NUTRITIONAL STATUS AND DAILY FOOD INTAKE OF PRESCHOOLERS IN BARANGAY SALINGSINGAN, AMBAGUIO, NUEVA VIZCAYA: BASIS OF A NUTRITIONAL GUIDE

Grace Lyn C. Alperez[1], Dominador S. Garay Jr.[2], Tedd Austin I. Salum[3], John Rey C. Santos[4], Iommy N. Blance[5], and Thelma D. Delos Reyes, RM, RN, MSN[6]

ABSTRACT

Despite national efforts to monitor child growth, there is limited research assessing how specific food group consumption patterns relate to developmental health outcomes among children in rural Philippine communities. This study addresses that gap by investigating the growth indicators and meal composition of preschool-aged children in Barangay Salingsingan, Ambaguio, Nueva Vizcaya. A descriptive-correlational-comparative design was used to analyze data from 41 children, including anthropometric measurements—height-for-age, weight-for-age, and weight-for-height—and a five-day caregiver-reported dietary log. The analysis revealed that although 92.7% of participants fell within normal range for weight relative to height, 26.8% were classified as underweight and 69% were either stunted or severely stunted, indicating long-term nutritional deficits. Meal logs showed a heavy reliance on energy-rich staples, with 67.5% of meals classified in this group. At the same time, protein- and micronutrient-dense foods accounted for only 9.3% and 23.2%, respectively. All families reported monthly incomes below ₱12,000. Children with caregivers aged 25 to 34 tended to have more favorable health outcomes, suggesting an influence of parental maturity and potentially greater caregiving knowledge or stability. The study highlights the coexistence of calorie adequacy and micronutrient deficiencies, underscoring the importance of targeted educational and food-access interventions in rural settings. Findings from this research can support localized planning for nutrition programs that better match the needs and realities of remote communities.

Keywords: Linear growth deficit, dietary imbalance, food frequency analysis, caregiver influence, rural health disparities

INTRODUCTION

Malnutrition remains a significant public health issue in the Philippines, especially among children under five. Despite national programs and ongoing efforts, the country continues to struggle with high rates of stunting, underweight, and wasting. According to the Global Nutrition Report (2021), the Philippines has the highest prevalence of stunting among children under five in Southeast Asia. Malnutrition not only affects children's physical development but also has long-term consequences on their cognitive abilities, academic performance, and even economic productivity later in life.

Food is commonly classified into three groups: Go (energy-giving), Grow (body-building), and Glow (body-regulating) foods. An imbalance in these food groups often results in nutritional deficiencies. Recent data suggests that Filipino children consume a large proportion of Go foods while lacking adequate intake of Grow and Glow foods. Understanding children's actual food intake, categorized by these groups, can help identify dietary gaps and areas for improvement. Preschool years (ages 3 to 5) are a critical period for growth and development. During this stage, children's nutrition has a direct impact on their physical and mental health. However, factors such as poverty, limited access to diverse foods, low parental education, and inadequate health services all contribute to poor nutritional outcomes. The role of parents—especially their age, income, and food choices—is vital, as they act as primary caregivers and influence children's eating habits and overall well-being.

Nueva Vizcaya, particularly the municipality of Ambaguio, reflects this broader national problem. Ambaguio is a mountainous, fifth-class municipality with limited healthcare access and challenging transportation routes. Among its barangays, Salingsingan has been identified by the local nutrition council as having the highest number of undernourished, stunted, and overweight children under five. In 2024, the barangay recorded 42 stunted children out of 211 total malnourished cases in the municipality, underscoring the urgent need for targeted nutritional interventions in the area.

Thus, this study aims to assess the nutritional status and daily food intake of preschoolers in Barangay Salingsingan. It also investigates how parental factors—specifically age and monthly income—affect the children's nutrition. By exploring these relationships, the study hopes to provide useful insights for developing a localized nutritional guide for parents and health workers. Ultimately, the research supports broader goals such as the United Nations Sustainable Development Goal 2: Zero Hunger, which emphasizes the importance of ending malnutrition in all its forms.

In doing so, this study contributes to the growing body of research focused on early childhood nutrition, while offering practical solutions tailored to the unique challenges faced by communities like Barangay Salingsingan.

