RESEARCH REPORT

FOOD SECURITY AMONG THE POOR IN RURAL AND URBAN AREAS: AN OVERVIEW OF SOCIAL CAPITAL, SELF-EFFICACY, AND NUTRITION KNOWLEDGE

Dr. Annisa Utami Seminar, S.IP., M.Si.
Prof. Dr. Ir. Ali Khomsan, MS.
Hana Fatimah, S.Gz., M.Gz.

IPB University
and
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Title	:	Food Security Among the Poor in Rural and Urban Areas: An Overview of Social Capital, Self-Efficacy, and Nutrition Knowledge
Principal Investigator	:	Dr. Annisa Utami Seminar, S.IP., M.Si
Tim Peneliti	:	Prof. Dr. Ir. Ali Khomsan, MS Hana Fatimah, S.Gz
Bank account number	:	901862744944
Bank Address	:	Seabank Indonesia
Home Address	:	Jln. Cempaka Blok B No. 6 Perumahan Bumi Ciluar Indah, Bogor 16156
Office Address	:	Jl. Kamper, IPB University, Babakan, Kec. Dramaga, Kabupaten Bogor, Jawa Barat 16680
Telephone	:	+6281282129172
Fax	:	-
Total budget	:	IDR 90.000.000

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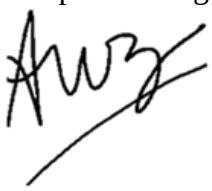
Principal Investigator,



Dr. Annisa Utami Seminar, S.IP., M.Si

LIST OF CONTENTS

INTRODUCTION

Poverty remains a major challenge for both developed and developing countries as it encompasses various aspects of household life. According to the *Poverty and Shared Prosperity 2018* report published by the World Bank at the end of 2018, Indonesia was identified as the country with the highest contribution to extreme poverty in East Asia and the Pacific (World Bank, 2018). Data from Statistics Indonesia (BPS) in 2023 show that 25.9 million people in rural and urban areas still experience hunger, and 9.36% of Indonesia's population is classified as poor (BPS, 2023). Cianjur Regency is one of the five areas in West Java with the highest extreme poverty rate, reaching 234,500 people (BPS Cianjur Regency, 2020). In 2021, the number of poor residents in Cianjur reached its five-year peak at 260,000 people (BPS Cianjur Regency, 2021). Data from BPS and the Cianjur Social Affairs Office indicate that the overall poverty rate in the regency increased from 10% in 2020 to 11.18% in 2021. This situation placed Cianjur among the regencies mandated by Presidential Instruction No. 4/2022 on the Acceleration of Extreme Poverty Eradication in Indonesia. Poverty limits access to food, which leads to hunger and, ultimately, food insecurity (Zakiah, 2016).

Cianjur Regency is administratively centered in Cianjur District and borders Bogor and Purwakarta Regencies to the north; Bandung, West Bandung, and Garut Regencies to the east; the Indian Ocean to the south; and Sukabumi Regency to the west. Most of Cianjur consists of mountainous areas, except for a narrow lowland strip along the southern coast. Geographically, the regency is divided into three development zones; Northern Zone (16 districts including Cianjur, Cilaku, Warungkondang, Gekbrong, Cibeber, Karangtengah, Sukaluyu, Ciranjang, Bojongpicung, Mande, Cikalongkulon, Cugenang, Sukaresmi, Cipanas, Pacet, and Haurwangi), Central Zone (9 districts including Sukanagara, Takokak, Campaka, Campakamulya, Tanggeung, Pagelaran, Leles, Cijati, and Kadupandak), Southern Zone (7 districts including Cibinong, Agrabinta, Sindangbarang, Cidaun, Naringgul, Cikadu, and Pasirkuda).

Cianjur Regency is located at 106°42' E and 6°21'–6°25' S, covering 361,434.98 hectares at elevations ranging from 7 to 2,962 m above sea level. Agricultural land spans 237,500 hectares, comprising 66,180 hectares of rice fields and 171,470 hectares of non-rice fields (Cianjur Regency Profile). Agriculture and forestry serve as the main livelihoods of Cianjur residents. Land use includes 83,034 ha (23.71%) of productive and conservation forests; 58,101 ha (16.59%) of wetland agriculture; 97,227 ha (27.76%) of dryland and mixed farming; 57,735 ha (16.49%) of plantation areas; 3,500 ha (0.10%) of grazing and yard land; 1,239 ha (0.035%) of ponds; 25,261 ha (7.20%) of settlements and yards; and 22,483 ha (6.42%) of other mountainous land. The northern area mainly grows vegetables, tea, and ornamental plants; the central area produces rice, coconuts, and fruits; while the southern area grows secondary crops, tea, rubber, sugar palm, cocoa, coconuts, and various fruits. The southern zone also offers potential for coastal tourism development (Cianjur Regency Profile).

Food is a basic human need closely linked to national well-being. Government Regulation No. 17/2015 defines food security as the condition in which food is sufficiently available in quantity and quality, safe, diverse, nutritious, and distributed equitably (Ministry of Agriculture, 2015). Food security exists when

all individuals at all times have physical and economic access to sufficient, safe, and nutritious food to meet dietary needs and preferences for an active and healthy life (FAO, 2003; Syafani et al., 2019).

The level of food security of a region can be measured through the Food Security Index (Indeks Ketahanan Pangan, IKP), which reflects regional achievements in food and nutrition security at both provincial and district/city levels. In Cianjur, food security is inseparable from national food security goals, as its ultimate indicator is good nutritional status. This warrants particular attention because poverty and food insecurity are strongly interconnected (Zakiah, 2016). Based on eight indicators issued by the National Food Agency (Badan Pangan Nasional, 2022), Cianjur's IKP for food utilization scored 65.76—classified as "Somewhat Food Secure" with a priority scale of 4 (FSVA BAPANAS, 2022). This finding suggests that Cianjur requires further improvements to reach the "Food Secure" category with a priority scale of 6, alongside poverty reduction efforts to improve food security and prevent food insecurity.

Food insecurity occurs when food security is not achieved. It correlates positively with poverty, leading to hunger, weight loss, and undernutrition due to limited purchasing power and/or inadequate food availability (Widodo & Wulandari, 2016). Poor households are financially constrained from accessing safe, sufficient, and nutritious food (Lybaws et al., 2022). Food insecurity also affects dietary preferences and unhealthy eating habits, such as reduced fruit and vegetable intake (Turnbull et al., 2021), skipping breakfast (Puddephatt et al., 2020), higher consumption of fast food or fried foods, unhealthy cooking methods (Kohanmoo et al., 2024), and increased consumption of inexpensive high-carbohydrate foods (Cummer et al., 2021).

Several studies have shown that unhealthy eating habits and poor food preferences can be mitigated through social capital and self-efficacy related to everyday food choices. Prior research demonstrates that social capital can alleviate food insecurity (Chhabra et al., 2014; Rusmawati et al., 2023; Egamberdiev, 2024). Social capital refers to community social activities that enhance efficiency by facilitating coordinated actions (Bourdieu, 1986). Elements of social capital include trust among community members, social networks, and shared norms. Inter-household interactions, food sharing, and information exchange about food availability can improve food access (Chhabra et al., 2014). Other studies show that participation in communication networks or community groups enhances resilience in meeting food needs. Social capital can be observed in religious activities, routine meetings, rituals, festivals, community health activities, and informal gatherings. Rusmawati et al. (2023) found that community interactions improved food security conditions.

Self-efficacy, according to Bandura (1997), is an individual's belief in their ability to organize and execute the actions required to manage prospective situations. Bandura identifies six factors influencing self-efficacy, including cultural values, beliefs, and self-regulation processes that act as both sources and consequences of self-efficacy. Higher self-efficacy reflects a person's ability to solve problems affecting their confidence in overcoming challenges (Nuzulia, 2010). Prior research shows a strong link between self-efficacy and food security. Knol et al. (2019) and Godrich et al. (2019) reported that individuals with lower food security levels also exhibited lower self-efficacy in dietary decision-making

and less confidence in cooking. Metta et al. (2021) demonstrated that participatory interventions in communities facing food insecurity improved collective self-efficacy. Nutritional knowledge also affects self-efficacy, as those with high self-efficacy and nutrition knowledge are more likely to adopt healthier dietary practices (Xazela et al., 2021).

Given the above background, it is essential to explore and compare food security conditions in Cianjur Regency. Currently, the regency's food security is classified as "Somewhat Food Secure," with its food utilization index in 2021 reaching a peak that requires improvement. This indicates a need for deeper analysis of how poverty affects food security in Cianjur. The study will focus on two dimensions: food utilization and food access. Food utilization will be examined in terms of local food preferences, choices, and habits, while food access will be analyzed through market availability, transportation, and food prices. Furthermore, this research will investigate how social capital, self-efficacy, and nutrition knowledge influence household food security.

OBJECTIVES

a. General Objective

To analyze food security among poor populations in Cianjur Regency using the concepts of social capital, self-efficacy, and nutrition knowledge.

b. Spesific Objectives

1. To identify the characteristics of poor rural households in Cianjur Regency.
2. To analyze the level of household food security.
3. To compare the differences in food security levels between rural and urban areas.
4. To describe and compare food preferences, food choices, and food habits in rural and urban settings.
5. To analyze individual-level self-efficacy in rural and urban areas.
6. To analyze community-level social capital in rural and urban areas.
7. To assess and compare nutrition knowledge in rural and urban areas.

METHODS

1) Design, Location, and Time

This study employed a comparative design with a cross-sectional approach. The research was conducted in Sayang Subdistrict (Kelurahan Sayang) representing the urban area and Ciwalen Village (Desa Ciwalen) representing the rural area of Cianjur Regency. These sites were selected because both have the largest populations in their respective administrative areas and therefore can represent a substantial number of social assistance recipients classified as poor, based on recommendations from the subdistrict authorities. Data collection was carried out from 12 to 20 February 2025.

2) Sampling

The study population comprised poor households residing in Cianjur Regency. According to 2023 data from Statistics Indonesia (BPS Cianjur Regency), the proportion of poor households was 10.22%. Respondents were recruited using purposive sampling. The minimum required sample size for each urban and rural site was calculated using the Lemeshow et al. (1997) formula.

$$n = \frac{Z^2 p(1-p)}{d^2}$$

$$n = \frac{1{,}96^2 \; x \; 0{,}08 \; x \; (0{,}9)}{0{,}08^2}$$

$$n = 56 \text{ subjects}$$

Notes:

n : minimum sample size
Z : standard normal deviate for 95% (α = 0,05) = 1,96
p : estimated prevalence of poverty in Cianjur Regency (10.14%)
d : margin of error (precision) = 8% (0,08)

To account for potential dropouts, 10% was added to the sample size, resulting in a minimum of 62 respondents in each urban and rural location. The primary respondents were mothers in households with children under five years old. Inclusion criteria in this research are: (1) permanent residents of the selected urban and rural areas; (2) beneficiaries of social assistance (such as the Family Hope Program/PKH or subsidized rice/raskin); (3) having at least one child under five years old; and (4) providing signed informed consent. Exclusion criteria: respondents not present during the data collection period.

Key informants for qualitative data collection were selected purposively among stakeholders knowledgeable about food security in the study areas. They included representatives from the Cianjur Regency Food Security Agency, the Social Affairs Office, village heads/subdistrict chiefs, and local health cadres and midwives. Additional informants were drawn from community members in areas with cases of extreme poverty. Identification of potential informants was facilitated

through initial discussions with Posyandu cadres and local midwives, who are familiar with the community's socio-economic conditions, including cases of extreme poverty, stunting, disability, elderly populations, and health vulnerabilities. These individuals also acted as gatekeepers to provide access to vulnerable families. A summary of the types and numbers of informants is presented in the following table.

Table 1 Types and Numbers of Informants

No.	Type of Informant	Number of Informants (Ciwalen Village)	Number of Informants (Sayang Subdistrict)	Total Informan
1	Representative of the Food Security Office (Cianjur Regency)	-	-	1
2	Representative of the Social Affairs Office (Cianjur Regency)	-	-	1
3	Village Head/Subdistrict Head	1	1	2
4	Midwife	1	1	2
5	Posyandu Cadre	6	8	14
6	Household with a Single Parent (father/mother only)	2	2	4
7	Household with a Stunted Child	1	1	2
8	Household with a Member with Disabilities	1	1	2
9	Household with an Elderly Member	1	1	2
10	Large Household (≥4 children)	0	1	1
11	Local Traditional Health Practitioner (*Tokoh lokal/paraji*)	2	0	2
	Total Informans	**15**	**16**	**29**

The following cases were jointly identified by the research team, local cadres, and midwives. Informants from Sayang Subdistrict representing diverse food security conditions:

1. IN-S1 (59 years) – A single-parent household head who lost his wife and child due to food poisoning; currently raising two children, one of whom suffers from tuberculosis.
2. IN-S2 (49 years) – A single father with a child who has had a disability since infancy; works as a waste picker with irregular income.
3. IN-S3 (28 years) – A father of a stunted child; the family diet is dominated by cheap and instant foods.
4. IN-S4 (52 years) – A daughter-in-law caring for a disabled mother-in-law while also looking after a junior high school-aged child; her husband works as a casual laborer.
5. IN-S5 (female, housewife) – Has seven children still living at home; the family frequently experiences food shortages.
6. IN-S6 (60 years) – An elderly person living with a grandchild; depends on assistance from relatives.

In addition to interviews, participatory observations were conducted in two main shops (a staple-goods shop and a tea shop) to understand the availability of local food items.

Informants from Ciwalen Village representing diverse food security conditions:

1. IN-C1 (60 years) – A woman caring for her 85-year-old mother with a very modest daily food intake.
2. IN-C2 (46 years) – A single mother with a toddler; more frequently purchases cooked food rather than cooking at home.
3. IN-C3 (39 years) – Mother of a child with cerebral palsy; faces health-care cost barriers due to outstanding BPJS (national health insurance) payments.
4. IN-C4 (40 years) – Mother of a child with both stunting and thalassemia; must regularly arrange blood transfusions for her child.
5. IN-C5 (66 years) and IN-C6 (70 years) – Traditional birth attendants (*paraji*) who remain active in the community, despite their practice being increasingly replaced by midwives.

Alongside individual interviews, group discussions were held with Posyandu cadres from both research locations to explore community dynamics, resistance to immunization, mutual-help practices, and strategies for addressing stunting.

3) Data Collections

This study employed two types of data: primary data and secondary data. Primary data were obtained through surveys, in-depth interviews, focus group discussions, and observations. Secondary data were collected from statistical records on population and poverty, policy documents related to food and social services, as well as relevant previous literature.

Table 2 Types of data collected

Data	Data Type	Approach	Data Sources	Data Collection Techniques
General description of the study location	Primary & Secondary	QUAL	BPS (Statistics Indonesia), local government data at the village or subdistrict level	Observation, interviews, document review
Characteristics of poor households in urban and rural areas	Primary & Secondary	QUAN dan QUAL	BPS data, village/subdistrict offices, key informants, respondents	Questionnaire, observation, interviews, document review
Anthropometry	Primary	QUAN	Respondents	Anthropometric measurements (body weight and height)
Food consuption	Primary	QUAN	Respondents	Food Frequency Questionnaire interviews
Food security	Primary	QUAN	Respondents and informants	Questionnaire, observation, interviews

Table 2 Types of data collected (continued)

Data	Data Type	Approach	Data Sources	Data Collection Techniques
Food preferences, food choice, and food habit	Primary	QUAL and QUAN	Informants	Questionnaire, observation, documentation, interviews
Access to food	Primary	QUAL	Infomants	Observation, in-depth interviews
Social capital	Primary	QUAL	Respondents and informants	Questionnaire, focus group discussions
Self-efficacy	Primary	QUAL and QUAN	Respondents and informants	Questionnaire, focus group discussions
Nutrition knowledge	Primary	QUAN	Respondents	Questionnaire

Quantitative Data Collection Techniques

The primary data collected comprised household and individual characteristics. Household characteristics included maternal age, paternal age, maternal education, paternal education, maternal occupation, paternal occupation, and household size. Individual characteristics covered the age and sex of under-five children. Data on household asset ownership included agricultural land, buildings, and goods. Additional data included household income, household expenditure, the nutritional status of under-five children, and maternal nutritional status. Dietary pattern data consisted of eating habits, nutrient intake of under-five children and mothers, as well as household dietary diversity. Other data encompassed food security, maternal nutrition knowledge, and maternal self-efficacy. All data were collected through measurements and interviews using structured questionnaires administered by trained enumerators.

