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Parental Preferences in Children's Menu Provision at Home: An Exploratory Study in West Sumatra

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Abstract

Indonesia continues to face significant challenges in achieving optimal nutrition, as malnutrition persists despite advancements in the health sector. This study explores how parents in West Sumatra make decisions about their children's meals, focusing specifically on their understanding of stunting and the role of dietary variety. The goal is to assess how parental awareness of stunting affects their choices in providing balanced, nutritious meals for their children. The study collected data from 387 parents using a structured questionnaire, analyzed through descriptive and correlational methods. Results showed that rice is the primary staple, consumed an average of 2.78 times per day. Although animal protein sources like fish and eggs are commonly included, vegetable and fruit consumption remain below recommended levels. A weak but positive correlation was identified between parental knowledge and food variety, especially regarding fruits and vegetables. However, this relationship was generally weak ($\rho < 0.2$), likely shaped by additional factors like household income and food access. The research also uncovered notable variations in parental knowledge depending on socioeconomic status, with higher-income families demonstrating greater awareness of stunting. These outcomes imply that while nutrition education is important, it must be paired with strategies that address broader structural challenges such as affordability and food availability. Further studies using longitudinal or qualitative methods are recommended to better understand the behaviors that influence dietary choices and to inform more effective nutrition policies.

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Introduction

Indonesia, despite its renowned biodiversity and rich culinary traditions, continues to face serious challenges in meeting the nutritional needs of its population. According to the 2018 National Basic Health Research, as many as 96.3% of Indonesians do not consume fruits and vegetables in accordance with WHO recommendations, which suggest a minimum of 400 grams per day (Darmawan et al., 2023). At the local level, data from the West Sumatra Provincial Health Office indicate that only 21.5% of young children in the region meet the standards for a balanced diet. Most of their intake consists of staple foods such as rice and animal products, with a very limited consumption of vegetables and fruits. This disparity is even more pronounced in rural areas like West Pasaman and the Mentawai Islands, where stunting prevalence exceeds 30%—the highest in the province (Arlinda et al., 2025; Delfiro & Putri, 2024).

The misalignment between balanced nutrition guidelines and actual consumption patterns is not merely a result of limited knowledge but rather a product of complex interactions among economic, sociocultural, and structural factors. Fluctuating food prices, limited access to fresh produce in local markets, and aggressive marketing of processed foods have all contributed to widening the gap between ideal dietary practices and reality (Dermoredjo et al., 2024; Ngongo et al., 2022; Rita et al., 2022). Moreover, the role of educational institutions, particularly primary schools and early childhood education centers, remains limited in promoting practical healthy eating habits. In many areas, school canteens and the surrounding

environment tend to facilitate the consumption of foods high in sugar and salt, exacerbating poor eating behaviors among children.

Alongside increasing urbanization and modernization, Indonesia is undergoing a nutritional transition marked by a shift from traditional diets to greater consumption of instant and ultra-processed foods. In West Sumatra, a study by Fibri et al. (2022) found that household expenditure on processed foods is rising faster than on fresh food items. Although Indonesia is rich in local food resources such as cassava, taro, and cassava leaves, their consumption continues to decline, being replaced by more convenient and commercially valuable products like instant noodles, sausages, and packaged snacks. This phenomenon reflects a broader shift in societal values, where traditional foods are perceived as less modern or less appealing, especially among children(Hamdani et al., 2023; Nurwanti et al., 2019; Owusu-Kwarteng et al., 2024).

The paradox between the abundance of local food sources and the low consumption of nutritious ingredients warrants a more critical analysis. Behind the declining use of local foods lie socio-economic dynamics that reflect changing tastes, status symbols, and lifestyles. Instant and processed food consumption is often associated with convenience, efficiency, and even higher social status, particularly in urban and semi-urban communities. At the same time, advertising and social media have significantly influenced how children and parents perceive "ideal" foods, which frequently diverge from the principles of balanced nutrition. These factors are interrelated and directly impact the quality of children's dietary intake.

In this context, the role of parents as the primary decision-makers in household food provision becomes especially critical. However, this role remains underexplored, particularly in regions like West Sumatra. Although several national studies have emphasized the importance of parental involvement in child nutrition (Nugroho & Farida, 2023; Silalahi et al., 2018; So et al., 2024), most of them focus on formal education or school-based interventions. Yet, parental preferences and priorities in planning daily meals—along with their perceptions of stunting and child nutrition—are fundamental in determining dietary diversity among young children. This gap highlights the need for more specific research into how parental knowledge of stunting influences their food decisions.

To date, literature examining the relationship between parental nutritional knowledge and feeding practices tends to be descriptive and lacks analytical depth. Many studies employ simple quantitative approaches without exploring the background of food decisions or relevant mediating factors, such as children's preferences, budget constraints, or gender roles within households. Moreover, no study has explicitly linked parental knowledge of stunting with the diversity of food menus provided at home, especially within the unique cultural and geographic context of West Sumatra. This reveals a critical research gap that needs to be addressed, both theoretically and practically.

This study aims to examine the relationship between parental knowledge of stunting and the frequency of children's meal provision, with a specific focus on dietary diversity, including staples, animal and plant-based proteins, vegetables, and fruits. Additionally, the research seeks to identify factors influencing menu diversity, such as household income, place of residence, and type of employment. Conceptually, this study is based on the assumption that knowledge about stunting shapes parental food preferences, which in turn affect the variety of food consumed by children at home. This relational model serves as the foundation of the analysis and is expected to inform the development of family- and community-based nutrition intervention policies.