Statement of the Problem

This study aimed to determine the nutritional status and daily food intake of preschoolers in Barangay Salingsingan of Ambaguio, Nueva Vizcaya. The data were gathered during the first semester of the 2024-2025 school year. Specifically, it sought to answer the following specific problems:

1. What is the profile of the parents of the preschoolers in Barangay Salingsingan, Ambaguio, Nueva Vizcaya, in terms of the following?
    a. Age
    b. Monthly income
2. What is the nutritional status of the preschool children in Barangay Salingsingan of Ambaguio, Nueva Vizcaya, in terms of the following?
    a. Height for age
    b. Weight for age
    c. Weight for height
3. What is the daily food intake of the preschoolers categorized into the following?
    a. Go
    b. Grow
    c. Glow
4. Is there a significant difference between the preschoolers' nutritional status when grouped according to their parents' profiles?
5. Is there a significant relationship between the nutritional status of the preschoolers and their daily food intake?
6. What nutritional and dietary guides may be recommended to the parents of the preschoolers to enhance their nutritional status?

METHODOLOGY

This study used a descriptive-correlational-comparative design to assess the nutritional status and daily food intake of preschoolers in Barangay Salingsingan, Ambaguio, Nueva Vizcaya. The descriptive part aimed to present the parents' profiles (specifically their ages and monthly incomes) and to describe the nutritional status of preschoolers using height-for-age, weight-for-age, and weight-for-height indicators. The correlational aspect examined the

relationships among children's nutritional status, their parents' profiles, and their food intake. Meanwhile, the comparative analysis examined differences in nutritional outcomes across parental age and income groups. These approaches were used to help identify key factors that may influence children's nutrition in this rural setting.

Barangay Salingsingan, the chosen locale, is a remote, mountainous barangay in Ambaguio, a fifth-class municipality in Nueva Vizcaya. It was selected for the study because it has one of the highest rates of malnutrition in the province, based on 2024 data from the Municipal Nutrition Council. The area lacks hospitals and has limited access to a variety of nutritious foods due to its terrain and distance from main markets. These conditions made it a relevant site for studying how geographic and economic factors affect child nutrition.

The respondents were preschool children aged 3 to 5 years old identified as malnourished through the barangay's Oplan Timbang program. Out of 52 recorded malnourished children, 41 were selected using simple random sampling. Inclusion also extended to those enrolled in the barangay's feeding program, though the meals provided were not considered nutritionally complete. With the help of barangay officials and health workers, researchers conducted house-to-house visits to identify eligible participants and obtain informed consent from parents or guardians.

Two main tools were used for data collection: a parent profile form and a five-day food diary. The profile form collected basic demographic information, such as age and monthly income, based on PSA income categories. The food diary, adapted from the CDC, was used to track the child's food intake for 5 consecutive days. Foods were later categorized into Go, Grow, and Glow groups based on FNRI's Pinggang Pinoy. Anthropometric measurements—height and weight—were obtained from the Oplan Timbang records. These were interpreted using the WHO Child Growth Standards to classify children as normal, underweight, overweight, stunted, or severely stunted. Data analysis included descriptive statistics for frequency and percentage distributions. Chi-square tests were applied to examine the relationship between food intake and nutritional status. At the same time, cross-tabulations were used to compare nutritional status across different parental age and income groups.

Ethical clearance was granted by the Saint Mary's University Research Ethics Board. The researchers ensured that all participants were informed about the study's purpose and process. Privacy and confidentiality were strictly maintained through coded identifiers, and all data were securely stored. Parents were made aware of their right to withdraw at any point. Upon completion of the study, a tailored nutritional guide was provided to parents, along with health teaching sessions to help them better support their children's dietary needs.

RESULTS AND DISCUSSION

Section 1. Parents' Profile

Table 1
Frequency and Percentage Distribution of Parents According to Age

Age Interval (Years)	Frequency	Percent (%)
17	2	4.88
18-24	11	26.83
25-34	24	58.54
35-44	4	9.76
Total	41	100%

The first part shows the distribution of parents by age. It can be seen that 4.88% (f=2)

are 17 years old; 26.83% (f=11) are 18 to 24 years old; 58.54% (f=24) are 25 to 34 years old, and 9.76% (f=4) are 35 to 44 years old. In the Philippines, early adulthood is typically associated with child-rearing responsibilities, aligning with the consistent trend in the reproductive age demographic (Philippine Statistics Authority, 2023).

