061$) were all greater than the significance level of 0.05. These findings indicate that maternal knowledge, education level, and household income were not significantly associated with food choice motives among mothers of toddlers in the study area.

DISCUSSION

This study found that some mothers were employed and some were unemployed. Some mothers also worked as teachers, traders, or private employees. The following presents complete data on respondents by occupation. The majority of respondents in this study were housewives, at 76%. Most respondents work as housewives, namely 76.0 percent (38 people) of the total number of 50 respondents. Then the table shows that respondents who work as traders, namely 14.0 percent (7 people) and respondents who work as honorary teachers are a minority because they number 2.0 percent (1 person). Employment status plays an important dominance in food choice motives (13).

Occupation directly influences the process of preparing toddler food, the ability to buy food and mother's food choices (14). Mothers who work as honorary and traders are more able to choose a variety of foods for their toddlers.

As expressed by one respondent who works as a trader, *"I can buy my child a complete range of eggs, chicken, fish and vegetables for his meal. Sometimes after selling I buy them at the market near where I sell."*

Based on the table 1, it can be seen that the majority of respondents' education level was high school or equivalent. This means that their education level is considered adequate, although not perfect. They felt that completing high school or equivalent was sufficient, eliminating the need to continue their education to university. This aligns with their belief that, *"There's no cost to continue school; just being able to go to school is already a blessing. It's better to work to help the family at home."* This means that respondents chose to earn money rather than invest money in education. Education level plays a significant role in maternal knowledge, which impacts their motives and food choices (15). Mothers with higher education tend to have a good understanding of their children's eating patterns (16). However, mothers with lower education tend to be indifferent to their children's eating patterns, sometimes even adopting the principle of eating anything as long as they are full (17).

It appears that 52% of respondents earn less than Rp 2,000,000 per month, or below the minimum wage (UMK). This indicates a lack of wealth distribution in this area and indicates the very weak economic conditions of the community (18). As many as 38% of respondents are in a moderate economic condition with an income of Rp 2,000,000 – Rp 3,000,000 per month. Only a handful of people, amounting to 10% of the total respondents, are categorized as quite well off. This may be largely influenced by the respondents' educational level, as previously discussed the majority have a high school education and only a few have attended college. Education to some extent influences a person's income, at least for those working in companies or institutions, where education is a criterion in determining salaries (19).

Income is closely related to a mother's food choices for toddlers. Higher incomes mean greater opportunities to provide a variety of foods tailored

to the child's needs (19). This aligns Zhu (2021) which found that families with middle- to upper-income families are more able to afford a variety of foods for their children than families with lower-middle incomes (20).

Changes in household income will affect consumption patterns and levels of well-being (21). Engel's theory states that the higher a household's income, the lower the percentage of expenditure on food consumption tends to be (22). Besides household income, several other factors influence household food consumption patterns. A study on factors influencing consumption patterns revealed that in addition to household income, other factors that influence consumption patterns include commodity prices, education level, family or household size, and employment status (23). The factors influencing consumption patterns are per capita income, housewife education, and residence (24).

The data shows that no respondents have implemented a balanced diet frequency properly, as seen in Table 5. A total of 14 respondents have a low food consumption frequency preference and the majority, namely 72% of respondents or 36 people, have a moderate food consumption frequency. Based on this data, it can be concluded that the amount of good food intake has been implemented by mothers in this village, but it is only sufficient to a minimal extent so that it is necessary to increase awareness of balanced nutritional consumption for mothers (25). If mothers have more awareness, perhaps it can be provided through counseling at the integrated health post (Posyandu), then the amount of balanced food intake for their children will be optimal (26).

"You still have vegetables. If you have fruit, it's rare, not every day, at most once a week, but sometimes you don't buy fruit often in a week, basically it depends on if you have time and if you have money."-Mrs. HSD, has a 4 year old child

"....only the vitamins given at the integrated health post (posyandu), I never buy them myself. I just wait until they're given to me from the integrated health post before my children take them. Thank God, my children are all healthy, even though they don't take their vitamins regularly. The important thing is not to eat too little rice; I have to feed them to get them to eat. I also play at my neighbor's house to make them eat heartily."-Mrs. JMH, has a 4 year old child

Although the average frequency of mothers' food consumption is considered quite good, mothers still don't pay enough attention to vitamin needs. Vitamins are still considered a secondary item, less essential for their toddlers, so they are rarely given to children or even not given vitamins or other dietary supplements at all (27). The underlying reasons for this practice are misperceptions or mothers' lack of knowledge about food and family economic constraints. As a solution, the existence of integrated health posts (Posyandu) is crucial as a medium for educating children about good and correct food knowledge and as a provider of nutritional assistance for toddlers, for example by providing milk and vitamins/supplements regularly (28).