Household characteristics (maternal and paternal age, maternal and paternal education, maternal and paternal occupation, and household size), asset ownership (agricultural land, buildings, and goods), household income, household expenditure, eating habits, food security, and maternal nutrition knowledge were collected through interviews using questionnaires administered to mothers of under-five children. Household food security data were collected using the Household Food Insecurity Access Scale (HFIAS). Nutrient intake of under-five children was assessed through a 24-hour dietary recall (1×24 hours), while maternal nutrient intake was assessed through a two-day 24-hour dietary recall (2×24 hours). Household dietary diversity data were collected using a Food Frequency Questionnaire (FFQ).

The maternal nutrition knowledge questionnaire was developed by the researchers and tested for validity and reliability. The validity test results showed $p<0.05$, indicating validity, while Cronbach's Alpha was 0.63, indicating acceptable reliability. The maternal self-efficacy questionnaire was adapted from a standardized instrument from previous studies and modified to suit the context of the current research. This questionnaire was also tested for validity and reliability on subjects with similar criteria but from a different study area. The validity test

results showed $p<0.05$, indicating validity, while Cronbach's Alpha was 0.88, indicating high reliability.

Anthropometric data collection was conducted through direct measurements. Body weight was measured using a calibrated digital scale, while body length/height was measured using a calibrated stadiometer.

Table 3 Types and categories of data

Variable	Indicator	Categories	Measurement Scale	Source
Household characteristics	Parental education	No schooling; Elementary School (SD/MI) or equivalent Junior High School (SMP/MTs) or equivalent Senior High School (SMA/MA) or equivalent University or equivalent	Ordinal	BPS (2013)
	Pekerjaan orang tua	Civil servant / Police / Army State-owned enterprises Private sector employee Fisherman Farmer Laborer/driver Trader Entrepreneur Other occupations	Nominal	Dewi (2023)
	Ownership of agricultural land assets	Rice field Dry field Yard/garden Fish pond	Nominal	Setiawan (2018)
	Household income (per month)	<Rp1.500.000,00 Rp1.500.000,00 – Rp3.000.000,00 >Rp3.000.000,00 – Rp4.500.000,00 >Rp4.500.000,00	Rasio	Sebaran data
	Proportion of household expenditure	High (>60% of total expenditure) Low (<60% of total expenditure)	Nominal	BPS (2013)
	Household size	Small (<3 persons) Medium (4–6 persons) Large (>6 persons)	Ordinal	Sebaran data
Nutrient intake	Adequacy level of energy and protein	Deficit (<80%) Normal (80–110%) Excess (≥110%)	Interval	WNPG (2012)
	Adequacy level of calcium and iron	Inadequate (<77%); Adequate (≥77%)	Interval	Gibson (2005)

Table 3 Types and categories of data (continued)

Variable	Indicator	Categories	Measurement Scale	Source
Eating Frequency	*Food Frequency Questionnaire* (FFQ)	Not frequent (≤3 times/week) Frequent (4–6 times/week) Very frequent (≥7 times/week)	Ordinal	Balitbangkes (2013)
Food Diversity	*Household Dietary Diversity Score (HDDS)*	Low (0–3) Moderate (4–5) High (6–8)	Ordinal	FAO (2011); Hoddinott dan Yohannes (2002)
Food Security	*Household Food Insecurity Access Scale (*HFIAS)	Food secure (0–1) Mild food insecurity (2–7) Moderate food insecurity (8–14) Severe food insecurity (15–27)	Ordinal	USAID (2007)
Nutrition Knowledge	Nutrition Knowledge	Good >80 Moderate 60–80 Poor <60	Interval	Khomsan (2021)
Self-efficacy	*Self-efficacy for food security* dan efikasi diri ibu terhadap anak	High self-efficacy (4) Low self-efficacy (1–3)	Ordinal	*Self-efficacy for food security scale* (Martin *et al.* 2016; Salarkia *et al*. 2015)
Child Nutritional Status (Weight-for-Age, W/A)	*Z-score* (W/A)	Severely underweight (<−3 SD) Underweight (−3 SD to <−2 SD) Normal (−2 SD to +1 SD) At risk of overweight (>+1 SD)	Interval	Kemenkes (2020)
	Z-score (H/A)	Severely stunted (<−3 SD) Stunted (−3 SD to <−2 SD) Normal (−2 SD to +3 SD) Tall (> +3 SD)	Interval	Kemenkes (2020)

Table 3 Types and categories of data (continued)

Variable	Indicator	Categories	Measurement Scale	Source
	Z-score (W/H)	Wasting (<−3 SD) Underweight (−3 SD to <−2 SD) Normal (−2 SD to +1 SD) At risk of overweight (+1 SD to +2 SD) Overweight (>+2 SD to +3 SD) Obesity (>+3 SD)	Interval	Kemenkes (2020)
Mother's Nutritional Status	Body Mass Index (BMI, kg/m²)	*Underweight* (<18,5) Normal (18,0 – 25,0) *Overweight* (25,1 – 27,0) Obesity (>27,0)	Rasio	Kemenkes (2020)

Qualitative Data Collection Techniques

Qualitative data collection in this study was carried out through in-depth interviews, group interviews, and observations. In-depth interviews were conducted with a semi-structured approach using open-ended question guides. The interview lasted for 45 to 90 minutes at the home of each informant using a mixture of Indonesian and Sundanese to make the atmosphere more natural and comfortable. The presence of posyandu cadres plays an important role as a gatekeeper to introduce researchers as well as build trust, so that informants can convey their personal experiences more openly, especially related to consumption patterns, family health, and strategies to deal with economic limitations.

In addition to individual interviews, this study also involved group interviews with posyandu cadres in Ciwalen Village and Sayang Village. The group interviews were conducted casually with guidance from the research team, and were attended by five to eight cadres who had experience in assisting the community. Through this format, researchers gain a collective understanding of nutritional challenges, family diets, and societal barriers to accessing health services and social assistance. The discussions that developed among cadres in group interviews also showed the social dynamics and daily practices that affect food security at the community level.

Observations were carried out during field visits to record the condition of households, the surrounding environment, and basic facilities such as the availability of water, electricity, and toilets. Observations are also directed at family access to food sources, both through stalls, markets, and mobile traders. In Sayang Village, for example, researchers observed two main stalls that were referred to by residents for their daily food needs, while in Ciwalen Village, the observation placed more emphasis on the family's daily shopping pattern and household consumption menu.

To maintain the validity of the findings, the researcher triangulated by verifying information through posyandu cadres, midwives, and local figures. This

step is very helpful in ensuring the accuracy of the data, especially on sensitive information such as social assistance history, health conditions, and household strategies in dealing with food shortages.

This research was carried out by paying attention to the ethical principles of qualitative research. Before the interview begins, the researcher always introduces himself clearly and explains the purpose of the research, which is purely for academic interests and not for political or administrative purposes. Each informant is given the understanding that their involvement is voluntary and that all information shared will be kept confidential. The identity of the informant is then disguised by using a certain code so that it cannot be tracked directly.

To build rapport with informants, researchers initiate interactions through light conversations about daily activities, the environment, and non-formal topics relevant to their lives. This strategy makes the atmosphere more fluid so that informants feel comfortable to share personal experiences, including sensitive experiences related to economic difficulties, family health conditions, or experiences of receiving social assistance.

The use of mixed Indonesian-Sundanese languages also helps to strengthen interpersonal relationships because it is closer to the daily lives of informants. In addition, the involvement of posyandu cadres and local midwives plays an important role as social mediators. They not only facilitate introductions between researchers and informants, but also foster a sense of security for informants to share experiences honestly. Thus, the data collection process can take place in an atmosphere of trust while respecting the physical, emotional, and time conditions of the informant.

4) Data analysis

1. Quantitative Data Analysis

Data collected through questionnaires were processed using Microsoft Excel, including data entry, coding, editing, and cleaning. Eating habit data were analyzed descriptively, covering main meal patterns, breakfast habits, consumption of animal-source foods, vegetables and fruits, and cooking methods. Household food security data were analyzed using the Household Food Insecurity Access Scale (HFIAS). Children's length and weight data were processed using WHO Anthro software version 3.2.2 to calculate Z-scores. Maternal self-efficacy data were analyzed using indicators based on the latest instrument developed by Martin et al. (2016) for food security self-efficacy questionnaires.

Parental education referred to the highest level of formal education completed by mothers and fathers, classified into five categories: no schooling, elementary school (SD/MI or equivalent), junior high school (SMP/MTs or equivalent), senior high school (SMA/MA or equivalent), and university (BPS, 2013). Parental occupation was grouped into eight categories following Dewi (2023): civil servants/armed forces/police/state-owned enterprises employees, private sector employees, fishermen, farmers, laborers/drivers, traders, entrepreneurs, and other occupations. Household size was classified into three categories according to the researcher's justification: small (≤3 persons), medium (4–6 persons), and large (>6 persons). Household income represented total earnings from all household members, expressed monthly, and categorized into four groups: <Rp1,500,000; Rp1,500,000–Rp3,000,000; Rp3,000,000–

Rp4,500,000; and >Rp4,500,000. Proportion of food expenditure was calculated as the percentage of monthly household expenditure spent on food. Following Maxwell et al. (2000), food expenditure was classified as low if ≤60% of total monthly expenditure and high if >60%.

Children's ages were divided into four categories: 0–5 months, 6–11 months, 1–3 years, and 4–5 years. Nutrient intake data were obtained using a 24-hour food recall for children (1×24 hours) and mothers (2×24 hours), converted into household measures and gram weights, and analyzed using the Indonesian Food Composition Table (TKPI). Nutrient content calculations were based on the formula:

$$KGij = (Bj/100) \times Gij \times (BDDj/100)$$

Notes:
KGij : nutrient content (i) in food item (j)
Bj : weight of food item (j) consumed (g)
Gij : nutrient content (i) per 100 g of food item (j)
BDDj : edible portion of food item (j)

Energy and nutrient adequacy levels were then calculated by comparing total intake to individual energy and nutrient requirements. For children, adequacy levels were classified according to the National Food and Nutrition Workshop (WNPG, 2012): deficit, normal, and excess. Micronutrient intake was classified into two categories: inadequate and adequate (Gibson, 2005). The adequacy level was calculated as:

$$\text{Adequacy Level (\%)} = \frac{Nutrient\ intake}{Individual\ nutrient\ requirement} \times 100$$

Household dietary diversity was measured using the Household Dietary Diversity Score (HDDS), adapted from the *Guidelines for Measuring Household and Individual Dietary Diversity* (FAO, 2011) and adjusted to the food consumption patterns of poor households in Indonesia based on the *Individual Food Consumption Survey Guidelines* (Puslitbang Gizi, 2014). The score was calculated based on eight food groups: (1) staple foods; (2) fish and fish products; (3) meat, eggs, and meat products; (4) legumes and processed legumes; (5) vegetables; (6) fruits; (7) snacks; and (8) beverages. Each food group consumed at least once during the reference period received a score of 1; non-consumed groups scored 0. Total scores ranged from 0 to 8 and were categorized as low (0–3), medium (4–5), and high (6–8), following Hoddinott and Yohannes (2002). Food frequency data were classified into three categories: very frequent, infrequent, and frequent (Balitbangkes, 2013). Food preference data were classified into four categories: strongly dislike, dislike, like, and strongly like (Biobank, 2020). Maternal self-efficacy was categorized into two levels—low and high—based on interval values (Martin et al., 2016; Salarkia et al., 2015). Food coping strategies were classified into three levels: low, medium, and high (Slamet, 1993).

Household food security was assessed using the HFIAS, which consists of nine questions (USAID, 2007):

1. In the past four weeks, did you worry that your household would not have enough food?
2. In the past four weeks, were you or any household member unable to eat preferred foods due to lack of resources?
3. In the past four weeks, did you or any household member have to eat a limited variety of foods due to lack of resources?
4. In the past four weeks, did you or any household member have to eat food they disliked because of lack of resources to obtain other foods?
5. In the past four weeks, did you or any household member have to eat smaller portions than usual due to lack of food?
6. In the past four weeks, did you or any household member have to eat fewer meals in a day due to lack of food?
7. In the past four weeks, was there ever no food of any kind in your household due to lack of resources?
8. In the past four weeks, did you or any household member go to bed hungry because there was no food?
9. In the past four weeks, did you or any household member go a whole day and night without eating anything because there was no food?

Responses of "yes" scored 1, while "no" scored 0. For each "yes" answer, a follow-up question determined the frequency of food insecurity experiences. Frequency was classified into "rarely" (1–2 times in 4 weeks; score 1), "sometimes" (3–10 times; score 2), and "often" (>10 times; score 3). Total scores were then classified into four categories: food secure (0–1), mildly food insecure (2–7), moderately food insecure (8–14), and severely food insecure (15–27) (USAID, 2007). The HFIAS instrument was chosen for its validated effectiveness in distinguishing between food secure and insecure households and its wide international application (USAID, 2007; Dewi, 2023).

After categorization, data were tested for normality and analyzed using Microsoft Excel 2016 and IBM SPSS Statistics version 26. Descriptive statistics were presented in tables and diagrams. Analyses included univariate and bivariate approaches. Univariate analysis described or tabulated frequencies of variables such as household characteristics, subject characteristics, and eating habits. Before bivariate analysis, data normality was tested using the Kolmogorov–Smirnov test. Bivariate analysis employed difference and association tests: Chi-square tests for categorical data, independent t-tests for normally distributed data, and Mann–Whitney tests for non-normal distributions. Pearson's correlation was used for normally distributed variables, and Spearman's correlation for non-normal variables.

2. Qualitative Data Analysis

Qualitative data obtained through in-depth interviews, group interviews, and observations were analyzed using NVivo software to facilitate the management of transcripts, coding, and organizing themes. The analysis was carried out by referring to the grounded theory approach as described by Strauss and Corbin (1990), which emphasizes the inductive construction of concepts from field data.

The analysis process is carried out in stages. In the open coding stage, the interview transcript is broken down into the smallest units of meaning. Initial coding uses a lot of in vivo coding, which is code that directly adopts the informant's original terms or expressions. This aims to maintain the closeness of the interpretation to the real experience of the informant, for example the phrase "save gas", "porridge every morning", or "often borrow bank emok" which describes the survival strategy of the household.

The next stage is axial coding, where the initial codes that have a relationship are grouped into broader categories. For example, codes related to economic limitations, daily spending patterns, and cheap food choices are combined in the category of food adaptation strategies; while codes regarding access to health services, BPJS arrears, and traditional therapies are grouped into the category of health access. At this stage, a causal relationship analysis is also carried out, for example, limited purchasing power that encourages simple consumption patterns so as to increase the risk of stunting.

The last stage is selective coding, which is identifying the core category that is able to explain the entire phenomenon. In this study, the core category that emerged was "household survival strategies in food security in the midst of multiple vulnerabilities (economic, health, and social)". This core category is a common thread that connects various issues that appear in the data, such as extreme poverty, disability, stunting, and the role of community social capital.

To increase the credibility of the analysis, the data triangulation process was carried out by comparing information from individual interviews, group interviews, observations, and confirmation with local posyandu cadres and midwives. This strategy is in line with the view of Creswell (2014) who emphasizes the importance of triangulation data to strengthen the validity of qualitative findings.

Thus, this process of qualitative analysis not only resulted in the categorization of the data, but also built a deeper understanding of how poor households in the two study sites managed their food security in the context of limitations and dual vulnerability.

5) Ethical approval

This study obtained Ethical Approval from the Health Research Ethics Committee of the Faculty of Nursing and Health Sciences, Universitas Muhammadiyah Semarang, No. 761/KE/11/2024.

RESULT AND DISCUSSION

a. Geographical Location of the Study Area

Cianjur Regency, with its capital in Cianjur District, is bordered by Bogor Regency and Purwakarta Regency to the north; Bandung Regency, West Bandung Regency, and Garut Regency to the east; the Indian Ocean to the south; and Sukabumi Regency to the west. Most of Cianjur's territory consists of mountainous areas, except for a narrow lowland along parts of the southern coast.