Methods

Research Design and Subject

This study utilized a quantitative descriptive design with a cross-sectional approach. This method was used to measure and describe parental preferences in meal provision in West Sumatra. Research data were collected through a questionnaire distributed to parents who met

the following criteria: having children aged 3-6 years which enrolled in kindergarten residing in West Sumatra province.

Participants were drawn from kindergartens across multiple regions in West Sumatra, and a purposive sampling technique was employed to ensure the sample was highly relevant and informative for the study. Of the 19 districts and cities in the West Sumatra region, 9 were identified as meeting the research criteria.

These criteria included: willingness to participate in the study, active involvement in children's daily eating routines, and access to a diverse range of food options (including both home-cooked meals and ready-to-eat foods). A total of 387 parental questionnaires were completed, representing respondents from nine districts, namely: Padang, Bukittinggi, Pesisir Selatan, Agam, Pasaman Barat, Dhamasraya, the Mentawai Islands, Tanah Datar, and Payakumbuh.

Instrument

The research questionnaire covers several aspects related to parental knowledge of stunting and the frequency of providing a diverse diet. The instrument measuring parental knowledge of stunting was evaluated using the Content Validity Index (CVI) approach, involving six experts in early childhood education, nutrition, and public health.

Out of the 22 questions, 20 received an I-CVI score of 1.00, indicating full agreement among the experts. The remaining two items received I-CVI scores of 0.83 and 0.50, with one item considered invalid. The overall S-CVI/Ave score of 0.95 demonstrate that the instrument possesses strong content validity and is appropriate for assessing parental preferences in children's food provision. As a result, 21 questions were retained for measuring parental knowledge. The researcher categorized the responses into five levels: very poor, poor, adequate, good, and very good.

Meanwhile, the instrument for assessing dietary diversity provides information on the variety of foods served, including staple foods, protein sources, vegetables, and fruits, based on the Regulation of the Minister of Health of the Republic of Indonesia Number 41 of 2014 concerning Guidelines for Balanced Nutrition. Each category evaluates how often the food is served, with options ranging from never, once a day, twice a day, to three times a day.

Table 1. The Instrumen of parents' knowledge about stunting.

Understanding Statement	Expert in Agreement	I-CVI
Definition of Stunting		
1. Stunting is a chronic malnutrition problem that affects children starting from the womb.	6	1.00
2. Inadequate maternal nutrition during pregnancy can affect the risk of stunting in children.	6	1.00
3. It is important for pregnant women to receive adequate nutrition to prevent stunting.	6	1.00
Impact of Stunting		
4. Stunting leads to a reduced immune response in children.	6	1.00
5. Stunting can limit normal physical development in children.	6	1.00
6. Stunting increases a child's risk of future illnesses.	6	1.00
Traits of Stunting		
7. Stunting occurs when a child's height is significantly shorter than that of children their age.	5	0.83
8. Recurring infections in children can contribute to stunting.	6	1.00
Contributors to stunting		
9. Lack of exclusive breastfeeding is a key contributor to stunting in children.	6	1.00
10. Stunting can occur in children aged 3 to 6 due to insufficient nutrition.	5	0.83
11. Low birth weight, defined as a weight below 2.5 kg, is not considered a sign of stunting in children.	5	0.83
12. A child will experience stunting if they receive adequate nutrition.	6	1.00

13. Poor nutritional status of the mother during pregnancy is not identified as a cause of stunting in children.	5	0.83
Prevention efforts		
14. Offering balanced and nutritious food to children after the age of 6 months does not contribute to the prevention of stunting.	6	1.00
15. Enhancing sanitation and hygiene practices is an effective strategy to prevent stunting.	6	1.00
16. Routine child health screenings play a crucial role in preventing stunting.	6	1.00
17. The provision of nutrient-rich food can serve as a preventive measure against stunting in children.	6	1.00
Determinants of stunting		
18. Stunting is not primarily caused by genetic factors.	6	1.00
19. Providing adequate nutrition for children by their parents can reduce the risk of stunting.	6	1.00
20. The insufficient knowledge of families in providing nutritious food is not a cause of stunting.	6	1.00
21. Providing weaning food with sufficient nutrition to children can cause stunting.	6	1.00
S-CVI/Ave		**0.95**

Data Analyses

All research data were processed using JASP for Mac version 0.19.1 (Apple Silicon). This study utilizes both descriptive and inferential methods to examine the relationship between parental characteristics and the provision of children's meals at home. The descriptive analysis presents respondent data based on area of residence, income level, occupation, and parental knowledge, displayed in frequencies and percentages. Children's food consumption—including staple foods, side dishes, vegetables, and fruits—is evaluated according to daily intake frequency and illustrated using tables and graphs to capture patterns in eating behavior and parental preferences in meal planning at home.

Prior to conducting inferential analysis, assumption tests such as the Shapiro-Wilk and Levene's Test were applied to ensure the suitability of statistical methods for ordinal data. Given that much of the data is ordinal or nominal, non-parametric tests were employed (Maldupa et al., 2024). A correlational analysis was then conducted to explore the link between parents' knowledge of stunting and their meal provision practices.

Result

The parental preference questionnaire for children's meal menus was distributed across various districts and cities in West Sumatra. The questionnaire focused on parental knowledge of stunting and meal provision frequency.