Table 2
Frequency and Percentage Distribution of Parents According to Monthly Income

Family Monthly Income	Frequency	Percent (%)
Php 12,000 and below	41	100

As seen in Table 2, all 41 children's parents have a monthly income of less than 12,000 pesos. Having a low income restricts parents' ability to purchase a variety of nutritious foods such as fresh fruits, vegetables, and lean proteins. This leads to unhealthy diets among children (US Dietary Guidelines for 2020-2025 Released, 2021). Moreover, low income can also be a barrier to accessing healthcare. This implies that concerned stakeholders should consider assisting low-income parents.

Section 2. Nutritional Status of Preschool Children

Table 3
Nutritional Status of Preschoolers Based on Height-for-Age

Weight Classification	**Frequency**	**Percent (%)**
Normal	12	29.27
Stunted	20	48.78
Severely Stunted	9	21.95
Total	41	100%

Approximately 71% of children are either stunted or severely stunted, which shows that their nutrition may be prolonged inadequate nutrient intake and recurrent infections during their critical growth periods, especially during their first 1,000 days of life (Stevens et al., 2016). Stunting is a well-established indicator of cumulative nutritional deficits and poor health conditions, which can impair cognitive development (Deshpande & Ramachandran, 2021). The 9 severely stunted children indicate that there is failure in their substantial growth that likely began early in life and was not adequately addressed through nutritional or healthcare interventions (Prentice et al., 2013).
This may be associated with the parents' socioeconomic status. Low household income limits access to diverse and nutrient-rich foods and adequate healthcare, which can lead to high stunting rates among children (Perkins et al., 2016).

Based on Table 1, 13 of the parents are aged 24 and below. This may indicate that their nutritional status during their pregnancy may have affected their children's stunting risk. According to a previous study, maternal factors such as height, age, education, and nutritional status during pregnancy and after birth strongly influence the risk of a child being stunted (Perkins et al., 2016). This problem is further exacerbated when younger parents or those with limited knowledge of nutrition face challenges providing adequate nutrition. Also, parents with limited income often prioritize affordable, convenient foods that are guaranteed to be eaten by children, even if these are less nutritious, such as processed or junk foods (Today, 2021). According to Saaka and Osman (2013), low income correlates strongly with food insecurity, which negatively affects children's growth and nutrition. Providing children with requested snacks or treats, which are often less healthy, can be an important expression of love when scarce material resources limit what low-income families can afford (Writer, 2018).

The need is amplified by evidence showing that catch-up growth, or the phenomenon in

which children who were formerly stunted re-establish normal growth patterns, begins only at two years of age and is very limited in magnitude. That is, growth deficits incurred during the first two years are difficult to reverse in later childhood. Late nutritional interventions can therefore have long-term effects, including compromised intellectual development, poorer school achievement, and diminished adult productivity. (Goudet et al., 2019; Prentice et al., 2013).

Table 4
Nutritional Status of Preschoolers Based on Weight-for-Age

Weight Classification	Frequency	Percent (%)
Normal	29	70.73
Overweight	1	2.44
Underweight	11	26.83
Total	41	100%

The table above shows the nutritional status of preschoolers based on weight-for-age. The majority of the children (70.73%) are classified as normal for weight-for-age. The normal weight in 29 children shows that most children maintain adequate weight-for-age. Only 1 child being overweight suggests that excessive weight gain is less common but still possible, even in low-income settings.

However, a concerning number of preschoolers are listed as underweight, comprising around 26.83% of the sample. The presence of 11 underweight children says that there is a substantial risk of malnutrition due to their insufficient weight relative to their age. This suggests they may have inadequate food intake or poor nutrient absorption, as low income limits access to sufficient quantities and high-quality nutritious foods (Tamir et al., 2024). Studies show that children in low-income families face higher odds of being underweight due to poverty-related food insecurity and restricted resources. This compromises their nutritional status (Birhanu et al., 2024).

Table 5
Nutritional Status of Preschoolers Based on Weight-for-Height

Weight Classification	Frequency	Percent (%)
Normal	39	92.7
Overweight	1	2.4
Underweight	2	4.9
Total	41	100%

The table above shows the nutritional status of preschoolers based on weight-for-height. Out of 41 preschoolers, 38 or 92.7% have a normal weight classification, while two or 4.9% are underweight, and 1 or 2.4% is overweight. The majority of children have a normal weight-for-height status, suggesting adequate growth relative to their height for most of the group. This also indicates that, with a small percentage of overweight and underweight students, these conditions are relatively uncommon in the sample under the weight-for-height-only classification. However, there is a greater number of underweight and stunted preschoolers under the other two classifications, height-for-age and weight-for-age.

