

FOOD CONSUMPTION PATTERNS AND NUTRITIONAL STATUS OF FAMILIES BENEFITING FROM THE FAMILY HOPE PROGRAM (PKH) IN SUKARAME DISTRICT, BANDAR LAMPUNG

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Abstract. This study investigates the food consumption patterns and nutritional status of families receiving support from the Family Hope Program (Program Keluarga Harapan/PKH) in Sukarame District, Bandar Lampung. Using a cross-sectional observational design, data were collected through direct interviews and the Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ) from a total of 55 selected respondents. The research aimed to analyse the relationship between socioeconomic characteristics, such as income, occupation, and education, and both food consumption behaviour and nutritional outcomes within these households. The findings showed that there was no significant relationship between food consumption patterns and nutritional status ($p = 0.181$), suggesting that frequency and variety of food intake alone may not be sufficient indicators of nutritional adequacy. In contrast, a significant correlation was found between total household income and nutritional status ($p = 0.032$), indicating that economic capacity plays a crucial role in accessing diverse and nutrient-rich food. This outcome supports the hypothesis that higher income levels enable better dietary choices and more stable nutritional conditions. The results imply that social assistance programs like PKH should be complemented with education on balanced nutrition and healthy food preparation. A holistic approach that addresses economic limitations and behavioural and knowledge-based barriers is essential to improve food security and public health in low-income communities.

Key words: *food consumption patterns, nutritional status, Family Hope Program, income, dietary behavior*

Running title: Food Consumption and Nutrition Status

INTRODUCTION

Food security is a crucial aspect of national development, consisting of four strategic components: availability, stability, access, and utilization. At the macro level, food security is represented by food availability and stability, while at the micro level, it encompasses food access and utilization. The realization of stable food security depends on the fulfillment of each of these components. Household-level food security ensures that each family member lives in a healthy, productive, and sustainable environment, supported by adequate nutrition and access to essential health services (Kemenkes, 2020).

A person's ability to live healthily, actively, and productively depends on consuming adequate and quality food. Quality nutrition plays a significant role in shaping the quality of human resources, which is a key factor in national progress. Food is not only a basic necessity but also a human right. Consuming sufficient and balanced nutritious food is essential for optimal health and intelligence (Elizabeth, 2011). According to the Ministry of Health Regulation No. 23 of 2014, families are expected to prevent, identify, and address nutrition-related issues among their members. Nutritional status is influenced by various factors, including economic conditions, cultural norms, habits, preferences, health status, and education levels (Eliana & Solikhah, 2012).

Food consumption levels in a region can reflect the population's nutritional health. Indicators such as energy and protein adequacy provide insights into consumption patterns (Saputri, Lestari, & Susilo, 2016). Good nutritional status, achieved through efficient use of adequate nutrients, supports physical growth, brain development, immune function, and work capacity (Almatsier, 2010). The recommended daily intake is 2,200 kilocalories and 52 grams of protein per person (Rahmadi et al., 2013). Over time, inadequate intake of these nutrients may result in chronic energy deficiency and increase vulnerability to disease.

In Indonesia, poverty remains closely linked to food insecurity. As of 2020, approximately 11.37% of the population lived below the poverty line, with Lampung Province recording 12.76% and Bandar Lampung City at 8.81%, reflecting a slight increase from the previous year (BPS, 2021). Poverty limits access to nutritious food, which weakens household food security and adversely affects nutritional status. To address this, the Indonesian government launched the *Program Keluarga Harapan* (PKH), a conditional cash transfer initiative aimed at reducing poverty by providing economic assistance to underprivileged families, enabling them to access essential health and education services (Kemensos RI, 2018).

Nutritional problems such as stunting, wasting, underweight, and even overweight is common among low-income households due to limited knowledge and resources. Poor nutrition stems from either a deficiency or an excess of essential nutrients. Household food consumption is often unbalanced, heavily reliant on rice, and lacks diversity. Therefore, promoting *Pola Pangan Harapan* (PPH), a diversified and balanced food consumption model, is essential for improving nutrition and health outcomes at individual, household, and regional levels in a sustainable way.