Cianjur Regency consists of 32 districts with 360 villages/urban wards. Geographically, Cianjur Regency is divided into three Development Regions: the Northern Region (covering 16 districts: Cianjur, Cilaku, Warungkondang, Gekbrong, Cibeber, Karangtengah, Sukaluyu, Ciranjang, Bojongpicung, Mande, Cikalongkulon, Cugenang, Sukaresmi, Cipanas, Pacet, and Haurwangi); the Central Region (covering 9 districts: Sukanagara, Takokak, Campaka, Campakamulya, Tanggeung, Pagelaran, Leles, Cijati, and Kadupandak); and the Southern Region (covering 7 districts: Cibinong, Agrabinta, Sindangbarang, Cidaun, Naringgul, Cikadu, and Pasirkuda). The geographical coordinates of Cianjur Regency are 106042' E and 6021'–6025' S, with a total area of 361,434.98 hectares and an elevation ranging from 7 to 2,962 meters above sea level. The agricultural area covers 237,500 hectares (66,180 hectares of rice fields and 171,470 hectares of non-rice fields) (Cianjur Regency Profile 2024).

Agricultural land for food crops and forestry constitutes the livelihood base for the Cianjur community. The utilization of Cianjur Regency's area includes: 83,034 hectares (23.71%) of productive and conservation forest; 58,101 hectares (16.59%) of wetland agriculture; 97,227 hectares (27.76%) of dryland agriculture and fields; 57,735 hectares (16.49%) of plantation land; 3,500 hectares (0.10%) of grazing yards/home gardens; 1,239 hectares (0.035%) of ponds; 25,261 hectares (7.20%) of residential/home gardens; and 22,483 hectares (6.42%) of other mountainous areas. The northern region of Cianjur is dominated by vegetables, tea, and ornamental plants. The central region cultivates rice, coconut, and fruit crops, while the southern region is characterized by secondary crops, tea plantations, rubber, sugar palm, cocoa, coconut, and various fruit crops. Other potentials in the southern region include natural beach tourism sites that remain relatively untouched and attractive for investment (Cianjur Regency Profile 2024).

b. Karakteristik Keluarga

The family characteristics in this study include father's education, mother's education, household size, father's occupation, mother's occupation, household income, household food expenditure, home ownership, and asset ownership. The family characteristics in urban and rural areas are presented in Table 3.

Table 1 Distribution of subjects based on parental education level and number of family members

Family Characteristics	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Father's Education							
Elementary School or Equivalent	27	42,2	33	53,2	60	47,6	
Junior High School or Equivalent	16	25,0	15	24,2	31	24,6	0,555
Senior High School or Equivalent	20	31,3	13	21,0	33	26,2	
No Formal Education	1	1,6	1	1,6	2	1,6	
Mother's Education							
Elementary School or Equivalent	28	43,8	36	58,1	64	50,8	
Junior High School or Equivalent	20	31,3	18	29,0	38	30,2	0,130
Senior High School or Equivalent	14	21,9	7	11,3	21	16,7	
No Formal Education	2	3,1	1	1,6	3	2,4	
Number of Family Members							
≤ 3 persons	1	1,6	1	1,6	2	1,6	0,032
4 – 6 persons	52	81,3	58	93,5	110	87,3	
>6 persons	11	17,2	3	4,8	14	11,1	

Note : *p-value is based on the Chi-Square Test (father's education, mother's education, number of family members). *Significant if $p < 0.05$

The educational level of parents, particularly mothers, plays an important role in influencing household food security. Based on Table 3, most fathers in urban areas (42.2%) and rural areas (53.2%) have completed only elementary school (SD/MI or equivalent). A similar pattern is observed among mothers, with nearly half in urban areas (43.8%) and rural areas (58.1%) having attained education at the elementary school level or its equivalent. Statistical tests indicate no significant difference ($p>0.05$) between the educational levels of parents in urban and rural areas. Educational attainment remains relatively low, and none of the parents have higher education, which reflects the socio-economic profile of low-income households. This low level of education among both fathers and mothers indicates limited access to information, including nutrition knowledge, which may ultimately influence decision-making regarding food management and affect household food security (Fatmah, 2024).

Household size also influences food security, especially in low-income households (Amalia et al., 2023). According to Table 3, the majority of households in both urban (81.3%) and rural (93.5%) areas have between four and six family members. However, more households in urban areas have ≥6 family members compared to rural areas, with the number of urban households being larger than

rural households. This indicates a statistically significant difference between household sizes in the two areas ($p<0.05$). According to Herdiana et al. (2021), larger household size can negatively affect food security. The greater the number of household members, the higher the consumption burden that must be met, potentially reducing the level of household food security. Table 4 presents the distribution of respondents based on parents' occupations.

Table 2 Distribution of subjects based on parental education level and number of family members

Family Characteristics	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Father's Occupation							
Private Employee	3	4,7	1	1,6	4	3,2	0,397
Farmer	1	1,6	3	4,8	4	3,2	
Laborer/Driver	36	56,3	33	53,2	69	54,8	
Trader	15	23,4	13	21,0	28	22,2	
Entrepreneur	3	4,7	9	14,5	12	9,5	
Other Occupations	6	9,4	3	4,8	9	7,1	
Mother's Occupation							
Private Employee	1	1,6	0	0	1	0,8	
Trader	3	4,7	1	1,6	4	3,2	0,372
Housewife	60	93,8	61	98,4	121	96	

Note: p-value based on Chi-Square Test. *Significant if* $p < 0.05$

Based on Table 4, more than half of the fathers in urban (56.3%) and rural (53.2%) areas work as daily laborers, such as construction workers or drivers. Meanwhile, the majority of mothers in both urban (93.8%) and rural (98.4%) areas are housewives. This indicates no significant difference ($p>0.05$) in the types of parental occupations—both fathers and mothers—between urban and rural areas. Fathers' occupations as daily laborers and mothers' roles as housewives tend to be associated with low and irregular income, which can affect the household's economic capacity to meet food needs sustainably. Such income-limited occupations may constrain access to diverse and nutritious food sources, ultimately impacting household food security (Zulaiha, 2018). Table 5 presents the distribution of respondents based on household income and expenditure.

Table 3 Distribution of respondents based on family income

Family Characteristics	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Monthly Family Income (Rp000)							
<Rp1.500	25	39,1	17	27,4	42	33,3	0,119
Rp1.500 – Rp3.000	31	48,4	38	61,3	69	54,8	
>Rp3.000 – Rp4.500	3	4,7	7	11,3	10	7,9	
>Rp4.500	5	7,8	0	0	5	4,0	
Med (Min-Max) (Rp000)	1.600 (550-5.760)		1.940 (500-4.000)		1.680 (500-5.760)		

Family Characteristics	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Mean±SD (Rp000)	2.022±1.260		2.053±803		2.037±1.056		
Proporsi of food expenditure							
High (≥60%)	58	90,6	59	95,2	117	92,9	
Low (<60%)	6	9,4	3	4,8	9	7,1	0,031
Med (Min-Max) (%)	77(49-97)		83(33-97)		80(33-97)		
Mean±SD (%)	76,3±11,2		79,7±12,4		78±11,9		

Note: p-value based on Mann Whitney Test. *Significant if* p < 0.05

Based on Table 5, nearly half of the families (48.4%) in urban areas have a monthly income of IDR 1,500,000–3,000,000, while the majority of families in rural areas (61.3%) also fall within the same income range. Statistical tests show no significant difference (p>0.05) between monthly household income in urban and rural areas, although the average household income in rural areas is slightly higher than in urban areas. The diversity of employment sectors in rural areas partly explains this condition, as some households are not solely dependent on one income source but also utilize other productive activities such as trading or farming using home yards (Azharudin et al., 2022). In contrast, low-income households in urban areas generally rely on informal jobs or daily wages with relatively fixed income and limited access to land for additional income-generating activities, thus providing fewer opportunities to increase supplemental income compared to rural households.

Expenditure on food needs remains the primary priority for most households, particularly in rural areas. This is reflected in the dominance of food expenditure compared to non-food expenditure. The proportion of household food expenditure ≥60% of total expenditure dominates both in urban (90.6%) and rural (95.2%) areas. The average proportion of food expenditure is higher in rural areas (79.7% ± 12.4%) than in urban areas (76.3% ± 11.2%), with a significant difference (p<0.05). Expenditure on cigarettes is also relatively high, at IDR 111,953 (5% of food expenditure) in urban areas and IDR 266,452 (11% of food expenditure) in rural areas per month. This indicates that poor households still allocate a considerable portion of their income to non-nutritive needs, which do not contribute to improving family nutrition. This condition can potentially worsen food security status because funds that could otherwise be used to purchase nutritious food are diverted to cigarette consumption.

Although the proportion of food expenditure in urban areas is lower, food security status in urban areas tends to be more vulnerable. This is influenced by high non-food costs such as housing rent, transportation, education, and lifestyle, which reduce purchasing power for food, especially among low-income families (Putri & Yamin, 2021). The large amount of non-food and cigarette expenditure means that a high proportion of food expenditure is not significantly associated with food security status (p>0.05).

The high non-food expenditure in urban areas reduces food purchasing power, thus food vulnerability remains high. Moreover, a high proportion of food expenditure is also not significantly associated with food security status (p>0.05) in both urban and rural areas, because a high proportion does not automatically guarantee adequate food access. In fact, a food expenditure proportion ≥60%

reflects the heavy burden of food spending in total household expenditure, which is one indicator of household poverty.

Although household income in rural areas is slightly higher, there is no significant difference (p>0.05) compared to urban household income. This shows that most poor households, both in urban and rural areas, do not have gardens, fields, or livestock as alternative food sources. Only a small number operate small businesses such as kiosks with limited income. Consequently, they remain dependent on food purchases in the market and are vulnerable to price fluctuations and supply limitations (Azharudin et al., 2022). Table 6 presents the distribution of respondents based on home and asset ownership.

Table 4 Distribution of respondents based on house ownership and assets

Family Characteristics	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
House Ownership							
Owned	38	59,4	57	91,9	95	75,4	0,000
Rented	26	40,6	5	8,1	31	24,6	
Asset Ownership							
Motorcycle	37	57,8	45	72,6	82	65	
Refrigerator	45	70,3	36	58,1	81	64,3	
TV	51	79,7	41	66,1	92	73	

Note: p-value based on Chi-Square Test. *Significant if* p < 0.05

Based on Table 6, the majority of families in rural areas (91.9%) own their homes, whereas the proportion of families in urban areas who own their homes is lower (59.4%), and the proportion of those living in rented houses is relatively high (40.6%). This reflects limited access to home ownership in urban areas and shows a significant difference in home ownership between urban and rural areas (p<0.05). Home ownership in both urban and rural areas is mostly inherited from parents. This condition is a key factor that strengthens home ownership, which not only represents family stability but also serves as an important social and economic asset in family life, particularly in rural areas (Setiadi & Baiquni, 2020).

Regarding asset ownership as shown in Table 6, most assets owned by families in urban areas are televisions (79.7%) and refrigerators (70.3%), while families in rural areas are more likely to own motorcycles (72.6%). Some families own more than one asset. This reflects differing needs and environmental contexts: motorcycles are an essential mode of transportation in rural areas due to limited public transportation and greater distances between locations, whereas in urban areas electronic goods such as televisions and refrigerators are considered essential household assets.

c. Characteristics of the Subjects

The subjects of this study were children under five years old (under-fives) from both urban and rural areas in Cianjur Regency, West Java. The number of subjects in the urban area was 64 under-fives, while in the rural area there were 62 under-fives. Table 7 presents the distribution of the subjects by sex and age in both areas.

Table 5 Distribution based on subject characteristics (children under five)

Subject Characteristics	Kota		Desa		Total		*p-value*
	n	%	n	%	n	%	
Gender							
Male	32	50	40	64,5	72	42,9	0,101
Female	32	50	22	35,5	54	57,1	
Age							
0-5 months	1	1,6	4	6,5	5	4,0	0,443
6-11 months	5	7,8	5	8,1	10	7,9	
1-3 years	31	48,4	28	45,2	59	46,8	
4-5 years	27	42,2	25	40,3	52	41,3	
Med (Min-Max)	32(3-60)		33,5(2-58)		33(2-60)		
Mean±SD	32,97±15,6		30,48±15,6		31,75±15,6		

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on Table 7, the number of male and female subjects in the urban area was balanced, with a proportion of 50% male and 50% female under-fives, whereas in the rural area the proportion of male subjects was higher (64.5%) compared to female subjects (35.5%). In terms of age, the largest proportion of subjects in the urban area was in the 1–3 years age group (48.4%), and the largest proportion in the rural area was also in the same age group (45.2%). The second largest age group in both the urban area (42.2%) and the rural area (40.3%) was 4–5 years old. Statistical tests showed no significant differences regarding sex and age between urban and rural areas ($p>0.05$).

d. Nutritional Status

Nutritional status is an important aspect in determining the quality of health and well-being of individuals, particularly in vulnerable groups such as young children and mothers. Good nutritional status can prevent various health problems in families caused by malnutrition or nutrient deficiencies (Purba *et al*., 2021).

1) Nutritional Status of Children Under Five

The nutritional status of children under five is a key indicator and an important determinant of the overall nutritional status of the family. This is because young children are highly vulnerable to the effects of malnutrition, so their nutritional condition directly reflects the family's social and economic environment, consumption patterns, and access to nutritious food resources (Purba et al., 2021). Table 8 presents the distribution of the nutritional status of children under five in urban and rural areas in the Cianjur, West Java study.

Tabel 6 Distribution of children under five nutritional status

Nutritional Status	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
WAZ							
Severely underweight	7	10,9	3	4,8	10	7,9	0,403
Underweight	14	21,9	11	17,7	25	19,8	

Nutritional Status	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Normal	36	56,3	45	72,6	81	64,3	
Risk of overweight	7	10,9	3	4,8	10	7,9	
Mean ± SD *(Z-Score)*	-1,14 ± 1,6		-1,04 ± 1,2		-1,09 ± 1,41		
HAZ							0,073
Severely stunting	15	23,4	9	14,5	24	19,0	
Stunting	14	14,0	11	17,7	25	19,8	
Normal	27	42,2	41	66,1	68	54,0	
Tall	8	12,5	1	1,6	9	7,1	
Mean ± SD	-1,29 ± 2,69		-1,04 ± 1,2		-1,17 ± 2,09		
BAZ							
Gizi Kurang	4	6,3	5	8,1	9	7,1	
Bersiko gizi lebih	3	4,7	5	8,1	8	6,3	0,349
Overweight	0	0	1	1,6	1	0,8	
Obesitas	1	1,6	0	0	1	0,8	
Rataan ± SD	-0,45 ± 1,08		-0,35 ± 1,14		-0,4 ± 1,1		

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

The nutritional status of children under five is an important indicator reflecting both the child's condition and the overall family environment. Based on Table 8, for the weight-for-age (W/A) indicator, the proportion of children under five with very low and low body weight was higher in urban areas (32.8%) compared to rural areas (22.5%). Statistical analysis showed no significant difference in W/A nutritional status between urban and rural areas ($p>0.05$).

For the height-for-age (H/A) indicator, the proportion of stunted children (severely stunted and stunted) was higher in urban areas (37.4%) compared to rural areas (32.2%). Statistical analysis showed no significant difference in H/A nutritional status between urban and rural areas ($p>0.05$), which may be attributed to the fact that in both regions the majority of children had normal height-for-age status. Regarding the weight-for-height (W/H) indicator, the majority of children under five in both areas were also in the normal nutrition category—87.5% in urban areas and 82.3% in rural areas—yielding no significant difference ($p>0.05$).

Children under five in urban areas in this study tended to experience more malnutrition and stunting than those in rural areas. This could be due to several factors, including more densely populated urban environments, which affect sanitation conditions. According to Vilcins *et al*. (2018), crowded and slum-like environments with poor and contaminated sanitation increase the risk of infections in children under five, which can interfere with nutrient absorption and lead to growth disorders such as stunting. In addition, socioeconomic inequality among poor urban communities limits their access to nutritious food due to financial constraints, as such foods tend to be more expensive, making poor urban children more vulnerable to malnutrition and

stunting. Children under five in urban areas may also be prone to unbalanced dietary patterns, with frequent consumption of ready-to-eat foods and high-calorie but low-nutrient foods due to economic limitations and lifestyle factors. This contributes to the occurrence of stunting even when calorie intake is adequate (Global Alliance, 2021).