Demographic Characteristics of The Sample

The samples demographic characteristics include region, occupation, and income level. Most respondents are from Pesisir Selatan (24.29%), followed by Padang and Agam, while fewer come from Dhamasraya and the Mentawai Islands. A majority (59.43%) are housewives, indicating a dominance of non-formal employment. In terms of income, nearly half earn between 1,050,000–3,000,000 rupiah, while a small portion earns above 5 million. These findings suggest that respondents mainly come from densely populated areas in West Sumatra and generally belong to lower- to middle-income households, which is relevant for interpreting stunting knowledge.

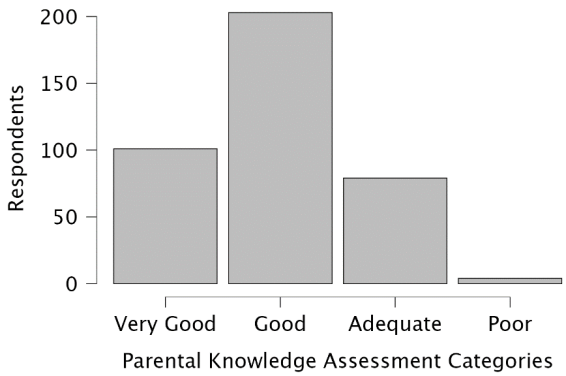

Figure 1. Percentage of Parents' Knowledge Assessmen

Based on the analysis of the relationship between respondent characteristics and parental knowledge about stunting, it was found that among the three variables examined—region of residence, occupation, and income level—only income showed a statistically significant relationship with the level of knowledge. This is indicated by a p-value of 0.023 and a 95% confidence interval that does not cross zero (0.012–0.162), suggesting that the higher the family income, the higher the parents' knowledge about stunting. For example, in the income group above 7 million rupiah, 92.3% of respondents had knowledge categorized as "Good" or "Very Good". Conversely, the group with income below 1 million rupiah had the highest proportion in the "Poor" knowledge category (14.15%).

Table 2. Relationship of Respondent Characteristics with Parent Knowledge about Stunting

Characteristics	%	Parents' Knowledge								P Value	95% CI	Collinearity Statistics	
		Poor		Adequate		Good		Very Good					
		n	%	n	%	n	%	n	%			Tolerance	VIF
Region										0.181	-0.058; 0.011	0.963	1.039
Bukittinggi	4.65%	0	0.00	2	11.11	11	61.11	5	27.78				
Padang	15.25%	0	0.00	10	16.95	29	49.15	20	33.89				
Pesisir Selatan	24.29%	3	3.19	9	9.57	55	58.51	27	28.72				
Agam	14.47%	0	0.00	13	23.21	27	28.21	16	28.57				
Pasaman Barat	16.28%	0	0.00	20	31.75	32	50.79	11	17.46				
Dhamasraya	6.97%	1	3.70	10	27.04	15	55.56	1	3.70				
The Mentawai Islands	6.46%	0	0.00	7	28.00	13	52.00	5	20.00				
Tanah Datar	7.75%	0	0.00	2	6.67	16	53.33	12	40.00				
Payakumbuh	3.88%	0	0.00	6	40.00	5	33.33	4	26.67				
Occupation										0.548	-0.062; 0.033	0.943	1.060
Housewife	59.43%	4	1.74	47	20.44	119	51.74	60	26.09				
Private Sector Employee	3.36%	0	0.00	2	15.39	7	53.85	4	30.77				
Civil Servant/Military/Police	13.95%	0	0.00	9	16.67	26	48.15	19	35.19				
Entrepreneur	9.04%	0	0.00	7	20.00	23	65.72	5	14.29				
Other …..	14.21%	0	0.00	14	25.46	28	50.91	13	23.64				
Income										0.023	0.012; 0.162	0.922	1.085
< 1.000.000	54.78%	3	14.15	47	22.17	115	54.25	47	22.17				
1.050.000 – 3.000.000	24.55%	1	1.05	19	20.00	46	48.42	29	30.53				
3.050.000 – 5.000.000	16.79%	0	0.00	12	18.46	36	55.39	17	26.15				
5.050.000 – 7.000.000	0.52%	0	0.00	0	0.00	0	0.00	2	100				
> 7.000.000	3.36%	0	0.00	1	7.69	6	46.15	6	46.15				

Meanwhile, the region of residence variable did not show a significant relationship with parental knowledge about stunting (p = 0.181), although there were variations in knowledge distribution across regions. Several areas such as Padang, Pesisir Selatan, and Agam had high proportions in the "Good" and "Very Good" categories, but these differences were not strong enough to indicate a statistically meaningful association. A similar pattern was observed in the occupation variable (p = 0.548), where respondents working as entrepreneurs had the highest proportion in the "Good" category (65.72%), yet the relationship was still not statistically significant.

This finding is supported by the multicollinearity analysis, which indicated no issues of inter-variable correlation, with all VIF values below 10 and tolerance values above 0.1. Overall, the results suggest that economic factors, particularly family income level, play a crucial role in determining parental knowledge about stunting, while geographic background and occupation do not have a significant influence.

Provision of Diverse Food Menus

According to Minister of Health Regulation No. 41 on Balanced Nutrition Guidelines, a diverse diet is essential for meeting nutritional needs, including staple foods, side dishes, vegetables, and fruits. This study surveyed these food categories among 387 respondents, with findings detailed below.

Provision of Staple Food Menu

Nearly all respondents (97.7%) consume rice, with an average frequency of 2.78 times per day, highlighting rice's dominant role as the staple food in West Sumatra. Although this aligns with broader national dietary trends, it merits deeper analysis regarding differences across socioeconomic strata and levels of nutritional awareness.