At the household level, income, parental education, food expenditure, family size, and occupation significantly influence dietary patterns and nutritional status. Households with higher income and education levels generally have better access to diverse and nutritious foods, leading to improved health outcomes. Food consumption patterns, measured using tools like the Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ), provide insight into household nutrition adequacy and quality (Kristiandi, 2015). Understanding these patterns can help formulate more effective policies and targeted interventions for nutritional improvement in vulnerable populations.

This research analyses food consumption patterns, socioeconomic characteristics, and nutritional status among families receiving PKH assistance in Sukarama Subdistrict, Bandar Lampung. Additionally, the study examines the relationship between socioeconomic factors, consumption patterns, and nutritional status within these households.

MATERIALS AND METHODS

Research Design

This study is observational with a cross-sectional design. Data were collected at a single point through direct interview surveys using questionnaires. The aim was to determine the dietary consumption patterns and nutritional status of families receiving benefits from the Family Hope Program (PKH) in Sukarama District.

Research Location and Time

This research was conducted in Sukarama District, Bandar Lampung City, Lampung Province, from March to June 2022.

Population and Sample

The study was conducted in Sukarama District, Bandar Lampung City, targeting families receiving benefits from the Family Hope Program (PKH). The design was a cross-sectional observational study, employing surveys and direct interviews. Sampling was conducted using purposive sampling, selecting families that met specific inclusion criteria, such as:

- 1) Mother is responsible for meal preparation,
- 2) Having children in the nuclear family,
- 3) Willingness to participate.

The Slovin formula was used to determine the sample size with a margin of error of 10%:

$$n = \frac{N}{1 + N(d^2)} = \frac{1007}{1 + 1007(0,1^2)} = 90,96 \approx 91 \text{ samples}$$

Despite this calculation, only 55 families were ultimately included due to feasibility and inclusion criteria.

Operational Definitions of Variables

Table 1. Operational Definitions of Variables

Variable	Operational Definition	Measurement Tool	Measurement Result	Scale
Age Characteristics (MoH, 2017)	Age classification based on health guidelines	Questionnaire	- 0–5 years (Infant) - 6–11 years (Child) - 12–17 years (Early Teen) - 18–26 (Late Teen) - 27–35 (Young Adult) - 36–45 (Middle Adult) - 46–55 (Late Adult)	Ordinal
Educational Level	The highest level of education completed	Questionnaire	1. Did not complete primary school 2. Primary school/equivalent 3. Junior high/equivalent 4. Senior high/equivalent 5. Higher education/equivalent	Ordinal
Income	Total income (cash/goods) earned by all family members in one month	Questionnaire	1. Low ($\leq$ IDR 1 million) 2. Medium (IDR 1–2.5 million) 3. High ($\geq$ IDR 2.5 million)	Ordinal
Food Consumption Pattern	Number and types of foods consumed, converted into energy, protein, fat, and carbohydrates	Semi Quantitative Food Frequency Questionnaire (SQ-FFQ)	1. Poor (<3 types of food) 2. Fair (4–6 types of food) 3. Good (>7 types of food)	Ordinal

Nutritional (Adult)	Status	Result of measuring body weight (kg) and height (cm) using BMI	Digital scale and microtoise	1. Underweight: BMI < 18.5 2. Normal: BMI 18.5–24.9 3. Overweight: BMI > 25 4. Obese: BMI 25–29	Ordinal
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Data Collection Tools:

- 1) Questionnaires for demographics and food consumption patterns (Semi-Quantitative Food Frequency Questionnaire – SQ-FFQ),
- 2) Anthropometric measurements: weight (digital scale) and height (micrometer),
- 3) Data types: both primary (interviews, questionnaires, measurements) and secondary (PKH data from government agencies).