2) Nutritional Status of Mothers

The nutritional status of children under five can indirectly influence the nutritional status of mothers and other family members, as mothers are the primary decision-makers in fulfilling the family's nutritional needs, including children's dietary intake. Mothers who are healthy and well-nourished tend to be more capable of managing the family's eating patterns, understanding the nutritional needs of family members, and providing optimal caregiving, thereby ensuring that children under five and other family members receive balanced nutrient intake (Sawo *et al*., 2023). Table 9 presents the distribution of mothers' nutritional status.

Table 7 Distribution of mothers nutritional status

Status Gizi	Kota		Desa		Total		*p-value*
	n	%	n	%	n	%	
IMT/U							
Underweight	1	1,6	2	3,2	3	2,4	0,73
Normal	29	45,3	21	33,9	50	39,7	
Overweight	9	14,1	14	22,6	23	18,3	
Obesitas	25	39,1	25	40,3	50	39,7	
Mean ± SD	25,94 ± 4,78		26,23 ± 4,69		26,08 ± 4,72		

Note: p-value based on *Independent t-test*. *Significant if* $p < 0.05$

Based on Table 9, the proportion of mothers with normal nutritional status was higher in urban areas (45.3%) compared to rural areas (33.9%). This is related to better access to balanced nutrition or health education in urban areas than in rural areas. The proportion of overweight mothers was higher in rural areas (22.6%) than in urban areas (14.1%). The proportion of obese mothers was almost the same in urban (39.1%) and rural (40.3%) areas. Statistical tests showed no significant difference in mothers' nutritional status between urban and rural areas ($p>0.05$). This may reflect lifestyle changes and dietary patterns in rural areas that are beginning to resemble urbanization trends due to the geographical proximity between urban and rural areas. This finding is consistent with Ningrum (2019), who reported that modernization in rural areas has brought changes in how families access and manage food, one of which is the increasing habit of purchasing ready-to-eat foods. Urbanization can drive changes in consumer behavior and dietary transitions. Lifestyle shifts toward urbanized food access patterns can influence nutritional status and food security (FAO, 2023).

e. Ketahanan Pangan

Household food security is one of the key indicators for assessing the welfare conditions of a family down to the individual level, particularly in the context of access to sufficient, safe, and nutritious food (FAO, 2019). The HFIAS categories consist of food-secure households and households experiencing mild, moderate, or severe food insecurity (Coates et al., 2007). Table 10 presents the distribution of respondents based on the level of household food security in urban and rural areas.

Table 8 Distribution of respondents based on household food security

Household Food Security (HFIAS)	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Food secure	5	7,8	2	3,2	7	5,6	
Mild food insecurity	15	23,4	27	43,5	42	33,3	
Moderate Food Insecurity	23	35,9	16	25,8	39	31,0	0,16
Severe Food Insecurity	21	32,8	17	27,4	38	30,2	
Median (Min-Max)	10,5 (0-26)		8,5 (0-26)		10 (0-26)		
Mean±SD	11,39 ± 6,68		9,89 ± 6,9		10,65 ± 6,8		

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Table 10 shows the distribution of respondents based on household food security levels in urban and rural areas. Based on HFIAS measurements, most households experienced food insecurity ranging from mild to severe. The majority of respondents in urban areas were classified as moderately food insecure (35.9%) and severely food insecure (32.8%), while only 7.8% were food secure. In rural areas, the highest percentage was in the mildly food insecure category (43.5%), followed by severely food insecure (27.4%) and moderately food insecure (25.8%). Only 3.2% of rural households were classified as food secure. The average HFIAS score also showed that food vulnerability or food insecurity conditions in urban areas (11.39 ± 6.68) were higher than in rural areas (9.89 ± 6.9), although statistical tests indicated no significant difference in food security between urban and rural areas ($p>0.05$).

The high proportion of food-insecure households in rural areas is generally influenced by dependence on seasonal agriculture, harvest fluctuations, limited market access, and inadequate food distribution infrastructure, making it difficult for rural families to maintain stable food supplies throughout the year (Azharudin et al., 2022). Although urban households have better market access, relatively higher food prices and high non-food expenditures make some households still food insecure (Putri & Yamin, 2021). Therefore, strategies to strengthen food security in rural areas should focus on enhancing local food production, increasing food diversification, and improving distribution access, whereas in urban areas, interventions can be focused on stabilization measures.

Urbanization in cities can lead to the conversion of agricultural land into settlements or infrastructure, which ultimately reduces the availability of local food. This aligns with the findings of Hapsari and Rudiarto (2017), which state that food security is influenced not only by food availability but also by socioeconomic conditions, physical characteristics of the area, and public health factors. Consequently, poor urban families working in the informal sector with unstable

incomes are more vulnerable to economic shocks that directly affect their ability to purchase sufficient and nutritious food, food prices, and income protection for poor households.

According to FAO (2019), the dimensions of food security depend not only on food availability but also on physical access, economic affordability, supply stability, and the ability of households to safely utilize nutritious food. Lifestyle changes and consumption patterns in rural communities that increasingly resemble urban communities have reduced the differences in food security between urban and rural areas, leading to statistically insignificant differences. According to FAO (2023), urbanization transforms agri-food systems across the rural–urban continuum, impacting access to healthy and affordable food, even though rural areas traditionally still have advantages in terms of local food availability. Table 11 presents the distribution of respondents' answers to household food security questions.

Table 9 Distribution of respondents based on household food security responses (HFIAS)

Household Food Security (HFIAS)	Urban		Rural		Total	
	n	%	n	%	n	%
Worried about having enough food						
No	7	10,9	11	17,7	18	14,3
Rarely	11	17,2	14	22,6	25	19,8
Sometimes	17	26,6	13	21,0	30	23,8
Often	29	45,3	24	38,7	53	42,1
Inability to consume preferred foods						
No	9	14,1	17	27,4	26	20,6
Rarely	7	10,9	7	11,3	14	11,1
Sometimes	24	37,5	11	17,7	35	27,8
Often	24	37,5	27	43,5	51	40,5
Limited food variety						
No	14	21,9	47	75,8	61	48,4
Rarely	3	4,7	5	8,1	8	6,3
Sometimes	15	23,4	6	9,7	21	16,7
Often	32	50,0	4	6,5	36	28,6
Having to consume certain types of food that are not desired						
No	48	75	27	43,5	75	59,5
Rarely	6	9,4	7	11,3	13	10,3
Sometimes	6	9,4	12	19,4	18	14,3
Often	4	6,3	16	25,8	20	15,9
Consuming smaller portions of food						
No	16	25,0	27	43,5	43	34,1
Rarely	8	12,5	7	11,3	15	11,9
Sometimes	20	31,3	16	25,8	36	28,6
Often	20	31,3	12	19,4	32	25,4

Household Food Security (HFIAS)	Urban		Rural		Total	
	n	%	n	%	n	%
Consuming fewer meals per day						
No	22	34,4	39	62,9	61	48,4
Rarely	11	17,2	11	17,7	22	17,5
Sometimes	19	29,7	7	11,3	26	20,6
Often	12	18,8	5	8,1	17	13,5
No type of food available to eat at home						
No	38	59,4	12	19,4	50	39,7
Rarely	11	17,2	7	11,3	18	14,3
Sometimes	10	15,6	20	32,3	30	23,8
Often	5	7,8	23	37,1	28	22,2
Going to bed at night hungry						
No	37	57,8	43	69,4	80	63,5
Rarely	12	18,8	6	9,7	18	14,3
Sometimes	9	14,1	7	11,3	16	12,7
Often	6	9,4	6	9,7	12	9,5
Going an entire day and night without consuming any food						
No	51	79,7	56	90,3	107	84,9
Rarely	5	7,8	1	1,6	6	4,8
Sometimes	5	7,8	2	3,2	7	5,6
Often	3	4,7	3	4,8	6	4,8

Based on Table 11, regarding responses to questions about eating habits, five-sevenths (45.3%) of respondents in urban areas and three-eighths (38.7%) of respondents in rural areas reported “often” to the question about worrying about not having enough food at home. A similar comparison was observed for the question regarding the inability to consume preferred foods, where three-eighths (37.5%) of urban respondents answered “often” or “sometimes,” while nearly four-ninths (43.5%) of rural respondents answered “often”. Half of the urban respondents (50%) answered “often,” and three-quarters (75.8%) of rural respondents answered “no” to the question about limited food variety. Three-quarters of respondents in both urban and rural areas (75%) answered “no” to the question regarding having to consume certain types of food they did not want to eat. A similar proportion (31.3%) of urban respondents answered “sometimes” or “often” to the question about consuming smaller portions, whereas four-ninths (43.5%) of rural respondents answered “no”. More than one-third (34.4%) of urban respondents and more than three-fifths (61%) of rural respondents answered “no” to the question about consuming less food during the day. Nearly three-fifths (59.4%) of urban respondents answered “no,” and three-eighths (37.1%) of rural respondents answered “often” to the question regarding the unavailability of any edible food at home. Nearly three-fifths (57.8%) of urban respondents and more than two-thirds of rural respondents answered “no” to the question about going to sleep hungry at night. Almost all respondents, both in urban (79.7%) and rural areas (90.3%), answered “no” to the question about skipping the entire day and night without consuming any food.

f. Food Consumption

1) Nutrient Intake in Children Under Five

Children under five are in a critical growth period that requires adequate nutritional intake. Meeting the requirements for energy as well as macro- and micronutrients, such as protein, iron, phosphorus, and calcium, serves as an important indicator for assessing a child's nutritional status, growth, and development (Pratiwi et al., 2021). Table 13 presents the average intake and adequacy levels of energy and nutrients among toddlers in urban and rural areas.

Table 10 Average intake and adequacy levels of energy and nutrients among children under five in urban and rural areas

Nutrient intake	Urban	Rural	Total	*p-value*
Energy				
RDA (kcal)	1147	1127	1137	0,533
Nutrient intake (kcal)	914	923	918	
Adequacy level (%)	80±34,8	84,29±37,27	82,24±35,94	
Protein				
RDA (grams)	23,2	22,7	22,9	
Nutrient intake (grams)	23,8	24,0	23,5	0,959
Adequacy level (%)	102,3±53,1	107,72±66,4	104,95±59,78	
Iron				
RDA (mg)	8,1	7,47	7,8	0,722
Nutrient intake (mg)	4,03	4,15	4,1	
Adequacy level (%)	50,6±39,53	56,2±58,2	53,35±49,4	
Phosphorus				
RDA (mg)	456,2	445,66	451,0	0,354
Nutrient intake (mg)	209,63	230,98	220,0	
Adequacy level (%)	46,0±36,1	52,74±42,14	49,29±39,14	
Calcium				
RDA (mg)	713,3	673,93	694,1	0,003
Nutrient intake (mg)	112,34	207,66	158,9	
Adequacy level (%)	16,58±17,72	34,27±47,14	25,21±36,24	

The nutrient adequacy levels used in this study refer to the recommendations of the National Food and Nutrition Workshop (Widyakarya Nasional Pangan dan Gizi, WNPG) 2004 and the Indonesian Ministry of Health Regulation No. 28 of 2019 regarding recommended dietary allowances for the Indonesian population. Based on Table 13, the average energy intake of children under five in urban and rural areas approached the recommended dietary allowance (RDA). The RDA for energy among children under five was 1,147 kcal in urban areas and 1,127 kcal in rural areas, while the actual intake was 914 kcal in urban areas and 923 kcal in rural areas. The percentage of energy adequacy was lower in urban areas (80%) compared to rural areas (84.29%). Statistical analysis indicated no significant difference in energy adequacy between urban and rural areas ($p > 0.05$), suggesting that both areas fall within the "adequate" range (<80–110%) according to WNPG (2012). Energy adequacy in urban areas being higher than in rural areas may

be influenced by socioeconomic conditions and food accessibility. Rural communities generally have better access to local agricultural and fishery products, which tend to provide more stable food availability, thereby supporting higher energy intake. Rice, as the staple food and primary carbohydrate source, contributes significantly to daily energy intake of children under five (Utami & Ani, 2024).

The average protein intake in both urban and rural areas exceeded the RDA. The protein RDA was 23.2 g in urban areas and 22.7 g in rural areas, while the actual intake was 23.8 g in urban areas and 24 g in rural areas. This indicates that protein adequacy among children under five is within the normal range (80–110%) according to WNPG (2012), with protein adequacy of 102.3% in urban areas and 107.7% in rural areas. Statistical analysis showed no significant difference in protein adequacy between the two areas ($p > 0.05$). Most children under five in both urban and rural areas consumed eggs as their main source of animal protein due to their affordability and accessibility. Animal protein sources, including meat, fish, eggs, and milk, are rich in essential amino acids, supporting optimal growth and preventing stunting (Safitri et al., 2024). Variation in maternal knowledge and caregiving practices regarding the importance of protein also influences children's protein intake. Cultural factors, family habits, and social support further affect feeding practices, especially in low-income households (Adebowale et al., 2020; Smith et al., 2017).

Iron intake among children under five in both urban and rural areas was deficient. In urban areas, the majority of children under five (82.8%) experienced iron deficiency, while only 17.2% had sufficient intake. In rural areas, the situation was slightly better, with 77% experiencing deficiency and 23% having adequate intake. The average iron adequacy was 50.6% in urban areas and 56.2% in rural areas, both well below the recommended RDA. Statistical analysis revealed no significant difference in iron adequacy between urban and rural areas ($p > 0.05$), indicating that iron deficiency remains a significant micronutrient issue for children under five. This aligns with national data showing persistent iron deficiency among Indonesian children, with average intakes below daily recommendations in both urban and rural settings (Putri et al., 2015). Iron, an essential micronutrient, plays a critical role in hemoglobin formation, mitochondrial enzymes, immune function, and brain development. Low iron adequacy is largely due to limited consumption of animal-based foods, which are primary sources of heme iron, such as liver, red meat, and fish. Low consumption of iron-rich animal foods is often linked to economic constraints among low-income households, whose diets rely more on plant-based sources with low bioavailability and insufficient vitamin C intake to enhance absorption (Pettifor & Zlotkin, 2004). According to Susenas (2022), poor households allocate a significantly smaller proportion of their budget to animal-based foods compared to non-poor households.

Phosphorus intake among children under five in both urban and rural areas was also deficient. The majority of children under five in urban areas (84.4%) experienced phosphorus deficiency, with only 15.6% meeting the requirement, while in rural areas, 80.3% were deficient and 19.7% met the

requirement. Average phosphorus adequacy was 46.0% in urban areas and 52.74% in rural areas, indicating that about half of the daily phosphorus requirement was unmet. Statistical analysis revealed no significant difference between urban and rural areas ($p > 0.05$). Phosphorus, an essential macromineral, plays a vital role in bone and teeth formation, energy metabolism via ATP, and cellular function (Krajcovicová-Kudlácková et al., 2020). During early childhood, phosphorus needs increase due to rapid growth, and deficiency can impair bone development, disrupt calcium balance, and potentially result in linear growth retardation (Semba et al., 2016). Low phosphorus intake in both urban and rural children under five in this study is likely influenced by limited consumption of phosphorus-rich animal foods, which are often unaffordable for low-income families, leading to insufficient intake (Ghosh et al., 2019).

Calcium adequacy among children under five in both urban and rural areas was critically low. Nearly all children under five in urban areas (98.4%) experienced calcium deficiency, with only 1.6% meeting the requirement. In rural areas, although slightly better, 88.5% were deficient and 11.5% met the requirement. Average calcium adequacy was 16.58% in urban areas and 34.27% in rural areas, both far below the daily requirement. Statistical analysis showed a significant difference ($p < 0.05$) between urban and rural areas, with rural children under five having higher average calcium adequacy (34.27%) than urban children (16.58%). This disparity is likely associated with household economic factors, as low-income families often cannot provide regular sources of calcium, such as milk, cheese, yogurt, and fish. Limited purchasing power reduces access to nutrient-dense foods, including calcium-rich sources (Arsenault et al., 2020). Higher calcium adequacy in rural areas may be attributed to better access to affordable local foods containing moderate amounts of calcium, such as small local fish, moringa leaves, or other plant-based foods. Rural households also often consume small fish whole with bones, which contributes directly to calcium intake (Dewi et al., 2022).

2) Nutrition Intake in Mother

Nutrient intake among mothers is an important determinant of family nutritional status, particularly for children under five who are in their direct care. Mothers play a central role as household food managers and as key influencers of children's daily dietary patterns; therefore, maternal nutrient adequacy significantly affects both feeding practices and the nutritional status of children (Mahmudiono et al., 2018). Table 14 presents the average levels of energy and nutrient adequacy among mothers in urban and rural areas.