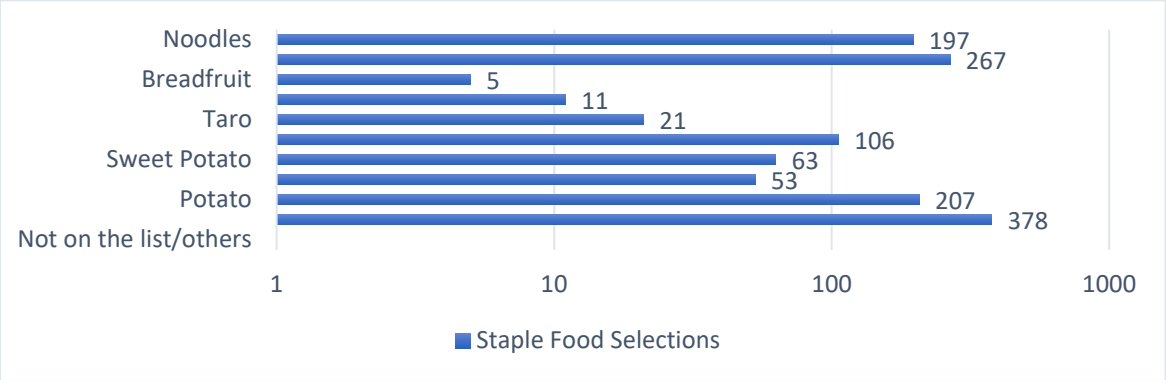

Figure 1. Percentage of Staple Food Consumption Over the Past Week

Cross-tabulation results indicate that the preference for rice remains strong even among parents with high levels of stunting awareness or higher household incomes. This persistence suggests that nutritional knowledge does not automatically lead to changes in staple food choices, likely due to deeply rooted cultural norms and economic considerations—rice is seen as an indispensable part of daily meals, while alternatives like potatoes, corn, or sago have yet to be widely accepted as practical substitutes.

Table 3 illustrates that rice is the most frequently consumed staple food in West Sumatra, with a stable average of 2.78 servings per day. This consistent intake underscores rice's central role in the region's diet, making it a dietary cornerstone for the majority of the population.

The main food consumption habits among respondents in this study predominantly focus on rice, with other basic meals functioning primarily as alternatives or supplements and not being consumed consistently. Bread, potatoes, and noodles are ingested at a lower frequency than rice, averaging fewer than 1.5 times day.

Table 3. Frequency of Staple Food Provision

Staple Food Group	Consumption Frequency (n)				Mean	SD
	Never	Once a day	Twice a day	Three times a day		
Rice (*Ns*)	0	2	52	325	2.78	0.58
Bread (*Rt*)	113	144	97	33	1.13	0.93
Potato (*Ktg*)	150	156	53	28	0.89	0.89
Noodles (*Mi*)	209	159	9	10	0.53	0.66
Breadfruit (*Skn*)	348	30	5	4	0.14	0.47
Sago (*Sg*)	363	16	4	4	0.09	0.41
Taro (*Tl*)	347	33	5	2	0.13	0.41
Corn (*Jg*)	240	27	114	6	0.48	0.69
Sweet Potato (*Ub*)	289	79	9	10	0.33	0.65
Cassava (*Sgk*)	298	72	6	11	0.29	0.59

Other staple foods, including as jackfruit, sago, taro, corn, sweet potatoes, and cassava, are rarely eaten, with the majority of respondents indicating that they never do. This means that these items are not a major component of their everyday diet. In general, the results show a social preference for more modern or universally recognized staple meals like rice, bread, and noodles over traditional staples.

Provision of Side Dish Menu

The fact that very few families do not provide side dishes demonstrates the value of protein in meeting children's nutritional needs. According to the data, the most popular side dishes with percentages greater than 50% are eggs (88.9%), fish (84.2%), chicken (78.3%), tofu (67.2%), and tempeh (60.4%).

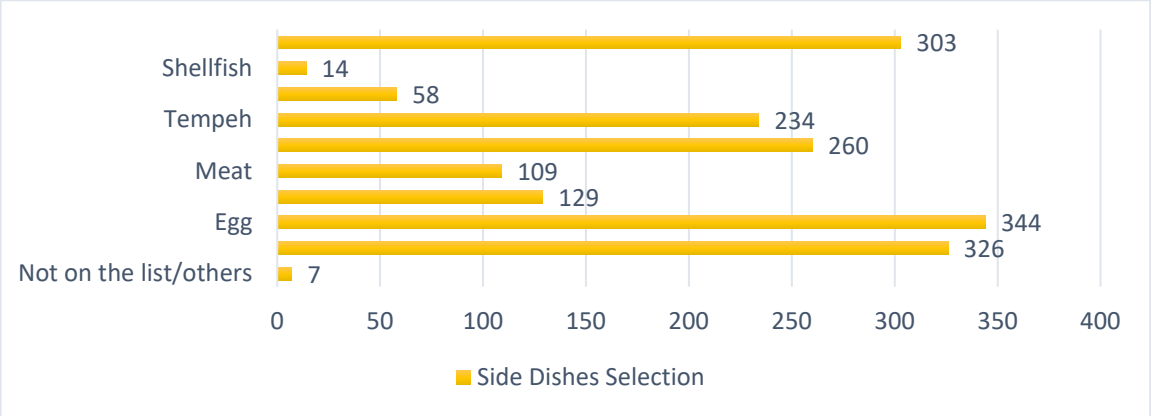

Figure 2. Percentage of Side Dishes Consumption Over the Past Week

The consumption of animal proteins (fish, eggs, chicken, meat, shrimp, squid, shellfish) and plant-based proteins (tofu, tempeh) varies significantly. Fish and eggs are consumed an average of 1.93 and 1.71 times per day, respectively, indicating their inclusion in respondents' daily diets. In contrast, red meats such as beef or goat are consumed only 0.69 times per day, while chicken is favored at 1.49 times daily, reflecting a preference for poultry over other meats.