According to the previous table showing parents' monthly income of less than 12,000 pesos, most children maintain a normal weight-for-height status despite their parents' low monthly income. This suggests that the children receive adequate nutrition and a diet rich in nutrient-dense foods, as these are important factors that contribute to children's growth, height, and weight. This can be inferred from the fact that most children maintained a normal nutritional status as reflected above.

Studies show that diet quality is independently associated with children's weight status, with better quality diets tending to correlate with healthier weight outcomes (Jennings et al., 2011). However, findings are also somewhat inconclusive due to variation in study designs and populations (Thomson et al., 2019).

Section 3. Daily Food Intake

The table above shows the daily food intake of the preschoolers within the research locale.

Table 6

Percentage of Daily Food Intake of Preschoolers

Weight Classification	Frequency	Percent (%)
Go	567	67.50
Grow	78	9.29
Glow	195	23.21
Total	840	100%

It can be gleaned that in a week, 67.50% (f=567) of 840 meals are composed of Go foods; 9.29% (f=78) are Grow foods, and 23.1% (195) are Glow foods. From this grouping, it can be inferred that most preschoolers consume Go foods prepared by their parents, followed by Glow foods.

This is due to the research locale being an agricultural area with an abundant supply of fruits and vegetables. Meanwhile, there is limited consumption of Grow foods, which include protein-rich items like meat, fish, and dairy, since they are delivered on irregular schedules. Moreover, the area has rugged terrain, which makes it difficult for suppliers to deliver some products. According to some residents, protein-rich foods are often bought at public markets in lowland areas, usually only on weekends. In their 2022 study, Keyata found that families living in remote farming villages struggle to access marketplaces, making it difficult to purchase perishable items like dairy, eggs, and fresh produce. This issue is common in isolated mountainous regions, where transportation challenges and seasonal food shortages further limit their access to a varied diet. Similarly, a 2024 study by Sato et al. in rural Lao PDR highlighted the impact of geographic isolation on food availability and consumption patterns. The research showed that due to poor infrastructure and long travel times to markets, families often depend on locally grown staples. Even when a more diverse diet is possible, the lack of awareness about the nutritional benefits of fruits, vegetables, and protein-rich foods leads to their underconsumption.

To understand the food groups mentioned above, Go foods are typically energy-dense foods that provide carbohydrates and fats, which act as the fuel for physical activities and daily functions. Examples include grains, cereals, and starchy foods. On the other hand, protein-rich foods are essential for growth and muscle development, such as meats, beans, dairy, and eggs. Glow foods are fruits and vegetables rich in vitamins, minerals, and antioxidants, which are important for immune function and overall health (Edible Schoolyard NYC, 2020).

Based on this classification and the results in Table 6, the high consumption of Go foods suggests that preschoolers are getting a substantial number of energy-providing foods, which are important for their active growth and development (Mayo Clinic, 2025). However, the relatively low intake of Grow foods suggests limited protein intake, which is concerning given the vital role of protein in tissue growth, maintenance, and immune health (Faizan & Rouster, 2023). The moderate intake of glow foods reflects that the children consume some fruits and vegetables. These foods provide micronutrients and fiber, but intake may still be insufficient given recommended serving sizes (Centers for Disease Control and Prevention, 2025).

Overall, this imbalanced dietary pattern, with high Go food intake and lower grow and Glow food intake, suggests that while preschoolers' diets are energy-efficient, they may be lacking adequate protein and micronutrients necessary for optimal growth and immune function. The relatively low food frequency may be related to insufficient protein intake, which contributes to chronic undernutrition, given the stunting prevalence in the sample (American Heart Association, 2024).