In this study, dietary diversity was examined, namely the various types of food consumed by toddlers every day for the past week. This dietary diversity consists of staple foods, side dishes, vegetables, and fruits. Based on the table above, 16% of respondents had a high dietary diversity consumption, and the majority (80%) of respondents had a moderate dietary diversity consumption. Only 4% of respondents had a low dietary diversity consumption. This indicates that mothers have a sufficient understanding of the importance of dietary diversity for children, although not perfect. Therefore, improvements are needed to better implement dietary diversity, especially regarding the consumption of fruit, milk, and other additional supplements for their children, which is still not yet implemented by mothers in Pagesangan Timur Village (29).

"This week, my usual meals for my husband and children include rice, regular side dishes like tempeh, tofu, fish, and chicken, and sometimes vegetables like spinach, kale, and mustard greens. I didn't buy any fruit this week, as it's the end of the month and my husband hasn't given me any money yet. We rarely eat fruit, let alone milk. I only buy milk when my children ask for it. Usually, my children ask because they see their friends drinking milk. I only buy the cheaper kind, like sweetened condensed milk."-NHS mother, has a 4 year old child

"At my mother's house, we don't really like buying fruit, so we just eat rice, side dishes, and vegetables. We have a small garden behind the house for vegetables. I buy Dancow milk, if it's not canned. I give it sparingly so it doesn't run out

quickly. I never buy vitamins."-Mrs. RUK, has a 4 year old child

A small percentage of mothers, still consume only two types of food on average per week: rice and side dishes. This is very unhealthy because it can hinder the growth of toddlers. Cases like this occur due to family economic constraints, namely those who rely on paycheck to paycheck, which means that every money they have is used up for basic needs (and often not enough) and have no savings at all (30). The solution for families in this economic situation is to provide subsidies or assistance in meeting basic needs, perhaps through direct cash assistance (BLT) or baby food distributed through the local integrated health post (Posyandu) (31).

Many factors influence food diversification. In essence, the factors that influence the diversification of food consumption are the same as with factors that influence food consumption, namely social, cultural, economy, knowledge, food availability and others, but every person have different emphases. In terms of food consumption, consumers act irrationally. only on the basis of economic considerations, but also driven by various reasoning and feelings such as needs, interests and satisfaction are both emotional in nature. personal and social. Although tastes and choices Consumers are based on economic values and knowledge, but it seems that prestige elements are very prominent (32).

Based on the Spearman correlation test, the results showed that the level of knowledge did not significantly influence the motives of mothers' food choices with a p-value of 0.056 (>0.05). The level of knowledge plays an important role in maternal knowledge, which impacts motives and food choices. Mothers with sufficient knowledge tend to have good knowledge of their children's diets. However, mothers with low nutritional knowledge tend to prioritize eating the important thing to fill them rather than eating nutritious food. In this study, the opposite result was obtained, namely there was no relationship between the level of education and the motives of food choices. This may be because respondents with higher education are mostly unemployed, so they do not have the ability to buy and choose diverse and nutritious food ingredients for their toddlers (33).

Researchers also analyzed the relationship between income level and food choice motives.

This study found an insignificant correlation between education and mothers' food choice motives, with a p-value of 0.422 (>0.05). This is inconsistent with Khomsan's (2014) research, which found that individuals with higher incomes are more likely to be able to purchase nutritious and varied foods, specifically for their toddlers. Conversely, individuals with lower incomes tend to have fewer options for providing their toddlers with daily meals. This finding is likely due to the fact that, despite having a low level of education, some mothers are still determined to provide nutritious food for their children (34).

Insignificant results were also found in the correlation between income and maternal food choice motives (p-value 0.061 (>0.05)). This may be due to the fact that despite their low income, mothers still provide the best food for their children. After all, every mother wants the best for their children (35).