Data Analysis

The statistical analysis in this study was conducted in two stages: univariate and bivariate analysis. The univariate analysis was used to describe the general characteristics of the respondents, including demographic information, socioeconomic status, food consumption patterns, and nutritional status. This analysis provided a basic understanding of the distribution and frequency of each variable. Meanwhile, the bivariate analysis was employed to assess the relationship between two variables, particularly the association between food consumption patterns and the nutritional status of the families. The Spearman Rank correlation test was used for this purpose, which is suitable for ordinal data and measures the strength and direction of the association between ranked variables. The analysis was conducted with a 95% confidence interval and a significance level (p-value) of less than 0.05, indicating that the results were statistically significant if the p-value was below this threshold.

Research Ethics

As the research involved human participants, ethical procedures were strictly followed. The researcher clearly explained the study's purpose, methodology, potential benefits, questions involved, and data confidentiality. All participants signed a written informed consent form. Respondent identities were kept confidential and not disclosed publicly. Participation was voluntary, and individuals had the right to refuse or withdraw at any time.

Research Procedure

The data collection process involved several steps:

1. Obtained approval from academic supervisors and formal permission letters from the Study Program and Sukrame Sub-district Office.
2. Completed administrative requirements, including submitting a research permit.
3. Collected updated data on PKH beneficiary families in Sukrame to identify potential respondents.
4. Conducted door-to-door visits to recruit eligible participants based on the inclusion criteria.
5. Explained the research process and obtained informed consent from participants.
6. Provided and assisted in filling out the Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ); respondents were given about 15 minutes to complete it.
7. Collected and reviewed completed questionnaires.
8. Processed and analyzed the data from the questionnaires and SQ-FFQ forms.

RESULTS AND DISCUSSION

Result

Respondent Characteristics

The characteristics of the respondents in this study are systematically presented in Table 2 below.

Table 2. Respondent Characteristics

Indicator	Most Common Category	Percentage
Age	41–50 years	45.5%
Household Size	3–4 members	63.6%
Monthly Income	IDR 1–2 million	40.0%
Occupation	Housewife	41.8%
BMI (Nutritional Status)	Normal (BMI 18.5–25)	47.3%
Socio-economic Status	Low-income households	63.6%

This study included 55 respondents, all registered beneficiaries of the Family Hope Program (Program Keluarga Harapan/PKH) residing in Sukrame District, Bandar Lampung City. The demographic profile revealed that the largest age

group among the respondents was 41–50 years, accounting for 45.5% of the sample (25 individuals), with the average age calculated at 43.09 years. This indicates that the respondents were generally of a productive age, potentially influencing family dietary choices and household management.

Regarding household composition, most respondents (63.6%) reported having 3 to 4 family members, which may reflect a typical nuclear family structure. Only a small percentage (12.7%) lived in households with 1–2 members, while 23.6% had more than five family members. Household size plays a crucial role in determining food allocation and expenditure.

Regarding monthly household income, most respondents fell within the IDR 1,000,000 to 2,000,000 range (40%), followed by IDR 500,000 to 1,000,000 (36.4%). The average monthly income across the sample was approximately IDR 1,257,692, indicating that the majority of families were living on limited financial resources. Notably, no respondents reported earnings above IDR 3,000,000 per month.

The primary occupation among respondents was being a housewife (41.8%), reflecting their central role in meal preparation and household food decisions. This was followed by traders or self-employed individuals (38.2%) and laborers or casual workers (20%). Employment type is closely linked to household income stability and food security.

Regarding nutritional status, measured using Body Mass Index (BMI), 47.3% of respondents were classified as having a normal BMI (18.5–24.9 kg/m²). However, 36.4% were categorized as overweight (BMI 25.1–27 kg/m²), and 10.9% fell into the obese category (BMI >27 kg/m²), indicating emerging health concerns related to overnutrition. A small portion, 5.5%, was underweight (BMI <18.5 kg/m²), suggesting the presence of both ends of the malnutrition spectrum.