Section 4. Cross Tabulation of Nutritional Status and Parents' Profile

Table 7
Cross-tabulation of Parents' Age and Children's Nutritional Status Based on Height-for-Age

Classification	17 years	18-24 years	25-34 years	35-44 years	Overall
Normal	2	6	4	0	12
Stunted	0	1	16	3	20
Severely Stunted	0	4	4	1	9
Total	2	11	24	4	41

The highest number of stunted preschoolers (16) were from mothers who are aged 25 to 34 years; 4 severely stunted and 4 of normal height for age were also recorded. Over half of all the stunted children from the sample are from this age group, implying that chronic malnutrition is still evident among mothers who are in their supposed most economically stable and mature years. This aligns with the findings of Capanza et al. (2018), who emphasized that undernutrition in children is associated not only with parental profiles but also with household food insecurity and poor dietary diversity.

The height measurements of children born to mothers aged 18–24 years showed six children with normal height, four children who are severely stunted, and one who is stunted. The findings of severe stunting among children of young mothers confirm previous research, which indicates that younger maternal age increases the risk of undernutrition as young mothers often lack experience and have reduced access to healthcare services and limited nutritional knowledge (Wemakor et al., 2018; UPLB, 2018).

The children in the 35–44 years age group displayed stunted and severely stunted growth patterns with no normal cases. The limited number of participants in this group prevents researchers from establishing a definitive link between maternal age progression and nutritional vulnerability. Research worldwide indicates that children born to mothers who are either very young or very old are at higher risk of poor growth outcomes (UNICEF, 2023; Prentice et al., 2013).

Table 8
Cross-tabulation of Parents' Age and Children's Nutritional Status Based on Weight-for-Age

Classification	17 years	18-24 years	25-34 years	35-44 years	Overall
Normal	0	5	20	4	29
Overweight	0	1	0	0	1
Underweight	2	5	4	0	11
Total	2	11	24	4	41

All children of parents aged 17 years are underweight based on weight-for-age. This would indicate a prevalence of undernutrition in this youngest parental age group. Parents aged 18-24 years have a mixed nutrition status profile for their children. This group has an equal proportion of normal and underweight children and a small proportion of overweight children.

The majority of children whose parents are aged 25-34 years have a normal nutritional status, with fewer underweight children and no overweight cases. All children with parents aged 35-44 years are in the normal nutritional status category, and no cases of underweight are reported. Overweight is rare in the sample, as it occurs only in children of parents aged 18-24 years.

Younger parents (17 years old) may be associated with a higher risk of undernutrition in preschoolers, suggesting that parental maturity and experience negatively influence child nutrition in this group (Wemakor et al., 2018). The mixed nutritional status observed in the 18-24 age group suggests the influence of diverse factors, such as economic conditions and parental behaviors. Parents aged 25-34 years, on the other hand, provide better nutritional support to their children, perhaps due to greater economic stability, knowledge, and life experience, which may correlate with their children's improved nutritional status. Furthermore, the low incidence of overweight children implies that undernutrition is a greater concern in the population at present.

Table 9

Cross-Tabulation of Parents' Age and Children's Nutritional Status Based on Weight-for-Height

Classification	17 years	18-24 years	25-34 years	35-44 years	Overall
Normal	2	9	23	4	38
Overweight	0	1	0	0	1
Underweight	0	1	1	0	2
Total	2	11	24	4	41

Most preschoolers fall into the normal category across all parental age groups, especially in the 25-34 years age group, which reflects the largest subgroup. Only one overweight child is reported whose parents fall in the 18-24 years age group. There are two underweight children, one associated with parents in the 18-24 years group and the other with parents in the 25-34 years group. All children with very young parents (17 years) have a normal nutritional status with no cases of being overweight or underweight.

The data in Table 8 suggest that children of very young parents (17 years) also maintain normal nutritional status, which might challenge the common assumption that younger parental age is necessarily linked to poorer child nutrition. Moreover, a slightly higher incidence of overweight and underweight is seen in the 18-24 and 25-34 age groups. Still, given the small numbers, this may reflect sample variability. Parental age may interact with other variables, such as socioeconomic status, nutritional knowledge, and feeding practices, to influence child nutritional outcomes.

Section 5. Relationship Between Daily Food Intake and Nutritional Status

Table 10

Chi-Square Test for the Relationship Between Daily Food Intake and Nutritional Status (Height-for-Age)

Daily Food Intake	Normal (n=12)	Stunted (n=20)	Severely Stunted (n=9)	Row Total	Test Statistics
Go	100 (131.63)	317 (300.38)	150 (135)	567	χ^2= 45.85
Grow	38 (18.11)	34 (41.32)	6 (18.57)	78	p<.001
Glow	57 (45.27)	94 (103.30)	44 (46.43)	195	
Total	195	445	200	840	

The chi-squared test shows a significant relationship between daily food intake and height-for-age status ($\chi^2(4) = 45.85$, $p < .001$). This implies that the types of foods preschool

children consume are determinants of whether they are stunted, severely stunted, or of normal height for age.