CONCLUSION AND RECOMMENDATION

Overall, the characteristics, motives, and actions of mothers' food choices in this study were all in the fairly good category in terms of knowledge, education, and income levels, although they were still not completely good and needed various improvements, especially in knowledge through food counseling and income through food assistance or subsidies. There was no relationship between knowledge, education, and income on mothers' food choice motives ($P>0.05$).

Researchers hope that there will be further research in the future regarding the motives and actions of mothers' food choices for toddlers in other areas, both in NTB and in Indonesia, so that they can see the condition of the nutritional status of toddlers which can then be anticipated so that the quality of Indonesian human resources will improve for an increasingly advanced Indonesia.

REFERENCES

1. Yuningsih Y, Zannah AN, Sari AI, Handayani R. The relationship between nutritional status and the development of children aged 4-60 months. *J Kesehat Dr Soebandi*. 2024;12(2):89-96.
2. Research and Development Agency of the Ministry of Health of the Republic of Indonesia. National Basic Health Research Report (Riskesdas). Balitbang Kemenkes RI. 2013;124.
3. Bloom D, Canning D. Health as human capital and its impact on economic performance. *Geneva Pap Risk Insur Issues Pract*. 2003;28(2):304-15.
4. Indonesia CSA. Health Profile of West Nusa Tenggara Province. 2023.
5. Psaki S, Bhutta ZA, Ahmed T, Ahmed S, Bessong P, Islam M, et al. Household food access and child malnutrition: results from the eight-country MAL-ED study. *Popul Health Metr*. 2012;10(1):24.
6. Folayan MO, Oginni AB, El Tantawi M, Adeniyi A, Alade M, Finlayson TL. Association between maternal decision-making and mental health and the nutritional status of children under 6 years of age in sub-urban Nigeria. *BMC Public Health*. 2023;23(1):1159.
7. Tessema KF, Yihune M, Boti N, Hailemariam Z. Socio-Cultural Barriers Affecting Women's Decision on Child Feeding in Rural South Ethiopia: Perspectives of Caregivers and Key Figures. *SAGE Open*. 2025;15(2):21582440251339890.
8. Duong C, Jenkins M, Pyo E, Nguyen PH, Huynh T, Nguyen-Viet H, et al. Understanding maternal food choice for preschool children across urban-rural settings in Vietnam. *Matern Child Nutr*. 2023;19(1):e13435.
9. Deslippe AL, Bergeron C, Cohen TR. Boys and girls differ in their rationale behind eating: a systematic review of intrinsic and extrinsic motivations in dietary habits across countries. *Front Nutr*. 2023;10:1256189.
10. Rezaeizadeh G, Mansournia MA, Keshtkar A, Farahani Z, Zarepour F, Sharafkhah M, et al. Maternal education and its influence on child growth and nutritional status during the first two years of life: a systematic review and meta-analysis. *EclinicalMedicine*. 2024;71.
11. Albardan L, Platat C. A holistic exploration of the psychosocial, environmental, neurobiological, and individual factors influencing children's food choices: A narrative review. *Front Nutr*. 2025;12:1645293.
12. Katenga-Kaunda LZ, Iversen PO, Kamudoni PR, Holmboe-Ottesen G, Fjeld HE. Food-based nutrition counselling and education intervention for improved diets of pregnant women in rural Malawi: a qualitative study