Conversely, respondents rarely consume seafood proteins like shellfish, shrimp, and squid, with 345 individuals reporting they never eat shellfish. In contrast, plant-based proteins such as tofu and tempeh are consumed 1.48 and 1.36 times per day, indicating their significant role in daily diets.

Several side dishes, like tofu (SD = 1.16) and tempeh (SD = 1.14), exhibit relatively high standard deviations, indicating significant variability in individual consumption patterns. Factors influencing this variation may include personal preferences, pricing, or availability across different regions.

In contrast, shellfish and squid have lower SDs (0.54 and 0.80), suggesting that most people have similar consumption patterns—rarely or never consuming these dishes. This indicates that these side dishes are not very popular among the respondents in general.

The average daily consumption of fish (1.93) and eggs (1.71) is the highest, indicating that these two are key protein sources in the respondents' diets. In comparison, the consumption of

meat (0.68) and chicken (1.49) is lower, suggesting that meat and chicken are not the primary choices for fulfilling protein needs.

The data reveals that the community exhibits a balanced dietary pattern, integrating both animal proteins (fish, eggs, chicken) and plant-based proteins (tofu, tempeh). While animal protein predominates, the notable intake of tofu and tempeh signifies a well-rounded protein consumption.

Table 4. Frequency of Side Dishes Provision

Side Dishes Group	Consumption Frequency (n)				Mean	SD
	Never	Once a day	Twice a day	Three times a day		
Fish (*Ikn*)	53	70	114	150	1.93	1.06
Egg (*Tlr*)	51	116	113	107	1.71	1.01
Chicken (*Aym*)	94	105	91	97	1.49	1.11
Meat (*Dgg*)	234	81	31	41	0.69	1.01
Tofu (*Th*)	112	78	96	101	1.48	1.16
Tempeh (*Tmp*)	116	104	77	90	1.36	1.14
Shrimp (*Udg*)	237	72	45	33	0.67	0.98
Squid (*Cmi*)	299	48	21	19	0.38	0.80
Shellfish (*Krg*)	345	28	6	8	0.17	0.54

Provision of Vegetable Menus

In the variety of vegetable groups presented in this study, there are 18 types of vegetables consumed daily. Based on the survey results, three vegetables were consumed by more than 50% of respondents in West Sumatra: carrots (62.1%), spinach (53.5%), and water spinach (53.2%).

From the data presented in Figure 3, it can be concluded that parents in West Sumatra consistently provide a variety of vegetables as part of the meal menu, including carrots, spinach, and water spinach. These three types of vegetables are the most commonly selected by parents in West Sumatra.

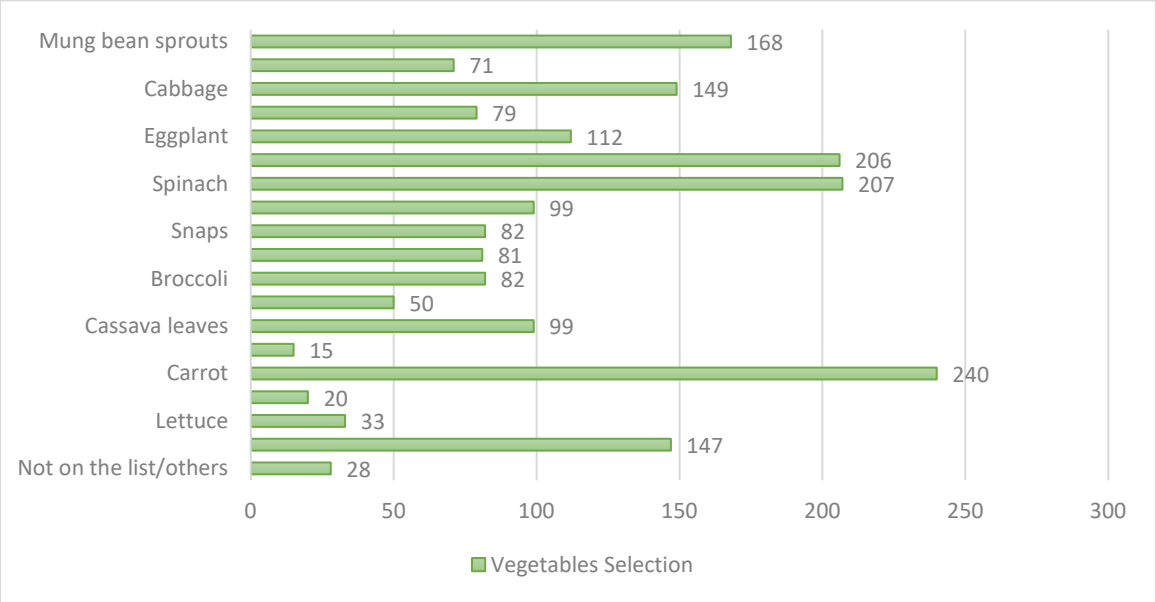

Figure 3. Percentage of Vegetables Consumption Over the Past Week

Carrots and spinach emerge as the most commonly consumed vegetables, averaging once a day, reflecting their acceptance in children's diets. In contrast, other vegetables like kale, bean sprouts, corn, and cabbage are consumed at a moderate rate of 0.5 to 0.8 times daily, indicating inconsistent inclusion in children's meal plans by parents.