Table 11 Average intake and adequacy levels of energy and nutrients among mothers in urban and rural areas

Nutrient intake	Urban	Rural	Total	*p-value*
Energy				
RDA (kcal)	1592	1603	1598	
Nutrient intake (kcal)	1049	1174	1110	0,112
Adequacy level (%)	67,0±25,0	74,0±29,0	70,0±27,0	
Protein				
RDA (grams)	47,5	47,6	47,6	
Nutrient intake (grams)	27,0	27,2	27,1	0,760
Adequacy level (%)	59,6±31,9	59,2±28,2	59,0±30,0	
Iron				
RDA (mg)	18	18	18	
Nutrient intake (mg)	6,95	7,41	7,2	0,339
Adequacy level (%)	38,63±25,48	41,14±22,85	39,87±24,16	
Phosphorus				
RDA (mg)	700	700	700	
Nutrient intake (mg)	218,72	261,5	239,8	0,229
Adequacy level (%)	31,25±15,42	37,36±23,75	34,25±20,11	
Calcium				
RDA (mg)	1200	1200	1200	
Nutrient intake (mg)	148,85	193,5	170,8	0,759
Adequacy level (%)	12,4±7,8	16,13±15,99	14,24±12,61	

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on Table 14, the majority of mothers in both urban and rural areas experienced deficiencies in macro- and micronutrients, including energy, protein, iron, phosphorus, and calcium. This indicates that nutrient inadequacy is a widespread issue across both regions, with varying degrees of severity, highlighting that chronic energy deficiency remains a primary nutritional problem in both areas.

The average energy intake among mothers in rural areas (1,174 kcal) was higher than that of mothers in urban areas (1,049 kcal), although both were well below the recommended dietary allowance (RDA) of 1,592 kcal for urban areas and 1,603 kcal for rural areas. The energy adequacy level (EAL) among mothers was 67% in urban areas and 74% in rural areas. Although the mean energy adequacy in rural areas was higher than in urban areas, statistical analysis indicated no significant difference between the two regions ($p > 0.05$). Deficient maternal energy intake can lead to Chronic Energy Deficiency (CED). Triatmaja et al. (2018) reported that CED is more frequently observed among mothers aged ≥29.5 years, while younger

breastfeeding mothers are more likely to experience undernutrition. Maternal nutrient intake also directly affects the quality of breast milk, influencing both maternal and child growth and development.

The average protein intake among mothers was 27.0 g in urban areas and 27.2 g in rural areas, substantially below the RDA of 47.5 g for urban areas and 47.6 g for rural areas. Protein adequacy was 59.6% in urban areas and 59.2% in rural areas, with no significant difference observed between regions ($p > 0.05$). Common protein sources for mothers included salted fish, tofu, and tempeh, which are affordable, readily available, and easy to prepare. This aligns with findings by Triatmaja et al. (2018) and Wardani et al. (2023), showing that in low-income households, tofu and tempeh are the most commonly consumed protein sources. Factors such as education level and household income influence food choice and nutritional knowledge (Anjani et al., 2024). Protein deficiency may impair cellular regeneration, reduce immunity, and, in pregnant women, negatively affect fetal growth. Novita and Syarief (2019) reported that low protein intake among housewives is associated with limited purchasing power and low diversity of animal-based foods.

Iron intake among mothers was also deficient, with urban mothers consuming an average of 6.95 mg and rural mothers 7.41 mg, both far below the RDA of 18 mg. Iron adequacy was 38.63% in urban areas and 41.14% in rural areas. Statistical analysis showed no significant difference ($p > 0.05$) between urban and rural areas. Such low intake contributes to a high prevalence of iron-deficiency anemia in both regions. Iron is crucial for hemoglobin formation, the main component of red blood cells responsible for oxygen transport. Inadequate iron intake reduces hemoglobin production, resulting in anemia, defined as hemoglobin levels <12 g/dL in women of reproductive age (WHO, 2015; Kemenkes RI, 2019). Paramashanti et al. (2024) found that low socioeconomic status is associated with low iron intake, directly impacting the incidence of anemia in mothers and children, reducing productivity, increasing fatigue, and raising the risk of complications during pregnancy and delivery, particularly with long-term anemia.

Phosphorus intake among mothers was slightly lower in urban areas (218.72 mg) compared to rural areas (261.5 mg), yet both were far below the RDA of 700 mg. Phosphorus adequacy was 31.25% in urban areas and 37.35% in rural areas, with no significant difference ($p > 0.05$). Phosphorus is essential for ATP molecules, phospholipids, and bone structure. It is also transferred to infants via breast milk to support bone development and energy metabolism, meaning maternal phosphorus deficiency can adversely affect infant nutrition (Bzikowska Jura et al., 2022). Breastfeeding mothers with phosphorus deficiency may increase the risk of mineral deficits in infants, potentially impairing bone development and cellular energy metabolism, and causing mineralization-related growth disorders (Nakamura et al., 2015).

Calcium intake was critically low among mothers. Urban mothers consumed an average of 148.85 mg/day, while rural mothers consumed 193.5 mg/day, far below the RDA of 1,200 mg. Calcium adequacy was 12.4% in urban areas and 15.9% in rural areas. Overall, mothers in rural areas had slightly higher nutrient intake than those in urban areas, but both remained at

levels indicative of significant deficiency. Statistical analysis showed no significant difference between urban and rural calcium adequacy ($p > 0.05$). These findings indicate that most mothers experience severe calcium deficiency, which can reduce bone density and strength, particularly during lactation, affecting the calcium content in breast milk (Leyvraz & Yao, 2023). Calcium deficiency is closely linked to household economic status. Low-income families often cannot afford high-quality calcium sources such as milk, dairy products, soft-boned fish, and green vegetables. In low-income countries, including some regions of Asia and Africa, calcium intake typically ranges from 300–600 mg/day, far below recommendations, primarily due to economic constraints (Shlisky et al., 2022).

3) Household Consumption Frequency

The assessment of household food consumption frequency was conducted using a Food Frequency Questionnaire (FFQ) that was adapted to local conditions and the food groups commonly consumed by low-income households. In this study, the FFQ instrument evaluated the diversity of consumption of various types of foods and beverages over a one-week period. Table 15 presents the distribution of households based on meal frequency (times per week).

Table 12 Distribution of respondents based on the frequency of staple food and animal-source side dish consumption (times per week)

Food items	Urban			Rural			Total			*p-value*
	n	%	Mean ±SD	n	%	Mean ±SD	n	%	Mean ±SD	
Staple food										
Rice	64	100	16,0±3,6	64	100	16,9±3,9	126	100	16,4±3,8	0,132
Noodle	50	78,1	1,8±1,5	48	77,4	1,5±1,1	98	77,8	1,6±1,4	0,290
Bread	40	62,5	1,3±1,8	38	61,3	1,5±1,9	78	61,9	1,4±1,9	0,531
Corn	25	39,1	0,5±0,7	20	32,3	0,5±0,8	45	35,7	0,5±0,8	0,532
Sweet potato	17	26,6	0,4±0,7	22	35,5	0,6±1,1	39	31,0	0,5±0,9	0,207
Cassawa	17	26,6	0,3±0,6	22	35,5	0,5±0,9	39	31,0	0,4±0,8	0,206
Fish and its processed products										
Dried salted fish	44	68,8	2,3±2,7	53	85,5	3,1±2,3	97	77,0	2,7±2,6	0,011
Fresh fish	19	29,7	0,4±0,9	27	43,5	0,8±1,2	46	36,5	0,6±1,1	0,036
Meat, egg, and its processed products										
Egg	62	96,9	5,3±3,8	54	87,1	3,9±3,1	116	92,1	4,6±3,5	0,025
Chicken	42	65,6	1,1±1,1	41	66,1	1,2±1,2	83	65,9	1,1±1,2	0,783
Sausage	25	39,1	0,8±1,4	21	33,9	0,7±1,6	46	36,5	0,8±1,5	0,444
Meat	0	0,0	0,0±0,0	2	3,2	0,03±0,2	66	52,4	0,02±0,1	0,149
Legumes and their processed products										
Tofu	62	96,9	3,6±2,5	59	95,2	2,9±1,8	121	96,0	3,2±2,2	0,228
Tempeh	52	81,3	2,8±2,6	54	87,1	2,3±1,8	106	84,1	2,6±2,2	0,570
Oncom	19	29,7	0,8±1,6	21	33,9	0,6±1,0	40	31,7	0,7±1,4	0,856

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Table 15 illustrates that the most frequently consumed staple food was white rice. All low-income households consumed white rice daily

(100%), with an average consumption of 16 times per week, or approximately twice daily, in both urban (16.0 ± 3.6) and rural areas (16.4 ± 3.8). This reflects a national and cultural preference for rice as the main energy source in Indonesia (Nurhasan et al., 2024). Noodles were also commonly consumed by a majority of households in urban (78.1%) and rural areas (77.4%), although the average frequency was less than twice per week. Consumption of alternative carbohydrate sources such as corn, cassava, and sweet potato was very low in both urban and rural areas, averaging less than once per week. Statistical analysis indicated no significant difference ($p > 0.05$) in staple food consumption between urban and rural households. This pattern reflects the general behavior of low-income households, which prioritize inexpensive but filling staple foods such as rice and noodles to meet basic energy needs (Nurhasan et al., 2024).

Salted fish was the most frequently consumed type of fish in both areas, with average consumption of 2–3 times per week in urban (2.3 ± 2.7) and rural areas (3.1 ± 2.3). The proportion of households consuming salted fish was higher in rural areas (85.5%) than in urban areas (68.8%). In contrast, fresh fish consumption remained low (average <1 time/week) in urban (0.4 ± 0.9) and rural areas (0.8 ± 1.2). Statistical analysis showed a significant difference ($p < 0.05$) in the frequency of salted and fresh fish consumption between urban and rural areas. Salted and freshwater fish were more commonly consumed in rural areas due to easier access to local water sources, making fish more affordable. Salted fish is an economical option for low-income households because it is cheaper and has a longer shelf life, allowing families to purchase in bulk (Sari & Muflikhati, 2018).

Chicken eggs were the most frequently consumed source of animal protein among the meat, egg, and processed products group. Urban households consumed eggs an average of 5 times per week (5.3 ± 3.8) compared to 3–4 times per week in rural households (3.9 ± 3.1). The proportion of egg-consuming households was also higher in urban areas (96.9%) than rural areas (87.1%). Statistical analysis indicated a significant difference ($p < 0.05$) in egg consumption frequency between urban and rural households. Higher egg consumption in urban areas is likely related to greater market availability, easier access, and slightly higher purchasing power. Eggs are relatively affordable, have a longer shelf life, and are versatile in daily meal preparation, making them an accessible source of animal protein for low-income households (Wibowo et al., 2025). In contrast, beef was the least consumed animal protein source in both urban (0%) and rural areas (0.03%), reflecting its high cost and limited affordability for low-income households.

Tofu and tempeh were the most frequently consumed plant-based protein sources among legumes and processed products in both urban and rural low-income households. Nearly all households in urban (96.9%) and rural areas (95.2%) consumed tofu, while tempeh was consumed by 81.3% of urban households and 87.1% of rural households. Average tofu consumption was 2–3 times per week in urban (3.6 ± 2.5) and rural areas (2.9 ± 1.8), and tempeh was consumed approximately twice per week in urban (2.8 ± 2.6) and rural areas (2.3 ± 1.8). Statistical analysis showed no significant difference ($p > 0.05$) in the frequency of tofu and tempeh consumption between urban

and rural households. High consumption of tofu and tempeh in both areas among low-income households is associated with their low cost and easy availability. Additionally, tofu and tempeh are considered essential foods that are less sensitive to fluctuations in household income, ensuring they continue to be consumed regularly even during economic hardship (Khoiriyah et al., 2024).

Table 13 Distribution of respondents based on the frequency of vegetables and fruits consumption (times per week)

Food item	Urban			Rural			Total			*p-value*
	n	%	Mean ±SD	n	%	Mean ±SD	n	%	Mean ±SD	
Vegetables										
Carrot	44	68,8	1,5±1,6	44	71,0	1,4±1,2	88	69,8	1,5±1,4	0,747
Spinach	42	65,6	1,3±1,5	40	64,5	1,2±1,2	82	65,1	1,3±1,4	0,905
Chinese mustard greens	37	57,8	1,1±1,2	38	61,3	1,0±1,0	75	59,5	1,0±1,1	1,0
Bean sprouts	36	56,3	0,8±1,0	37	59,7	1,1±1,2	73	57,9	1,0±1,1	0,356
Water spinach	35	54,7	1,0±1,2	32	51,6	0,8±1,0	67	53,2	0,9±1,1	0,505
Cassava leaves	12	18,8	0,2±0,4	19	30,6	0,5±1,1	31	24,6	0,4±0,9	0,086
Fruits										
Banana	45	70,3	1,6±1,7	41	66,1	1,7±1,8	86	68,3	1,7±1,8	0,792
Papaya	30	46,9	1,1±1,7	35	56,5	1,4±1,9	65	51,6	1,2±1,8	0,306
Orange	28	43,8	0,6±0,9	28	45,2	1,0±1,7	56	44,4	0,8±1,3	0,573

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on Table 16, the most frequently consumed vegetables among low-income households in both urban and rural areas were carrots, with 68.8% of urban households and 71% of rural households consuming them. The average frequency of carrot consumption was 1–2 times per week in urban (1.5 ± 1.6) and rural areas (1.4 ± 1.8). Spinach was also a commonly consumed vegetable in both urban (65.6%) and rural areas (64.5%), with an average frequency of once per week. In contrast, cassava leaves were the least consumed vegetable, eaten by only 18.8% of urban households and 30.6% of rural households, with average consumption frequencies below once per week in urban (0.2 ± 0.4) and rural areas (0.5 ± 1.1). Statistical analysis indicated no significant difference ($p > 0.05$) in the frequency of consumption of all vegetable types between urban and rural households. The homogeneity of vegetable consumption reflects similar economic conditions in both areas, as low income influences the types and frequency of vegetable consumption. The high consumption of carrots and spinach among low-income households in both regions suggests that vegetable choice is primarily based on local availability, affordability, and ease of preparation. Carrots and spinach are commonly available in traditional markets, relatively inexpensive, and easy to cook for daily meals. In contrast, cassava leaves were consumed less frequently, particularly in urban areas, which may be due to rural households

having home gardens, providing greater access to locally grown vegetables (Sabrina & Nurhayati, 2024).

Regarding fruit consumption (Table 18), bananas were the most frequently consumed fruit by both urban (70.3%) and rural households (66.1%), with an average consumption of 1–2 times per week in urban (1.6 ± 1.7) and rural areas (1.7 ± 1.8). Additionally, nearly half of households consumed papaya, both in urban (46.9%) and rural areas (56.5%), followed by oranges, consumed by 43.8% of urban households and 45.2% of rural households. Statistical analysis indicated no significant differences ($p > 0.05$) in the frequency of banana, papaya, and orange consumption between urban and rural households. Bananas were the most frequently consumed fruit in both areas, likely due to their year-round availability, affordability, and local production, making them a preferred choice for low-income households (Marpaung et al., 2024). According to Darmawan et al. (2023), local fruits such as bananas and papayas are primary choices for low-income households because their prices are stable and their taste is widely familiar.