- of factors influencing dietary behaviour change. *Public Health Nutr.* 2022;25(9):2436–47.
13. Konttinen H, Halmesvaara O, Fogelholm M, Saarijärvi H, Nevalainen J, Erkkola M. Sociodemographic differences in motives for food selection: results from the LoCard cross-sectional survey. *Int J Behav Nutr Phys Act.* 2021;18(1):71.
 14. Ravikumar D, Spyreli E, Woodside J, McKinley M, Kelly C. Parental perceptions of the food environment and their influence on food decisions among low-income families: a rapid review of qualitative evidence. *BMC Public Health.* 2022;22(1):9.
 15. Kibr G, Mulugeta A, Bosha T. Socio-economic variables associated with motivational barriers of food choice among lactating women from central ethiopia: a cross-sectional study. *Ecol Food Nutr.* 2021;60(3):276–303.
 16. Vidhya C, Sree PN, Rani KS, Srivastava P, Banu AMR, Sahu P, et al. Maternal Nutritional Understanding, Attitudes, and Practices: Implications for Children's Eating Habits. *Children.* 2023;1(5).
 17. Pesch MH, Daniel AR, Miller AL, Rosenblum KL, Appugliese DP, Lumeng JC, et al. Feeding styles among mothers of low-income children identified using a person-centered multi-method approach. *Appetite.* 2020;146:104509.
 18. Peters DJ. Community susceptibility and resiliency to COVID-19 across the rural-urban continuum in the United States. *J Rural Heal.* 2020;36(3):446–56.
 19. Kumar J. Influence of motivation on teachers' job performance. *Humanit Soc Sci Commun.* 2023;10(1):158.
 20. Zhu D. Consumption trends of the middle-income group (2006–2015). In: *China's Middle Class.* Routledge; 2021. p. 149–60.
 21. Dominko M, Verbič M. The effect of subjective well-being on consumption behavior. *J Consum Aff.* 2022;56(2):876–98.
 22. Nsabimana A, Bali Swain R, Surry Y, Ngabitsinze JC. Income and food Engel curves in Rwanda: a household microdata analysis. *Agric Food Econ.* 2020;8(1):11.
 23. Manajit S, Samutachak B, Voelker M. Socio-economic determinants of consumption patterns in Thailand. *Asia-Pacific Soc Sci Rev.* 2020;20(2):6.
 24. Ismail NA, Daud L, Mohd S, Samat N, Ridzuan AR. Consumption pattern determinants of low-income household: Evidence from Malaysia. *J Ekon Malaysia.* 2023;57(3):31–45.
 25. Baloch FA, Jomezai NA, Mohamed Ismail SAM. Food and cultural norms: rural mothers' selection of nutrition intake for their young children. *Health Educ.* 2020;120(1):87–106.
 26. De Cianni R, Pippinato L, Zanchini R, Brun F, Di Vita G, Mancuso T. Parental behaviour in choosing snacks for children aged six to ten: the role of mothers' nutritional awareness. *Br Food J.* 2023;125(2):713–30.
 27. Singh V, Kaur R, Singh R, Jangra S, Sharma A, Mehta S, et al. Important Vitamins and Minerals for Infants, Toddlers, and Children. In: *Maternal and Child Health, and Nutrition.* Springer; 2025. p. 23–42.
 28. Nsiah-Asamoah C, Doku DT, Agblorti S. Mothers' and Grandmothers' misconceptions and socio-cultural factors as barriers to exclusive breastfeeding: A qualitative study involving Health Workers in two rural districts of Ghana. *PLoS One.* 2020;15(9):e0239278.
 29. Mahendra Dev S, Pandey VL. Dietary diversity, nutrition and food safety. In: *Indian Agriculture Towards 2030: Pathways for Enhancing Farmers' Income, Nutritional Security and Sustainable Food and Farm Systems.* Springer; 2022. p. 39–82.
 30. Zelizer VA. The social meaning of money: Pin money, paychecks, poor relief, and other currencies. Princeton University Press; 2021.
 31. Shaefer HL, Edin K, Fusaro V, Wu P. The decline of cash assistance and the well-being of poor households with children. *Soc Forces.* 2020;98(3):1000–25.
 32. Jannah M, Setyo Sri Rahardjo, Ratih Puspita Febrinasari. Experimental Study of the Effectiveness of Mung Bean Soygurt and Date Palm Extract as Adjuvant Therapy in Type 2 Diabetic Rats. *Nutr J Pangan, Gizi, Kesehat [Internet].* 2025 Oct 31;6(2):74–82. Available from: <https://journal.universitasbumigora.ac.id/nutroilogy/article/view/5154>
 33. Al-Amin M, Islam MN. Breaking the barriers: the capacity to aspire for higher education of Bangladesh tea workers' children. *Child Geogr.* 2024;22(3):480–96.

34. Prasetyo YB, Permatasari P, Susanti HD. The effect of mothers' nutritional education and knowledge on children's nutritional status: a systematic review. *Int J Child Care Educ Policy*. 2023;17(1):11.
35. Carlson S, Neuberger Z. WIC works: addressing the nutrition and health needs of low-income families for more than four decades. *Cent Budg Policy Priorities*. 2021;