Chayote, yardlong beans, eggplant, green beans, and cauliflower exhibit low average consumption, ranging from 0.35 to 0.5 times per day, with over half of the respondents rarely or never serving these vegetables. Moreover, bitter melon, water squash, broccoli, lettuce, and

radishes have an average consumption below 0.3 times daily, with most respondents indicating that they never consume these vegetables. Notably, bitter melon and radish are seldom included in children's meals.

Table 5. Vegetable Provision Frequency

Vegetables	Consumption Frequency (n)				Mean	SD
	Never	Once a day	Twice a day	Three times a day		
Carrot	148	118	83	38	1.03	0.99
Spinach	163	99	74	51	1.03	1.07
Water Spinach	178	111	65	33	0.88	0.98
Mung bean sprouts	201	90	57	39	0.83	1.02
Chayote	298	48	29	12	0.37	0.76
Cabbage	281	70	26	10	0.39	0.73
Yardlong bean	278	65	31	13	0.43	0.78
Eggplant	263	71	35	18	0.50	0.84
Corn	242	100	30	15	0.53	0.79
Snaps	273	71	25	18	0.45	0.81
Cauliflower	264	81	31	11	0.46	0.76
Broccoli	296	56	27	8	0.35	0.70
Radish	309	52	20	6	0.28	0.63
Cassava leaves	265	71	23	28	0.52	0.89
Bitter melon	359	16	9	3	0.11	0.44
Water gourd	327	35	21	4	0.23	0.59
Lettuce	320	49	13	5	0.23	0.57
Cucumber	218	120	33	16	0.61	0.81

Provision of Fruit Menus

According to the data shown in Figure 4, bananas and oranges are the most commonly included fruits in meal menus, reflecting their high popularity among other fruit options. In contrast, fruits like strawberries, dates, and sapodilla are less frequently featured. There are also occasions when no fruit is served at all. Overall, while there is a variety in the types of fruits provided, there is a noticeable tendency to favor certain fruits over others.

There is considerable variation in fruit provision, with fruits like oranges and bananas showing a diverse distribution (indicated by higher standard deviations), while fruits like passion fruit and lychee are less consistently provided. According to the data, lychee and passion fruit are the least served, with "Never" frequencies reaching 366 and 364 times, respectively, followed by mangosteen and soursop.

Table 6 reveals that parents are more likely to provide common and easily accessible fruits, such as oranges, bananas, and papayas, compared to exotic or seasonal fruits. There is significant variation in the frequency of provision for certain fruits, which may be influenced by availability, cultural preferences, price, and accessibility in the regions where the research was conducted.

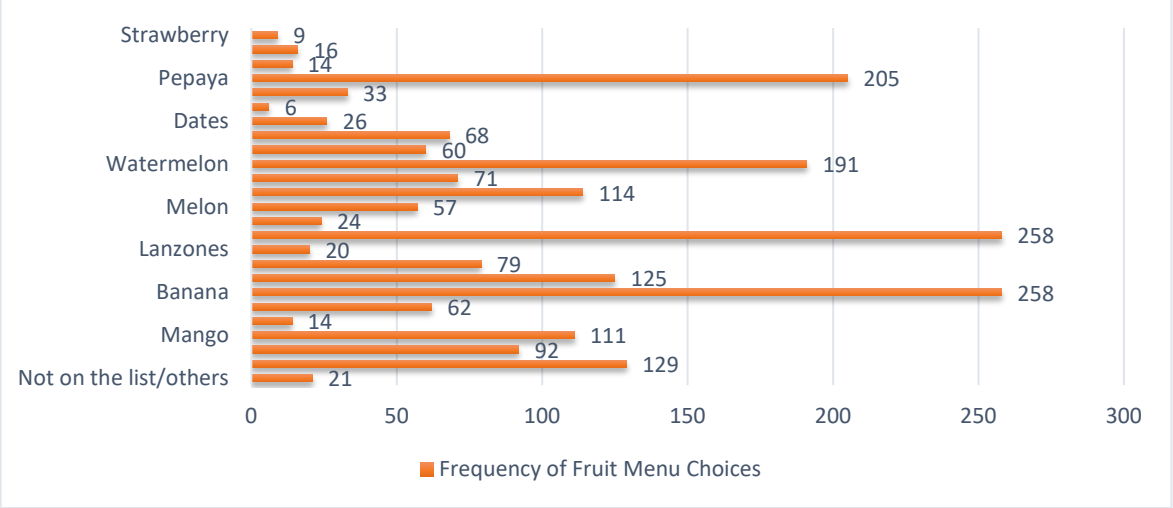

Figure 4. Percentage of Fruits Consumption Over the Past Week

Overall, the data indicates that fruits such as bananas, oranges, and papayas are the most frequently consumed by respondents, while exotic or seasonal fruits like lychee, passion fruit, and durian have significantly lower consumption frequencies. The variation in consumption is more pronounced among the more popular fruits, suggesting that preferences and accessibility play crucial roles in fruit consumption patterns among the surveyed population.