Table 14 Distribution of respondents based on the frequency of vegetables and fruits consumption (times per week)

Food item	Urban			Rural			Total			*p-value*
	n	%	Mean ±SD	n	%	Mean ±SD	n	%	Mean ±SD	
Snacks food										
Biscuit	51	79,7	2,8±3,0	42	67,7	2,1±2,4	93	73,8	2,4±2,7	0,082
Meatball or fish dumplings (bakso/siomay)	37	57,8	0,9±1,1	38	61,3	1,2±1,6	75	59,5	1,1±1,3	0,259
Tapioca balls / tapioca omelet balls (cilok/cilor)	35	54,7	1,2±1,7	30	48,4	0,9±1,4	65	51,6	1,1±1,6	0,308
Packaged savory snacks (chips/crisps)	33	51,6	2,0±3,1	31	50,0	1,1±1,7	64	50,8	1,5±2,5	0,297
Spicy soggy crackers with vegetables & protein (seblak, traditional spicy cracker dish)	28	43,8	0,8±1,1	21	33,9	0,5±0,8	49	38,9	0,6±1,0	0,192
Doughnut	21	32,8	0,5±1,1	19	30,6	0,9±1,0,39	40	31,7	0,7±1,5	0,806
Rolled egg omelet (street-style)	19	29,7	0,9±2,3	18	29,0	0,4±1,0	37	29,4	0,7±1,8	0,652
Fried fish cake (otak-otak)	8	12,5	0,5±1,8	3	4,8	0,1±0,4	11	8,7	0,3±1,3	0,121
Fried fishcake in vinegar	5	7,8	0,1±0,3	3	4,8	0,1±0,3	8	6,3	0,1±0,3	0,503

Food item	Urban			Rural			Total			*p-value*
	n	%	Mean ±SD	n	%	Mean ±SD	n	%	Mean ±SD	
sauce (pempek)										
Beverages										
Tea	39	60,9	3,0±5,7	40	64,5	2,7±3,8	79	62,7	2,9±4,8	0,515
Coffee	26	40,6	2,8±4,9	24	38,7	1,7±2,9	50	39,7	2,3±4,1	0,550
Milk	18	28,1	0,8±2,1	23	37,1	1,5±3,2	41	32,5	1,1±2,7	0,205

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on Table 17, biscuits were the most frequently consumed snack among low-income households in both urban and rural areas, with consumption higher in urban areas (79.7%) than in rural areas (67.7%). The average frequency of biscuit consumption per week was 2–3 times in both regions, specifically 2.8 ± 3.0 in urban areas and 1.7 ± 2.4 in rural areas. In addition to biscuits, meatball/siomay snacks were also relatively popular, consumed by 57.8% of urban households and 61.3% of rural households, with an average frequency of approximately once per week (0.9 ± 1.1 in urban areas and 1.2 ± 1.6 in rural areas). Other snack types, such as cilok/cilor, rolled eggs, and seblak, were consumed by approximately 40–55% of households in both areas, with a frequency of 1–2 times per week. Statistical analysis indicated no significant differences ($p > 0.05$) between urban and rural areas for the consumption of all snack types. Biscuits were the most popular snack due to their relatively low price, easy availability at small kiosks, and long shelf life, making them an economical choice for children and family members. According to Huffman et al. (2014), the consumption of ultra-processed snacks such as biscuits, candies, and other convenience foods has increased significantly among low-income households in developing countries due to accessibility, aggressive marketing, and limited nutrition education. This phenomenon is referred to as a "food swamp," where high-calorie but nutrient-poor foods are more readily available in low-income areas than healthy options (Stowers et al., 2017).

Tea was the most frequently consumed beverage among households, with 60.9% of urban and 64.5% of rural households consuming it. The average frequency of tea consumption was 2–3 times per week (0.5 ± 0.7 in urban areas and 2.5 ± 3.8 in rural areas). Coffee was the next most commonly consumed beverage, with 40.6% of urban households and 41.9% of rural households consuming it. Milk consumption was relatively lower, with 28.1% of urban households and 33.9% of rural households consuming milk, at an average frequency of once per week (0.8 ± 2.1 in urban areas and 1.5 ± 3.2 in rural areas). Statistical analysis indicated no significant differences ($p > 0.05$) in the consumption of any beverage type between urban and rural households. Tea and coffee were the most frequently consumed beverages due to their low cost and easy availability in local kiosks and traditional markets. According to Mulyani et al. (2021), sweet tea and instant coffee dominate the beverage choices of low-income households because they are readily available, inexpensive, and perceived as providing sufficient energy despite low nutritional content. In contrast, milk is relatively expensive for low-income

households with limited economic resources and access, resulting in low consumption frequency. Sweetened condensed milk (SCM) is often considered a substitute for milk. Hidayat et al. (2022) report that the use of SCM as a milk substitute for children and toddlers is common in some regions of Indonesia. SCM contains over 70% sugar and minimal protein, making it unsuitable as a primary nutritional source for children.

4) Food Diversity

Food diversity is an important indicator used to describe the quality of household food consumption. Dietary diversity was measured using the Household Dietary Diversity Score (HDDS), based on data collected through the Food Frequency Questionnaire (FFQ). Foods were grouped into three categories: low (0–3), medium (4–5), and high (6–8), according to foods frequently consumed over the past seven days. A higher HDDS indicates a greater likelihood that a household has a balanced dietary pattern that meets the nutritional needs of its members (Swindale & Bilinsky, 2006). Table 18 presents the distribution of households based on HDDS categories in urban and rural areas.

Table 15 Distribution of respondents by household dietary diversity score (HDDS)

HDDS Category	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Low (0-3)	1	1,56	1	1,61	2	1,59	0,496
Moderate (4-5)	2	3,13	4	6,45	6	4,76	
High (6-8)	61	95,31	57	91,94	118	93,65	
Median(Min-Max)	8(2-8)		8(3-8)		8(2-8)		
Mean±SD	7,23±1,14		7,32±1,11		7,28±1,12		

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on the calculated Household Dietary Diversity Scores (HDDS) presented in Table 18, the majority of households in both urban and rural areas fell into the high dietary diversity category. Specifically, 95.31% of households in urban areas and 91.94% of households in rural areas had HDDS scores in the high category (6–8). In contrast, households with low (0–3) and medium (4–5) dietary diversity accounted for less than 7% in both areas. Statistical analysis indicated no significant difference in HDDS between urban and rural households ($p > 0.05$).

These results indicate that most respondent households in both regions have relatively diverse access to food. The lack of a significant difference between urban and rural areas may be influenced by the homogeneity of respondents' socioeconomic characteristics, similar food availability, or comparable consumption patterns in both areas. According to Ruel (2015), high dietary diversity reflects a greater likelihood of adequate nutrient intake, thereby supporting overall household food security. However, high dietary diversity does not necessarily guarantee optimal nutritional quality if it is not accompanied by the selection of nutritionally balanced foods in sufficient

quantities, particularly among low-income households where economic factors strongly influence food choices.

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5) Food Choice, Food Habit, Food Preference

Field data from Sayang Village (urban) and Ciwalen Village (rural) show that the root of the problem of food insecurity is extreme poverty. The majority of poor families have no assets, only work as farm laborers in the village or informal workers for daily wages in the city. Uncertain income makes them unable to buy food consistently. As a result, daily food consumption is entirely dependent on whether there is cash on the day. A single father in Sayang said: "If you have money to buy side dishes, if not, you will fast". This expression describes *food choice* in poverty: not about nutrition or taste, but about whether or not there is money on that day.

It is in this context that a pattern of survival adaptation emerges. From the results of the in-depth interviews, it can be seen that there are five stages of survival strategies carried out by poor families when facing food difficulties: (1) not being picky about food, (2) dividing food, (3) reducing the frequency of eating, (4) eating leftovers, and (5) not eating at all (Figure 1).

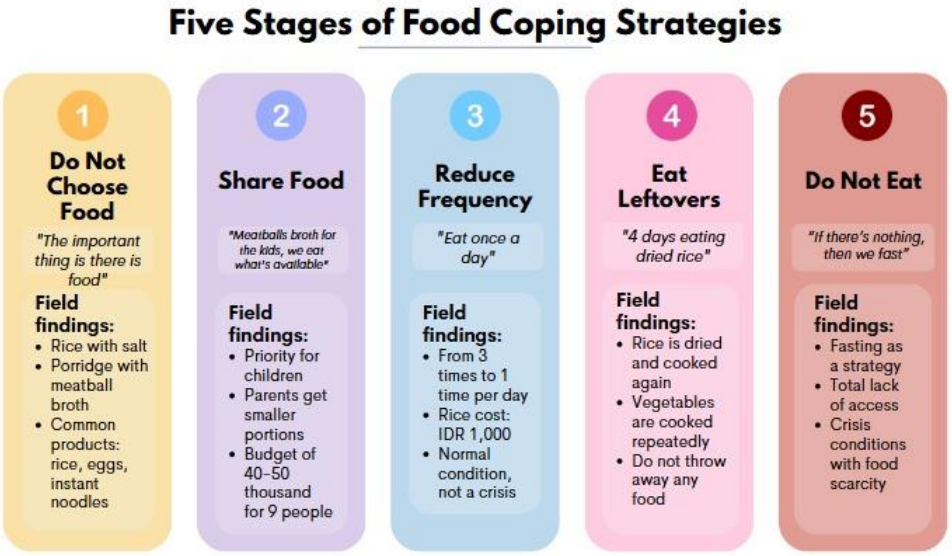

Figure 1 Five Stages of Extreme Poor Families Strategy to Face Food Insecurity (Source: Qualitative Data Processing, 2025)

Stage 1. Not picky about food

These five stages show the concrete dynamics of how poor families navigate limitations, and become a strong empirical picture of the daily face of food poverty. The first stage of survival strategies arises when the family stops thinking about variety, nutritional quality, and even taste. The principle: the important thing is food. A father in Sayang said that he once survived on only rice and salt. In Ciwalen, a midwife said that many toddlers are only given porridge with the addition of meatball sauce or cilok so that they feel like there is a taste.

This situation shows that in the early stages of hardship, poor families can still eat, but they have already lost their freedom of choice. The food consumed is the cheapest and available in the surrounding stalls. Observation of stalls supports this: Nutritious foods such as vegetables, fish, and fruit are available in stalls, but the most commonly purchased products are rice, eggs, cooking oil, and instant noodles. This means that *food choice* has turned into non-choice: only consuming the cheapest food.cooking oil, and instant noodles. This means that *food choice* has turned into non-choice: only consuming the cheapest food.

Box 1. Mr. Odi – The Case of Mr. Tunggal (Sayang Village)

Pak Odi (49 years old) is a single father who lives with his child who has been disabled since infancy due to step. To support his household, he works scavenging junk with an erratic income, around Rp20,000-Rp40,000 per day. With such a low income, almost every day he has to adjust his food consumption according to the money he earns. In an interview, he recounted his experience of surviving when there was really no money: *"I used to only eat rice and salt, the important thing is that there is rice, as long as I am full. If you have money to buy side dishes, if not, you will fast."*

For Mr. Odi, salt is a minimal symbol so that rice feels "side dish". This phrase is not a reflection of simplicity, but rather a survival strategy in the midst of extreme limitations. When money is not there, eating rice and salt is seen as better than not eating at all. This situation shows how food choice has lost its meaning: it is no longer about choosing the desired food, but simply filling the stomach with what is available. In Pak Odi's case, not being picky about food means there is no room to choose at all.

Stage 2. Dividing Meals

The next stage is to divide the potluck food in the household. The meatball soup that is bought is often only for children, while parents eat rice only. An informant described: "Meatball soup for children, we eat makeup."

Box 2. Mrs. Nurjanah (Case for a Household with 9 Family Members)

Mrs. Nurjanah (43 years old) lives in Sayang Village with nine family members. With her husband's income as a casual coolie and occasional assistance for the eldest child, she has to manage Rp40-50 thousand per day for the food needs of the entire household: "*I cook the most vegetables every day, tofu, tempeh, and eggs. The money is IDR 40-50 thousand a day for nine people. So yes, let's share, the children first, me and the father later."*

Animal protein foods such as chicken or fish rarely make it to the dinner table; if any, they are only for children. Adults more often give in to eating rice and salt or just vegetable sauce. In the long run, this strategy results in children getting used to simple side dishes and not knowing the variety of nutritious foods. Ibu Nurjanah's story emphasizes how food choice in poor families is only an internal negotiation of who has the right to eat first, not a matter of nutrition or taste.

The allocation of food is also evident in the case of large families: a mother in Sayang with nine family members admitted that she could only cook vegetables asem, tofu-tempeh, and eggs every day, at a cost of Rp40-50 thousand.

This practice of dividing food shows that in stage two, what is negotiated is no longer the type of food, but who can eat more or more nutritious. Young children are prioritized, while adults reduce portions. However, this priority does not necessarily guarantee nutritional quality, because what is shared is cheap food with low nutritional value.

Stage 3. Reduce the frequency of meals

If conditions worsen, the family begins to reduce the frequency of meals. From the normal pattern of three times a day, they switch to twice, even once a day. A father in the village said: "A day is only one meal".

This reduction in frequency appears to be recurring in many families, both in villages and cities. The elderly in Sayang, for example, only eat once a day with a thousand stalls. When this strategy becomes routine, it is no longer perceived as a crisis, but is considered normal. Eating once a day, even if it is nutritionally poor, is accepted as a normal daily routine. What was originally considered an "emergency" (one meal a day) is finally accepted as *a new* food habit.

Box 3. Pak Ruslan – Normalization of Poor Nutrition Habits (Ciwalen Village)

Mr. Ruslan (55 years old) lives in Ciwalen Village with his wife and seven children. He works as a celebration artist and manages a loan garden, with a very uncertain income. To send the children to school, he even sold a motorbike and a piece of land. In terms of consumption, he said:
"If the money runs out, usually the children eat first, the parents wait, sometimes until the night they eat once." In the famine season, he experienced extreme conditions: *"During the famine season, my children and I used to drink only sweet tea for two days."*

Eating once a day or replacing meals with sugary tea drinks is considered natural in this family. This phenomenon illustrates how crisis habits are no longer considered an emergency, but a normal routine. Mr. Ruslan's story shows how structural poverty normalizes undernourished habits, which ultimately shapes children's preferences for cheap and poor nutrition food.

Stage 4. Eating Leftovers

In the next stage, the family uses leftover food as a survival strategy. A case that has emerged many times is aron: leftover rice that is re-dried and recooked. A father in Sayang said: "Four days of eating dry rice (aron".

The habit of utilizing leftovers is also seen in families with many members. One mother said that vegetables cooked in the morning should be repeated again until night, even though the taste has changed. For them, throwing away food is completely impossible; The rest is always reprocessed

so that there is something to eat. This strategy shows a significant decline in food quality, from fresh food to repeated leftovers.

Box 4. Pak Ruslan – Normalization of Poor Nutrition Habits (Ciwalen Village)

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Stage 5. Not Eating At All

The most extreme stage is not eating at all. In this condition, the family considers "fasting" as a survival strategy. A single father said resignedly: "If there is no fasting, fast".

This phenomenon not only shows the loss of access to food, but also the loss of the meaning of food itself. At this stage, there is nothing more to

Box 5. Mrs. Nunuy – The Case of a Single Mother (Ciwalen Village)

Mrs. Nunuy (46 years old) is a single mother in Ciwalen Village who raises her child alone. With an erratic daily income from odd jobs, he often faces situations where he has no money at all to buy groceries. In the interview, he recounted the bitter experience when his family had to go through a night without food: *"Sometimes I don't eat all night, tomorrow I cook again. I usually tell the children to drink water first so they don't get fussy. If that's the case, yes, I just join the fast, wait until the morning hopefully there will be sustenance."*

This quote shows the most extreme stage of the poor household's survival strategy: fasting because of compulsion. For Mrs. Nunuy, fasting is not a spiritual choice, but a way to calm the child and postpone hunger until tomorrow. In this condition, eating loses its meaning. It no longer functions as a means of fulfilling nutrition or even enjoyment, but merely a biological action that is delayed due to the absence of resources. Critical paradigms read this experience as a form of structural deprivation: when access to food is entirely determined by purchasing power, the poor are forced to live in cycles of hunger and food delay.

negotiate: there are no choices, no habits to execute, no preferences to maintain.

These five stages of survival strategies show the adjustment process of poor households when facing extreme poverty. From the beginning, only lowering food standards (not being picky), then conducting internal negotiations (dividing food), then changing the diet (reducing frequency), reducing the quality of food (eating leftovers), until finally eliminating eating altogether (fasting). This stage is not just a momentary response, but reflects the logic of systematic structural adaptation in the context of extreme poverty. To understand these dynamics, the concepts of *food choice*, *food habit*, and *food preference* can be used as an analytical frame.

The first and second stages, namely not being picky about food and dividing food, show how *food choice* in poor families is not an expression of free preference, but *constrained preference*. Marques et al. (2021) and Lim & Kim (2022) emphasize that in poor conditions, food choices are entirely determined by purchasing power and availability of cheap food, not by taste or nutritional knowledge. This is evident in Sayang, where parents eat with rice and salt, or in Ciwalen when children are only given porridge with meatball sauce. Even when the stall provides vegetables or fish, the choice still falls on instant noodles and eggs. Thus, these findings confirm that *food choices* in extreme poverty are more accurately read as economic coercion, rather than individual preferences.