Most of the stunted and severely stunted individuals were from the group that consumes Go foods, which are energy-rich foods such as rice, root crops, bread, and fats. This implies that, even though the children are getting enough calories, they lack the body-building and protective nutrients essential for proper growth. A study in Upper Egypt found that 76.3% of stunted preschoolers failed to meet the recommended calorie intake, and 13.7% lacked protein, underscoring the link between inadequate nutrient intake and stunting (El Shafie et al., 2021).

The result emphasizes the importance of a balanced diet starting from early childhood. If they rely too much on energy-giving foods and lack protein and vitamins, this can result in poor linear growth. Nutrition education at every household in the community, especially among parents, is necessary. Promoting a balanced diet, ensuring that all three food groups are present in every meal, should be the focus of local nutrition programs.

Table 11
Chi-Square Test for the Relationship Between Daily Food Intake and Nutritional Status (Weight-for-Age)

Daily Food Intake	Normal (n=29)	Stunted (n=1)	Severely Stunted (n=11)	Row Total	Test Statistics
Go	467 (435.38)	27 (23.63)	73 (108)	567	χ^2= 56.12
Grow	40 (59.89)	3 (3.25)	35 (14.86)	78	p<.001
Glow	138 (149.73)	5 (8.13)	52 (37.14)	195	
Total	645	35	160	840	

The analysis shows a significant relationship between daily food intake and weight-for-age status, rejecting the null hypothesis ($\chi^2(4) = 56.12$, $p < .001$). Food intake of the preschoolers is linked to whether they are underweight, overweight, or of normal weight for their age.

Children in the Grow Food group had more cases of underweight. This is the result of an insufficient quantity and quality of protein diet and poor dietary balance. At the same time, the energy-dense food group (e.g., rice or root crops) showed fewer underweight cases and higher rates of overweight, suggesting overconsumption of calories with an imbalance in nutrition.

This is consistent with the findings of the Food and Nutrition Research Institute (FNRI, 2020) in the Philippines that undernutrition in preschool children is highly associated with inadequate intake of protein and energy. Moreover, Thomson et al. (2019) observed that children with low dietary quality were more likely to have abnormal weight status, including underweight or overweight. In the Philippines, Capanzana et al. (2018) observed that underweight children were commonly from food-insecure and low dietary diversity households, which are typical risk factors in rural and low-income communities.

This emphasizes that feeding programs and household eating practices must not only focus on filling the stomach but should also aim to provide a balanced diet with the proper amount of Go, Grow, and Glow foods. Providing greater access to nutritious foods and educating caregivers about the food alternatives available in the community to meet the nutrients children need can also help reduce both underweight and overweight cases.

Table 12
Chi-Square Test for the Relationship Between Daily Food Intake and Nutritional Status (Weight-for-Height)

Daily Food Intake	Normal (n=38)	Stunted (n=1)	Severely Stunted (n=2)	Row Total	Test Statistics
Go	532 (525.83)	27 (23.63)	8 (17.55)	567	χ^2= 22.90
Grow	67 (72.34)	3 (3.25)	8 (2.41)	78	p<.001
Glow	180 (180.84)	5 (8.13)	10 (6.04)	195	
Total	779	35	26	840	

The table indicates a significant association between daily food intake and weight-for-height status among preschoolers ($\chi^2(4) = 22.90$, $p < .001$). The children's food intake for Go, Grow, and Glow is associated with whether they are underweight, overweight, or of normal weight for their height.

A higher number of underweight cases are observed in the Grow group, reflecting insufficient intake of protein-rich foods such as fish, eggs, and dairy products. In the glow group, underweight cases are higher than expected, suggesting that although they are consuming vegetables, their diet lacks adequate energy and protein to support healthy weight gain. At the same time, preschoolers in the Go group, who ate mainly energy-containing foods such as rice, bread, root crops, and richly sugary snacks, had fewer underweight cases than expected but more overweight cases (27 instead of 23.63 expected). This implies the intake of more calories with insufficient nutrients.