Based on the data, 63.6% of respondents (35 individuals) were classified as low socioeconomic status, while 36.4% (20 individuals) were categorized as moderate socioeconomic status. This classification was determined through a structured questionnaire covering education level, occupation, vocational training, household income, ownership of electronic appliances and vehicles, number of dependents, and monthly expenses. Scores were grouped into three categories: 1–25 = low, 26–50 = moderate, and 51–75 = high socioeconomic status.

This comprehensive overview of respondent characteristics provides critical context for analyzing the relationships between socioeconomic conditions, food consumption patterns, and nutritional outcomes within low-income households supported by social assistance programs.

Relationship Between Food Consumption Pattern and Nutritional Status

The analysis using the Spearman rank correlation test revealed no statistically significant relationship between the food consumption patterns and the nutritional status of respondents ($p = 0.181$). This indicates that a family's variety or frequency of food consumption does not necessarily reflect their nutritional condition. Although a diverse food intake is important, nutritional outcomes are also influenced by the quality, quantity, and balance of nutrients, which are not always captured by food type alone. Similar findings were reported by Bora S. (2022), who observed no significant correlation between meal frequency and nutritional status in children under five. This suggests that other factors, such as nutrient density, food portions, and meal timing, play a more decisive role.

Table 3: Relationship Between Food Consumption Pattern and Nutritional Status

Variable	n (%)	p-value	Interpretation
Food Consumption vs. Nutritional Status	55 (100%)	0.181	Not significant ($p > 0.05$)

Relationship Between Total Household Income and Nutritional Status

The results of the Spearman rank correlation analysis showed a significant relationship between total household income and nutritional status of the respondents ($p = 0.032$). This implies that higher income levels are associated with better nutritional outcomes. Families with higher income tend to have greater access to nutritious foods, better health care, and improved food security. Conversely, low-income households are more likely to prioritize food quantity over quality, potentially leading to imbalanced or inadequate nutrient intake. This finding is consistent with Kusumayanti et al. (2020), who also found a significant correlation between income and nutritional status in low-income communities.

Table 4: Relationship Between Household Income and Nutritional Status

Variable	n (%)	p-value	Interpretation
Income vs. Nutritional Status	55 (100%)	0.032	Significant ($p < 0.05$)

Discussion

The findings of this study suggest that the relationship between socioeconomic status and food consumption patterns is not as linear or deterministic as commonly assumed. While lower socioeconomic conditions are generally believed to limit dietary choices due to financial constraints, external interventions such as government assistance and community food availability may explain the lack of a significant association in this context. These factors may mitigate the direct influence

of income by enabling low-income families to access staple food items regardless of their financial limitations. Moreover, cultural norms, habitual food preferences, and limited nutritional literacy may be more dominant in shaping consumption behavior than purely economic means.

Similarly, the absence of a direct relationship between food consumption patterns and nutritional status indicates that the quality of food intake, not just the pattern or frequency, is critical to determining health outcomes. Families may exhibit routine eating behaviors without necessarily achieving a balanced intake of essential nutrients. In such contexts, nutritional status may depend more heavily on food diversity, nutrient density, and knowledge about proper food preparation, which are not captured solely by frequency of consumption. This suggests a need for a deeper understanding of food quality and dietary adequacy beyond mere consumption frequency.

In contrast, the significant correlation between income and nutritional status reinforces the idea that income remains a fundamental enabler for dietary adequacy. Higher income increases household purchasing power, allowing for greater flexibility in choosing various nutrient-dense foods, thereby improving nutritional outcomes. It also facilitates access to healthcare, sanitation, and education, contributing to better nutritional status. This supports the theory that income does not operate in isolation but influences multiple dimensions of well-being that, in turn, affect nutrition.

These findings imply that while financial resources are important, they do not solely determine food behavior or nutritional outcomes. Interventions must address the broader social and behavioral context of food choices. Thus, improving nutritional outcomes requires economic support and targeted education and behavioral change efforts that consider cultural, informational, and systemic influences.

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