The third and fourth stages, reducing the frequency of eating and eating leftovers, showed the transformation of survival strategies into *new food habits*. Palazzo et al. (2022) explain that habits are formed from repetitive behaviors that are eventually carried out automatically. When the family gets used to eating once a day or consuming aron for a few days, this pattern is no longer perceived as a crisis, but as a normal routine. These findings show how *scarcity-induced habits are* born from economic limitations. This new habit has serious implications: children grow up in a household environment that considers undernutrition consumption to be normal, thus reinforcing the cycle of nutritional vulnerability.

The last stage, not eating at all, indicates the extreme point when *food preference* loses its meaning. In this condition, the problem is no longer what you want to eat, but whether or not there is food. However, the study also shows how preferences remain shaped in the long term by poor nutritional habits. Children in Sayang, for example, prefer instant noodles or soy sauce fried rice, and reject white rice. In Ciwalen, toddlers are used to only soupy diluted porridge. Ventura & Worobey (2018) emphasized that children's preferences develop from an early age through repeated exposure. Thus, even though in the crisis preferences lose meaning, in the long run poverty actually forms a new preference that is poor in nutrition. This is the intergenerational reproductive mechanism of food insecurity.

Observations of stalls in villages and cities show that the best-selling products are rice, eggs, oil, and instant noodles, while vegetables, fish, and fruits are rarely bought. The global literature emphasizes the role of *the food environment* in limiting choices (Reynolds et al., 2023). However, the findings of this study show that the role of *the food environment* in Ciwalen

and Sayang is secondary. Nutritious food is available, but poor families cannot afford it regularly. Thus, the root of the problem remains in structural poverty that eliminates purchasing power, while the food environment only narrows variety.

By linking the stages of survival strategies with the conceptual framework, a pattern is clearly visible: the initial stage (not picky, dividing food) reflects *constrained choice*; the stage of decreasing the frequency of eating and leftover eating is a form of scarcity habit; and the final stage is the loss of the meaning of preference in crisis, as well as the formation of a child's preference for nutrient-poor food. This pattern confirms Maxwell & Smith's (2021) argument that structural poverty results in a cycle of food vulnerability that is difficult to break.

g. Nutritional Knowledge

Nutritional knowledge refers to the understanding of proper food selection, consumption, and nutrient intake. It contributes significantly to an individual's health and productivity (Lestari et al., 2022). Mothers need to have adequate nutritional knowledge, as it directly influences decision-making regarding food consumption within the household. Mothers with good nutritional knowledge are also more likely to provide nutritious and varied meals for their families (Zahra et al., 2023). Table 22 presents the distribution of respondents based on maternal nutritional knowledge.

Table 19 Distribution of respondents by mothers' nutritional knowledge

Nutritional Knowledge	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
Good (>80)	39	60,9	40	64,5	79	62,7	0,925
Moderate (60-80)	24	37,5	22	35,5	46	36,5	
Low (<60)	1	1,6	0	0,0	1	0,8	
Median (Min-Max)	83,33 (55,56-100)		83,33 (61,11-100)		83,33 (55,56-100)		
Mean±SD	82,12±10,16		82,53±9,37		82,32±9,75		

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on Table 22, there was still one mother (1.6%) in urban areas with poor nutritional knowledge (<60). However, the majority of respondents, who were mothers of children under five, had good nutritional knowledge (>80), both in urban areas (60.9%) and rural areas (64.5%). The results also indicated no significant difference ($p > 0.05$) in maternal nutritional knowledge between urban and rural areas. The generally good level of maternal knowledge in this study is likely influenced by the active role of nutrition education programs conducted through Posyandu (integrated health posts). This aligns with studies by Azria and Husnah (2016) and Majidah et al. (2021), which showed that nutrition education on balanced dietary practices positively affects maternal nutritional knowledge.

Nutrition counseling activities are crucial for improving the nutritional status of children under five. Health education provided during these programs can influence individual behaviors, encouraging the adoption of more positive dietary habits. Mothers play a key role in supporting the improvement of child nutrition;

the more nutritional information mothers receive and understand, the better the nutritional practices implemented in childcare (Naibaho & Aritonang, 2022).

Mothers with good nutritional knowledge can also impact household food security, as they are better able to support family dietary patterns and plan appropriate meals for all family members. Increased maternal knowledge allows for a better understanding of the types, amounts, and nutritional quality of food suitable for consumption by all household members (Naibaho & Aritonang, 2022; Oktaviasih et al., 2023).

However, in this study, no significant relationship was found between maternal nutritional knowledge and household food security status ($p > 0.05$). This finding is consistent with Oktaviasih et al. (2023), which also reported no significant association between maternal nutritional knowledge and household food security. This suggests that although mothers may have a good understanding of nutrition, this alone is insufficient to guarantee food availability and access within the household. Food security is influenced more broadly by economic factors such as income, food prices, and market access, which cannot be directly altered by individual knowledge. Other contributing factors include education level, access to information or mass media, socio-cultural and economic conditions, and the surrounding environment (Kristiana & Widaningsih, 2021; Putri et al., 2022).

Table 20 Distribution of respondents based on correct answers to mothers' nutritional knowledge questions

No.	Question	Urban		Rural		Total	
		n	%	n	%	n	%
1.	A balanced diet consists of rice, vegetables, fruits, animal-based side dishes, and plant-based side dishes.	64	100	61	98,4	125	99,2
2.	Vitamins are one of the nutrients beneficial for body immunity.	63	98,4	62	100	125	99,2
3.	Protein functions in supporting the growth process.	64	100	62	100	126	100
4.	Margarine, butter, cheese, and coconut milk contain both protein and fat.	26	40,6	21	33,9	47	37,3
5.	Vegetables and fruits are a source of vitamins and minerals. sumber protein dan lemak.	35	54,7	28	45,2	63	50,0
6.	Carrots contain vitamin A which is beneficial for maintaining eye health.	64	100	62	100	126	100
7.	I eat rice as a source of energy.	63	98,4	62	100	125	99,2
8.	Excess sugar consumption can lead to diabetes.	36	56,3	23	37,1	59	46,8
9.	Salt consumption must be limited for our health.	60	93,8	61	98,4	121	96,0

No.	Question	Urban		Rural		Total	
		n	%	n	%	n	%
10.	Easily tired and frequent headaches are characteristics of people with anemia.	59	92,2	62	100	121	96,0
11.	Recommended consumption of six glasses of plain water per day.	26	40,6	26	41,9	52	41,3
12.	Breast milk is beneficial for infants because it contains nutrients, antibodies, and body defense factors.	63	98,4	61	98,4	124	98,4
13.	Breastfeeding should continue until the child is one year old.	47	73,4	43	69,4	90	71,4
14.	Regular weight monitoring every month is important for infants and young children.	64	100	61	98,4	125	99,2
15.	Reading food labels helps control intake of sugar, salt, and fat.	57	89,1	58	93,5	115	91,3
16.	Monitoring the use of cooking oil when preparing food is important.	46	71,9	47	75,8	93	73,8
17.	Excess fat consumption can cause obesity.	61	95,3	61	98,4	122	96,8
18.	Artificial colors and preservatives can cause disease.	61	95,3	60	96,8	121	96

The maternal nutritional knowledge questionnaire consisted of 18 questions. Based on Table 23, all respondents (100%) in both urban and rural areas correctly answered questions related to the functions of protein and vitamin A, particularly regarding child growth and development. This indicates that basic knowledge of essential macro- and micronutrients for children is relatively well understood. However, some questions had low correct response rates. One example is the question regarding sources of dietary fat, such as margarine, organ meats, and cheese, which were incorrectly categorized as protein sources by the majority of respondents (62.7%). Only 37.3% answered correctly. Additionally, questions about recommended daily water intake were often answered incorrectly. A total of 41.3% of respondents stated that consuming six glasses of water per day was sufficient, whereas the correct answer is eight glasses per day.

Low maternal nutritional knowledge has the potential to influence attitudes and food consumption practices within the household, including children's dietary patterns. Mothers with inadequate nutritional knowledge are more likely to provide food that does not meet the nutritional needs of children under five, which can negatively impact child nutritional status (Suriani et al., 2021). Furthermore, limited nutritional knowledge may increase the risk of household food insecurity. Conversely, the better a mother's understanding of nutrition, the more effectively she can determine the appropriate types and amounts of food for all household members. Adequate nutritional knowledge encourages mothers to select foods that meet the family's nutrient requirements, thereby contributing to improved dietary

quality and overall household nutritional status (Oktaviasih et al., 2023; Naibaho & Aritonang, 2022).

h. Self Efficacy

Self-efficacy is defined as an individual's belief in their ability to organize and execute a series of actions required to achieve a specific task (Bandura, 1997). According to Efendi (2013), self-efficacy is crucial in human life because it significantly determines and influences various aspects, including the ability to cope with stressors. The level of self-efficacy can be reflected in how effectively a person can solve the problems they face, including decisions related to food. In the context of maternal food caregiving, self-efficacy relates to a mother's confidence in her ability to perform food-related actions for her child and family, such as selecting healthy and nutritious foods, preparing meals, or managing food surplus (Aulia et al., 2021). This study examined maternal self-efficacy in relation to family and child dietary consumption. Table 26 presents the distribution of respondents based on maternal self-efficacy regarding children's dietary consumption.

Table 21 Distribution of respondents based on mothers' self-efficacy regarding child consumption

Mothers' Self-Efficacy Regarding Children Under Five	Urban		Rural		Total		*p-value*
	n	%	n	%	n	%	
High self-efficacy (score = 4)	5	7,8	7	6,5	12	9,5	0,014
Low self-efficacy (score = 1–3)	59	92,2	55	93,5	114	90,5	
Median (Min-Max)	3,3(1,8-4)		3,5(2,4-4)		3,4(1,8-4)		
Mean±SD	3,25±0,48		3,45±0,43		3,35±0,47		

Note: p-value based on Mann Whitney Test. *Significant if* $p < 0.05$

Based on Table 26, almost all respondents in urban areas (92.2%) and rural areas (93.5%) exhibited low levels of self-efficacy (score 1–3). Meanwhile, only a small proportion of respondents demonstrated high self-efficacy (score 4), with 7.8% in urban areas and 6.5% in rural areas. Statistical analysis showed a significant difference ($p<0.05$) in maternal self-efficacy regarding children's dietary consumption between urban and rural areas. The mean self-efficacy score was higher in rural areas (3.45 ± 0.43) compared to urban areas (3.25 ± 0.48), indicating that some rural mothers have greater confidence in their ability to meet the dietary needs of their children. According to Martin (2016), higher self-efficacy, as observed in rural areas in this study, can enhance household food security compared to lower self-efficacy.

One factor contributing to higher self-efficacy in rural areas may be stronger social solidarity and community cohesion compared to urban areas. Bandura's (1997) theory suggests that self-efficacy can be strengthened through social support and observation of others' success in similar situations (vicarious experience). The more intensive social interactions among neighbors in rural areas can encourage mothers to share experiences, feeding strategies, and caregiving practices, thereby enhancing their confidence in providing adequate nutrition for children. Additionally, counseling from Posyandu cadres and health center officers who directly reach target households in rural areas plays an important role in reinforcing

self-efficacy, even though formal information access may be more limited. Table 27 presents the distribution of respondents based on their answers to questions regarding maternal self-efficacy in child dietary consumption.

Table 22 Distribution of respondents based on mothers' self-efficacy responses regarding child consumption

No.	Mothers' Self-Efficacy	Urban		Rural		Total	
		n	%	n	%	n	%
1.	I encourage my child to always eat healthy food prepared at home.	29	45,3	23	37,1	52	41,3
2.	I do not allow my child to eat anything they want and ensure the food served to my child is healthy.	33	51,6	40	64,5	73	57,9
3.	I encourage my child to eat on time.	27	42,2	36	58,1	63	50,0
4.	I set an example for my child by eating healthy food.	39	60,9	45	72,6	84	66,7
5.	I involve my child in deciding the food to be served.	40	62,5	46	74,2	86	68,3
6.	I always offer food to my child three times a day.	25	39,1	35	56,5	60	47,6
7.	When my child says "I am not hungry," I still try to feed them.	39	60,9	41	66,1	80	63,5
8.	If my child refuses food, I offer another type of food.	43	67,2	45	72,6	88	69,8
9.	I can remain calm and not panic when my child refuses food.	40	62,5	43	69,4	83	65,9
10.	I can encourage my child to eat even when they are fussy or upset.	47	73,4	56	90,3	103	81,7

The questions related to maternal self-efficacy regarding children's dietary consumption consisted of ten items. The question that mothers in urban areas were most confident in answering concerned their ability to calm their child when the child was upset or frustrated with the food served (81.7%). This reflects an aspect of self-efficacy supported by emotion regulation skills and an authoritative parenting style. Henson et al. (2020) found that parents capable of regulating emotions, such as through cognitive reappraisal, exhibited higher parenting self-efficacy, including the ability to soothe a stressed child. This involves reinterpreting situations to mitigate negative emotions, effectively enhancing parental self-efficacy in the context of nutrition and child caregiving. Authoritative parenting is also associated with increased confidence in managing children's emotions during feeding by providing an emotionally supportive environment, reducing emotional eating behaviors, and strengthening parental confidence in assisting children (Henson et al. 2020; Pratiwi & Yustisia 2024). Such self-efficacy is important as it influences health and nutrition behaviors related to household food security (Coates et al. 2007).

Conversely, the questions that mothers in both urban and rural areas were least confident in answering related to encouraging children to consistently consume home-prepared healthy foods (41.3%), ensuring children eat three meals

daily at home (47.6%), and providing varied diets (50%). This is related to the reality that low-income parents may feel they meet their children's basic food needs but still face challenges in providing balanced, varied, and timely meals. These limitations reflect not only economic constraints but also low self-efficacy stemming from insufficient knowledge and technical skills in managing healthy food (Nirmala et al. 2024).

Qualitative data show that the self-efficacy of extreme poor households is more often in the form of a belief to simply survive, not to improve the quality of nutrition. Self-efficacy here comes across as fragile optimism: the family feels "capable" of feeding, but the meaning of "capable" is reduced to being able to survive enough with potluck food. Ibu Didah, for example, showed that the existing food continues to be reheated so that it can still be eaten for tomorrow, or the rest of the rice or side dishes are reheated even though the taste has changed. This expression is not a reflection of a strategy to improve nutritional quality, but rather a psychological mechanism to calm down.

Box 6. Mrs. Didah – Elderly Case (Ciwalen Village)

Ibu Didah (85 years old) is an elderly person in Ciwalen Village who lives with her daughter. In his old age, he is no longer economically productive and all his living needs are supported by children. However, he still sees the importance of his role in ensuring that the family is never completely without food. He shares a simple strategy he carries out every day: *"Vegetables cooked in the morning should be heated until night, even if the taste has changed, they are still eaten. If there is any leftover rice or side dishes, yes, keep it, don't throw it away. Tomorrow it will be heated again."*

For Mrs. Didah, the ability to keep food on the dinner table at all times, even if it is only in the form of leftover vegetables or side dishes, is a form of self-confidence. He feels "capable" of feeding because he can still manage how to keep food from running out quickly. However, Mrs. Didah's self-efficacy is not the capacity to improve the quality of nutrition, but the ability to survive in limitations. The strategy of reheating food shows fragile self-efficacy: it is able to maintain the continuity of the meal, but with the consequence of a decrease in food quality. Thus, self-efficacy here is a form of minimal adaptation, a sense of confidence to survive in conditions that are constantly repressive.

In Sayang Village (city), self-efficacy often appears as acceptance of resignation. Pak Dedi described a similar situation: *"Just eat anything... "Eat your heart out, and that's your way."*. When conditions were very bad, families in the city chose to skip eating: *"If there is no fasting, fast."* This statement shows that self-efficacy is present as the ability to accept the state of hunger. Parents still feel that they are carrying out their role as feeders, even though "feeding" only means inviting children to fast or postponing meals with water. In this context, self-efficacy in the city is more of a minimal survival: a feeling of being enough if the child is still eating something, even if it's just rice with salt or cheap fried foods.

In Ciwalen Village, although families also face extreme poverty, the expression self-efficacy shows a slightly different pattern. Households in villages more often describe their ability to regulate and adjust their diet. Mr. Ruslan said: *"If there are three times. If there is none, only once. It's very original. For example,*

don't eat this morning. Later Dzuhur, just eat it all because there is no rice. Realize that all of them are children. Let's hold it first.". This statement demonstrates self-efficacy based on meal time rearrangements: the belief that by delaying or withholding the morning, families can still eat together during the day.