Table 6. Frequency of Fruit Provision

Fruits	Consumption Frequency (n)				Mean	SD
	Never	Once a day	Twice a day	Three times a day		
Avocado	289	85	9	4	0.29	0.56
Grape	279	85	18	5	0.35	0.63
Apple	236	108	35	8	0.52	0.75
Lanzones	325	48	12	2	0.20	0.51
Durian	304	54	23	6	0.31	0.65
Java apple	264	86	29	8	0.43	0.72
Orange	138	153	62	34	0.98	0.93
Dates	319	42	15	11	0.27	0.67
Mango	252	88	31	16	0.51	0.81
Manggis	331	37	10	9	0.22	0.60
Lychee	366	16	3	2	0.07	0.34
Passion fruit	364	16	4	3	0.09	0.38
Melon	306	58	16	7	0.29	0.63
Jackfruit	330	40	13	4	0.20	0.54
Pineapple	295	65	19	8	0.33	0.67
Pear	257	83	30	17	0.50	0.82
Pepaya	175	142	44	26	0.79	0.89
Banana	134	139	70	44	1.06	0.99
Rambutan	273	80	20	14	0.42	0.75
Sapodilla	326	40	18	3	0.22	0.56
Snakefruit	265	85	28	9	0.43	0.73
Watermelon	200	131	38	18	0.67	0.84
Sirsak	346	28	7	6	0.16	0.51
Strawberry	334	40	8	5	0.18	0.52

Parents' Knowledge of Stunting and Food Consumption

The Spearman correlation analysis between parental knowledge and food consumption patterns yields several intriguing findings. Notably, there was no significant relationship identified between parental knowledge and the consumption of various staple foods, such as rice, potatoes, and cassava. This suggests that the level of knowledge parents possess does not significantly influence their consumption of staple foods, likely due to the fact that these foods represent basic necessities consumed by nearly everyone, regardless of knowledge.

In contrast, within the category of side dishes, a positive trend approaching significance was noted for meat (rho = 0.10, p = 0.05) and chicken (rho = 0.09, p = 0.07). Although the correlations are weak, they indicate a tendency for parents with greater knowledge to provide animal protein in the form of meat and chicken for their family's meals.

In the vegetable category, several types exhibit significant positive correlations, particularly Sld (p = 0.02), Lb (p = 0.01), and spinach (rho = 0.10, p = 0.05). These results indicate that parental knowledge influences the selection and provision of specific vegetables for family consumption, likely due to a better understanding of their nutritional benefits.

Table 7. The Spearman correlation analysis assessed links between parents' knowledge and the diversity of food types offered

Variable	Category	Item	Spearman_rho	p_value
PARENTAL KNOWLEDGE	Staple Food	Ns	0,01	0,85
		Ktg	0,05	0,33

Variable	Category	Item	Spearman_rho	p_value
		Sgk	0,01	0,89
		Ub	0,04	0,42
		Jag	-0,01	0,92
		Tl	-0,04	0,47
		Sg	-0,08	0,13
		Skn	-0,09	0,09
		Rt	0,06	0,23
		Mi	0,01	0,85
	Side Dishes	Ikn	0,07	0,19
		Tlr	-0,04	0,49
		Aym	0,09	0,07
		Dgg	0,1	0,05
		Th	0,03	0,51
		Tmp	0,06	0,28
		Udg	0,04	0,48
		Cmi	0,09	0,07
		Krg	0,05	0,31
	Vegetables	Kn	0,06	0,24
		Sld	0,11	0,02
		LbA	0,01	0,79
		Lb	0,13	0,01
		Br	0,06	0,22
		KeK	0,03	0,52
		Kng	0,07	0,16
		Tr	-0,05	0,34
		KP	-0,03	0,52
		Bc	0,05	0,34
		Kol	-0,05	0,33
		Wtl	0,05	0,34
		Jag	-0,002	0,96
		LbS	0,06	0,24
		Pare	0,05	0,29
		Bym	0,1	0,05
		Taoge	0,08	0,1
		DaS	-0,04	0,4
		Alp	0,13	0,01
		Ang	0,07	0,17
		Apl	0,1	0,04
		Dk	0,05	0,35
		Dur	0,04	0,48
		Jb	0,07	0,17
		Jrk	0,07	0,16
		Krm	0,12	0,02
		Mga	0,12	0,02
		Mgis	0,04	0,42
	Fruits	Lci	0,1	0,05
		Mrks	0,02	0,76
		Mel	0,1	0,04
		Ngka	0,08	0,13
		Ns	0,06	0,22
		Pr	0,06	0,22
		Ppy	0,01	0,82
		Psg	0,02	0,65
		Rmb	0,07	0,15
		Sw	0,07	0,15
		Salk	0,06	0,28
		Smgk	0,08	0,1
		Sirsk	0,03	0,61
		Strwb	0,13	0,01

Most notably, the fruit category reveals significant positive correlations with several fruit types, including Alp (rho = 0.13, p = 0.01), Apl (rho = 0.10, p = 0.04), Krm (rho = 0.12, p = 0.02), Mga (rho = 0.12, p = 0.02), and Strwb (rho = 0.13, p = 0.01). Although these correlations are relatively weak, the consistent trend suggests that parents with higher levels of knowledge are more inclined to offer a wider variety of fruits for their families.