The patterns are consistent with national findings. The Food and Nutrition Research Institute (2020) indicated that Filipino preschoolers predominantly experience underweight and wasting due to dietary imbalances in protein and energy-dense foods. Given that some households remain impoverished, as demonstrated by a study by Capanzana et al. (2018), there is still much cause for concern about the prevalence of undernutrition. Data from UNICEF (2023) shows that wasting is reaching over 45 million children worldwide. It also reveals that Southeast Asia is a major contributor to this problem. A case study in Indonesia by Kekalih et al. (2025) found that the most common conditions observed in children with limited access to a well-balanced diet were underweight and wasting.

These findings prove the necessity of a well-consumed meal containing Go, Grow, and Glow elements. Efforts should include ensuring that children receive an appropriate balance of calories, protein, and micronutrients to facilitate optimal growth and prevent both undernutrition and overnutrition.

Section 6. Nutritional Guide

A simplified nutritional guide, translated into Ilocano, was created to effectively communicate healthy eating practices to parents and caregivers in Barangay Salingsingan, Ambaguio, Nueva Vizcaya. The brochure, entitled "Turong para iti Nutrisyon dagiti Ubing Edad 3–5," was developed to address identified gaps in the food and nutrition intake of preschool children aged 3 to 5 years. The brochure emphasizes the importance of balanced meal from the three major food groups: Go (energy giving foods), Grow (body bulding foods), and Glow (body regulating foods) to help parents prepare affordable nutritious meals with locally available ingredients, such as rice, vegetables (sayote, pechay, malunggay), legumes (balatong), and easily accessible protein such as eggs and tokwa.

Ultimately, the brochure reflects the study's core findings, demonstrating that nutrition education, when localized and simplified, empowers families to make healthier food choices and

lays the groundwork for sustainable interventions and community-wide improvements in child nutrition.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study assessed the nutritional status and daily food intake of preschoolers in Barangay Salingsingan, Ambaguio, Nueva Vizcaya. It examined how these were influenced by their parents' age and monthly income. The findings revealed that while a high percentage (92.7%) of the preschoolers had normal weight-for-height, indicating adequate short-term nutrition, a significant portion were either underweight (26.8%) or stunted/severely stunted (70.7%), pointing to long-term undernutrition.

The food diary analysis showed that most preschoolers' diets were heavily composed of Go foods (67.5%), with limited consumption of Grow (9.3%) and Glow (23.2%) foods. This imbalance reflects poor dietary variety and a lack of protein and micronutrient-rich foods in their daily intake. All participating households had monthly incomes below ₱12,000, and most parents were between 25 and 34 years old. While parental maturity may have contributed to better feeding practices for some, economic limitations remained a major barrier to achieving a nutritionally adequate diet.

Statistical analysis confirmed a significant relationship between daily food intake and height-for-age, suggesting that the type and variety of food consumed play a critical role in long-term growth. However, no strong correlation was found between income or age alone and weight-for-height, suggesting that even within low-income brackets, food quality and parental knowledge are key influencing factors. Overall, the study highlights the need for nutritional education and community-based support programs that promote dietary balance and better food choices for preschool-aged children in resource-limited settings.

Recommendations

Based on the study's findings, it is recommended that parents prioritize Grow and Glow foods in their children's diets to support healthy growth, immunity, and development. Locally available and affordable foods like mung beans, eggs, malunggay, and sweet potatoes should be included regularly. Parents should also monitor food intake and seek professional advice if signs of undernutrition are observed. For preschoolers, nutrition education should be taught through simple, fun activities like storytelling, games, and gardening, while involving them in meal preparation to encourage healthy habits. Barangay officials are encouraged to conduct regular feeding programs, support growth monitoring, and offer livelihood projects to help families improve food access. Future researchers may expand the study to other areas or explore additional factors, such as parental education and cultural beliefs. Finally, agencies such as NGOs, LGUs, DOH, and DepEd can work together to provide accessible meal plans, supplemental feeding, and advocacy programs to improve early childhood nutrition. A coordinated and sustained community effort is essential to break the cycle of malnutrition and ensure better health outcomes for young children. Promoting awareness, sharing resources, and maintaining active involvement from all sectors will be key to making long-term, positive changes in child nutrition.

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