In summary, while the identified relationships are generally weak (rho < 0.2), the data indicate that parental knowledge is positively correlated with a more varied food consumption, particularly in fruits and certain vegetables. This emphasizes the importance of nutritional education for parents as a strategy to improve the quality of family food consumption, especially concerning fruit and vegetable intake.

Discussion

The results of this study indicate that parental choices in providing meals for children are deeply influenced by cultural practices and socioeconomic status. Rice remains the predominant staple food in West Sumatra, with nearly all respondents reporting its consumption at an average of 2.78 times per day. This highlights rice's central role in the Indonesian diet, supported by its low cost, high availability, and long-standing cultural significance (De Pee et al., 2021; Fetriyuna et al., 2024; Fitriana et al., 2020; Gamayanti & Junaidi, 2021; Pangesti et al., 2023). Although parents demonstrated adequate knowledge about stunting, this awareness does not necessarily translate into changes in staple food choices. This suggests that eating habits are more strongly influenced by entrenched cultural norms than by nutritional knowledge.

In contrast, other staple foods such as bread, potatoes, and noodles are consumed less frequently, while traditional sources like sago, taro, and cassava are rarely served. This indicates a growing shift from locally sourced foods to more commercially processed options (De Pee et al., 2021). The increasing preference for commercial products is largely driven by their wide availability in supermarkets and convenience stores, which encourages families to opt for easily accessible options (Pangesti et al., 2023). Furthermore, traditional carbohydrate sources such as sago and cassava remain underutilized, particularly in western Indonesia, where they are culturally less accepted compared to their stronger presence in eastern regions (Febriana et al., 2024; Nanlohy & Gafur, 2020; Sudirman et al., 2023). This underutilization of traditional staples highlights the influence of regional food norms on dietary diversity.

The high frequency of animal protein consumption—particularly fish, eggs, and chicken—indicates that parents tend to favor protein sources that are both accessible and cost-effective. This pattern reflects a broader global trend in developing countries, where urbanization and improved economic conditions have fostered an increasing preference for animal-based foods (Tomić et al., 2023). Notably, tofu and tempeh continue to be essential sources of plant-based protein, demonstrating their sustained role in local diets, likely due to their affordability and nutritional value (Haryani et al., 2023; Nuban et al., 2020; Nugroho & Farida, 2023). The balance between animal and plant-based proteins suggests an adaptable dietary approach that aligns with financial and nutritional needs. These trends underscore the complex interplay between knowledge, affordability, and food availability in determining parental choices.

The overall intake of vegetables remains insufficient, with most varieties consumed less than once per day. Although carrots, spinach, and water spinach are among the most commonly consumed vegetables, many others are rarely included in children's meals. This pattern is concerning, given that national vegetable consumption remains below FAO recommendations (Aprianty et al., 2024; Cholily et al., 2022; Damayanti et al., 2018), with a mean frequency of only 1.03 times per day—well below the adequate nutrition threshold. A similar issue is observed in fruit consumption, where bananas and oranges dominate, with average frequencies of 1.06 and 0.98 times per day, respectively. Contributing factors include limited awareness of nutritional benefits, economic barriers, and inconsistent availability of fresh produce (Draxten et al., 2014; Fletcher et al., 2017; Samad et al., 2024; Silalahi et al., 2018).

Regarding the diverse patterns of fruit consumption, oranges and bananas dominate the choices (n = 258 each), followed by papaya (n = 205) and watermelon (n = 191). However, Table 5 shows that bananas have the highest average daily consumption (1.06 times), followed by oranges (0.98 times). Despite the variety of available fruits, the overall frequency of fruit consumption remains low. Aprianty et al. (2024) found that Indonesians consume an average of 173 grams of fruits and vegetables daily—far below the WHO's 400-gram recommendation. This shortfall may be influenced by socioeconomic conditions, education levels, and cultural preferences. Elaina (2023) notes that freshness and quality are prioritized in consumer choices, while Riskesdas data show that 95.5% of Indonesians consume insufficient fruits and vegetables, particularly among school-aged children. Seasonal availability and price fluctuations also affect fruit accessibility (Presensia et al., 2023; Rachman et al., 2017; Suparman & Athennia, 2019).

This study reveals that while parental awareness of stunting moderately correlates with dietary diversity, particularly in fruits and vegetables, knowledge alone is insufficient to drive significant behavioral change. This suggests that nutrition interventions should not only disseminate information but also address structural challenges such as affordability, food access, and cultural perceptions. One limitation of this study is its cross-sectional design, which restricts the ability to assess causal relationships or long-term changes in food behavior. Future research should utilize longitudinal or qualitative methods to explore contextual and behavioral drivers more deeply. Policymakers should consider localized strategies that integrate nutrition education with practical solutions, leveraging regional food resources to enhance sustainable, culturally relevant dietary practices.

Conclusion

Parental preferences in providing food for children at home are shaped by a complex interplay of knowledge, socioeconomic conditions, and habitual practices. This study found that while the consumption of rice and animal-based proteins is prevalent among families in West Sumatra, the intake of vegetables and fruits remains notably insufficient. Notably, higher parental awareness of stunting was modestly associated with greater dietary diversity, particularly in the provision of fruits and vegetables, although the correlation was generally weak. These findings emphasize the need for nutrition education programs that go beyond information dissemination, promoting practical, affordable, and culturally acceptable strategies for achieving balanced diets using locally available resources. To be effective, future interventions must account for regional disparities, economic limitations, and entrenched food habits, while longitudinal studies are recommended to capture behavioral changes over time and to inform the development of sustainable, community-based nutrition models.

Declarations

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