Mrs. Nunuy added: *"Sometimes I don't eat rice for 3 days, but I eat porridge."*. This phrase emphasizes the belief in the ability to change the type of food: even if there is no rice, there are still other alternatives that can be provided so that the family does not go completely without food.

Self-efficacy in the village more often appears as a belief in the ability to adapt. Moms and dads believe they can still feed their families, even if it's by delaying meals, changing menus, or sharing less. This belief is not nutritionally ideal, but it shows a slightly greater sense of confidence than in the city, because it is accompanied by an adjustment strategy (Figure 2).

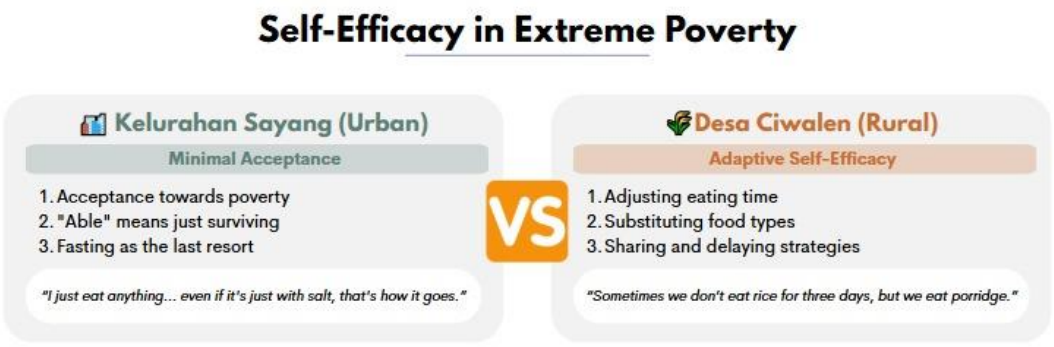

Figure 2 Self-Efficacy in Extreme Poverty, A Comparison between Villages and Cities

Bandura (1997) defines self-efficacy as an individual's belief in his or her ability to organize and carry out the actions necessary to achieve a specific goal. Self-efficacy affects how individuals face adversity, how much effort is expended, and how well they survive. In the context of this study, the "goal" is not to achieve an ideal diet with a balanced nutrition, but simply to ensure that the family continues to get food.

In the city, expressions such as "Yes, it is enough. Just makeshift (Mrs. Nurjanah) or "If there is no fasting" (Mr. Dedi) shows that self-efficacy is reduced to the belief to accept and live with shortcomings. This belief still gives a sense of ability, but only limited to "withholding" the condition. While in the village, expressions such as "If there are three times. If there isn't, just once... Later Dzuhur, just eat it all" (Mr. Ruslan) or "Sometimes I don't eat rice for 3 days, but eat porridge" (Mrs. Nunuy) show more adaptive self-efficacy. There is confidence that they can still manage meal times or change menus so that children keep eating something.

The difference in the form of self-efficacy in villages and cities can be explained through the social context and food environment. Research by Gartaula et al. (2020) on coping efficacy in poor households in South Asia emphasizes that community social support strengthens household self-efficacy in the face of food insecurity. In villages, the intensity of social interaction is higher; Mothers are used to sharing experiences, gardening vegetables, or parenting strategies. This reinforces their belief that there is still a "way" to adjust consumption. In contrast, in cities, community solidarity tends to be weaker. The urban poor are more

dependent on cash to buy food at stalls. When money runs out, the room for adjustment becomes very narrow, so self-efficacy more often appears as an attitude of resignation: accepting a state of hunger or fasting. This difference is consistent with the literature that states that self-efficacy can be strengthened by social support (Efendi, 2013; Bandura, 1997), and that families in rural communities tend to have greater confidence in meeting children's food needs due to the existence of more intense social networks (Martin, 2016).

In addition to the strategy of cooking modestly or postponing meals, some poor families describe their efficacy through the presence or absence of government assistance. In other words, survival is perceived as something that depends on external interventions, rather than entirely on one's own efforts. Mrs. Nurjanah said: "If there is no PKH assistance, it is very difficult. So I always hope that the assistance goes smoothly." Pak Dedi in Sayang also emphasized the same thing: "We are waiting for social assistance, sometimes it comes out, sometimes it doesn't. If you don't get out, you have to find a loan.".

Box 7. Aisyah's Grandmother – Elderly Case (Sayang Village)

Aisyah's grandmother (80 years old) lives in Sayang Village with her daughter, Umi (55 years old), who takes care of her every day. In the condition of old age and no longer productive, he has no income of his own. All of her life needs depend on her children and occasionally on help from the government. In an interview, he described his daily life as full of limitations: "If I buy a thousand buras in the morning at a stall, that's enough for a day. The body is sluggish, but what else can I do? If there is rice assistance, Alhamdulillah. If there is none, it is difficult. We can't help it, we can just give up."

This statement shows a very fragile form of self-efficacy. Aisyah's grandmother felt that she could still survive, but the meaning of "capable" here is simply because there is a child who takes care of her or helps come. In a critical framework, Grandma Aisha's self-efficacy is *state-dependent efficacy*: she feels "capable" when there is help or when the child can bear it, but otherwise helpless when the support is absent. This confirms that self-efficacy among the urban poor elderly is not psychological autonomy, but dependence which is interpreted as ability.

This expression shows that self-efficacy here is not merely a belief in personal ability, but a conditional sense of ability on social assistance. With the presence of PKH, basic necessities, or BLT, families feel more confident in being able to feed their children; Without that help, confidence collapses. This phenomenon shows how aid programs not only function as material relief, but also form a pseudo-efficacy: people feel able to survive, but only because of inconsistent state intervention. Self-efficacy that should be internal eventually becomes state-dependent efficacy: fragile, non-autonomous, and easily collapses when aid stops.

Food insecurity not only has an impact on nutritional status, but also on the psychological dimension of the family. Hadley et al. (2012) emphasized that the experience of food insecurity can weaken parents' confidence in feeding children. This study shows two faces of these impacts: in cities, food insecurity drives self-efficacy towards minimal acceptance; In the village, although still low, self-efficacy still functions as a belief to make adjustments. These findings are in line with Ventura & Worobey (2018), who stated that chronic food insecurity conditions can

alter parents' perceptions of "enough to eat," so the practice of feeding malnourished foods or delaying meals is considered reasonable.

Based on these findings, self-efficacy in the context of food poverty can be understood as survival efficacy, which is the belief to simply maintain survival, not to improve nutritional quality. In situations of extreme poverty, the sense of affordability that poor families have serves more as a psychological mechanism to calm themselves down than as a real strategy to improve food conditions. This efficacy is fragile because it is always limited by structural limitations: uncertain incomes, high food prices, and narrow access.

In rural settings, self-efficacy tends to emerge in the form of adaptive beliefs, with an emphasis on the ability to adjust consumption patterns. On the other hand, in urban areas, self-efficacy appears more as minimal acceptance, in the form of surrender to the condition of hunger. Both of these forms show limitations: self-efficacy only serves to maintain survival by whatever means are available.

Furthermore, this study found that the self-efficacy of poor families is often *state-dependent*, i.e. dependent on the presence of government assistance. The belief in being able to manage food is strengthened when help is present, and collapses when aid stops. This shows that self-efficacy in food poverty is not a reflection of full autonomy, but a fighting power that is bound and limited by socio-economic structures.

i. Social Capital

Social Capital in Facing Food Insecurity

This study found that extreme poor families in Ciwalen Village and Sayang Village still have social support from the surrounding environment. This social capital is present in the form of borrowing, sharing food, mutual cooperation, spontaneous solidarity, to the voluntary work of posyandu and PKK cadres. In emergency conditions, social capital is the first support when food needs cannot be met from their own income.

Some families describe the existence of community solidarity that arises in the form of sharing food. Pak Ruslan, a family with many members in Ciwalen Village, recounts how they outsmart their limitations by cooking together: *"Cooking together... Eat everything on the leaves, so call it tobas leaf tobas plate."* This practice allows some families to save costs while still eating together.

However, other experiences show the limitations of solidarity. Umi, a poor mother in Sayang, complained about the lack of concern from neighbors: *"No. I don't know if everyone is going to give it to me."* He feels that community support cannot be relied on at all times. This contrast suggests that solidarity between citizens does exist, but it is uneven, and often highly dependent on social closeness and certain situations.

In addition, poor families sometimes receive support in the form of vegetables from neighbors who have gardens or simple side dishes that are distributed when there is a surplus. Mothers in Ciwalen said that this sharing practice still exists, but the scale is small and does not always meet the daily needs of households.

Posyandu and PKK cadres occupy an important position in maintaining food security at the local level. They are the main motor that drives social solidarity, even though they have to bear personal burdens. A cadre in Sayang recounted: *"we need*

to pay the cook for this food assistance program… we are embarrassed if we cant provide good or tasty food, so we tried to add some of our own money for the cook".

Another story shows how cadres use personal refrigerators to store food for the PMT program. However, due to limited facilities, materials often spoil quickly. This fact shows that the success of the program on the ground depends largely on the commitment of the cadres, not solely on the support of the formal system.

Box 8. The Sacrifice of Posyandu Cadres in Ciwalen Village and Sayang Village

Posyandu cadres in Ciwalen Village and Sayang Village play an important role as the main support for social capital in dealing with food insecurity, even with different conditions and challenges. In Ciwalen, cadres emphasized their hard work to ensure that pregnant women and stunted children continue to get additional food. One of the cadres explained: *"If there are pregnant women or stunted children, we like to cook PMT. Sometimes they are happy, sometimes there are also those who refuse. If we don't want to come to the posyandu, we usually sweep to the house. If it is not taken, food is sometimes delivered to the house."* Cadres even often bear personal costs so that posyandu activities do not fail. They also had to face the rejection of some residents, but still carried out their duties voluntarily.

Meanwhile, in Sayang, the limited facilities make cadres have to use personal facilities. One cadre said: *"Food is stored in a private refrigerator, but because there is not enough, it sometimes spoils quickly."* In the case of malnutrition, they also mobilize spontaneous solidarity: *"We are impromptu help... If there is a direct case."*

These stories show how cadres in both rural arnd urban areas became an emergency safety net for poor families. However, their efforts depend heavily on individual dedication, personal sacrifice, and momentary solidarity. This confirms that social capital does exist, but it is fragile and unsustainable, so it cannot replace more stable structural interventions.

Cadres are also often the first party to move when there is a case of malnutrition. They organize spontaneous contributions among fellow cadres or residents. A senior said: *"We are looking forward to the next phase of the project... If there is a direct case."* This practice shows that community solidarity is often triggered by cadre initiatives, rather than by fixed institutional mechanisms.

Midwives in Ciwalen admitted that the role of cadres and the community is very helpful in reducing malnutrition, even though it is only temporary. He said that when there is a PMT program, the success of reducing cases cannot be separated from the hard work of cadres and the participation of the PKK. However, he also realizes that the program's sustainability is very fragile. Without the voluntary support of the community, the program did not go well.

Midwives also see community solidarity in the form of residents' attention. There are neighbors who are willing to share simple meals with poor families, or remind others to keep bringing their children to the posyandu. However, he considers this capacity limited. Social capital is important, but it is often unable to compensate for the severity of the nutritional problems faced by poor households.

The findings of the study show that extreme poor families in Ciwalen and Sayang do not fully face food insecurity alone. They still have a safe space from the social support around them, both in the form of mutual cooperation, neighbor

attention, and volunteer work of cadres. However, field findings also confirm that this social capital is fragile: it arises spontaneously, is dependent on specific individuals, and rarely functions as a sustained collective mechanism.

The practice of cooking together (*tobas leaves tobas plates*) or impromptu saweran for malnourished children shows the power of local social networks in helping moments. This finding is in line with Putnam (2000) who emphasized that social networks and mutual cooperation norms are able to strengthen the capacity of communities to face challenges. However, Umi's experience in Sayang who said that there were no neighbors to provide help confirmed that solidarity was not evenly distributed.

This condition describes what Adhikari & Goldey (2019) call *fragile solidarities*: a form of solidarity that appears in a given moment, but cannot sustain daily needs in conditions of chronic poverty. In other words, social solidarity does exist, but it is not strong enough to answer the nutritional problems that recur every day.

The findings also show the large role of posyandu and PKK cadres. They are not only the link between nutrition programs and the community, but also the main support of social capital in the field. However, this role is often accompanied by personal sacrifice. This phenomenon shows that community solidarity often depends on individuals who have a high level of commitment. Cabot et al. (2020) emphasize that in the context of prolonged crises, social capital tends to be fragmented, where the capacity for solidarity only lasts to the extent that there are active individuals. This is clearly seen in Ciwalen and Sayang: the success of the PMT program or nutrition kitchen is not only determined by the system, but also by the dedication of the cadres.

Overall, these findings suggest that social capital serves as an emergency cushion that provides survival space for extreme poor families. Spontaneous solidarity, cadre sacrifice, and neighborly concern are important supports when the formal system is inadequate. However, it is unstable. It is unpredictable, inaccessible equally to all poor families, and unable to prevent a repeat cycle of food insecurity.

Thus, the findings of this study reinforce the literature that social capital is indeed important for poor communities, but must be understood in the context of its limitations. It cannot replace structural interventions. In the context of food insecurity, social capital is more appropriately seen as a "fragile solidarity" that emerges in response to the crisis, but is not strong enough to be the foundation of long-term food security.

Government Assistance in Dealing with Food Insecurity

The results of the study show that government assistance is indeed one of the important supports in the lives of extreme poor families in Ciwalen Village and Sayang Village. However, findings on the ground also show that the role of this aid is never intact; It comes with many limitations, is often not on point, and only helps for the short term. The narrative of the recipients, village officials, health workers, and related agencies forms a relatively consistent picture: assistance exists, but it is fragile.

One of the most frequently raised issues by poor families is the issue of injustice in distribution. Umi, a poor mother in Sayang, said: "The house uses air

conditioning, loan sharks, got the assistance, but my mother doesn't." These complaints show how extreme poor groups often feel excluded from the list of recipients, while more established families actually get access. The Head of Ciwalen Village confirmed this problem: "We propose residence that deserve to got assistance, but when reviewed by higher officials, the assistance didn't go to people who we proposed." This is consistent with the findings of Hickey et al. (2020) who show that social assistance programs in many East African countries often fail to reach the most vulnerable groups due to weaknesses in targeting mechanisms. In other words, the problems encountered in Ciwalen and Sayang are not unique cases, but rather part of a global pattern: inaccurate data leads to the exclusion of the extreme poor.

This statement was strengthened by the admission of the Social Service which said that there were 28,450 anomalous data of recipients, including those who died were still registered. This kind of case illustrates the weakness of the administrative system that has direct implications for poor families' access to food. With inaccurate data, aid is not only mistargeted, but also fails to reach those most in need.

In addition to the issue of targets, aid is also perceived to be loaded with political content. The village head said that the distribution of aid often increased or changed ahead of the election. The midwife in Ciwalen even straightforwardly said: "The BLT is not really on target... Especially during the elections." For the poor, this creates ambivalence: aid is seen as important, but at the same time it is also seen not as a just social right, but as a political instrument that can be lost at any time. This kind of politicization has the potential to damage the credibility of aid programs in the eyes of the public. This is in line with the analysis of Slater & Sabates-Wheeler (2022), which emphasizes that *social protection* is often drawn into the orbit of electoral politics, so its implementation follows political logic more than social needs. Politicization like this risks reducing public trust in state programs and weakening the role of assistance as a social right of citizens.

In terms of effectiveness, assistance does have an impact, but it is temporary. The supplementary food program (PMT), for example, had reduced stunting cases. A midwife confirmed: "Alhamdulillah, it has increased significantly... But after the assisntance program was over, a new case appeared." The positive impact stops once the program is stopped.

The same thing happens with cash assistance. The Social Service admitted that the amount of assistance was very limited: "Can 200 thousand BPNT support 5 children? It's just a trigger, not an economic solution." For large families, this amount is clearly not enough to meet the needs of nutritious food. The Ciwalen Village Chief also added that productive assistance such as the sheep breeding program ended up failing: "It all died in 2-3 years." This shows that although the initial intention was empowerment, the weak assistance and the absence of a sustainability system made the program end up being consumptive again. This phenomenon is in accordance with the evaluation of Devereux (2021), who said that many social assistance programs during the COVID-19 pandemic in developing countries function as *short-term shock absorbers*, but do not have the transformative power to address the root of vulnerability. Our field findings show a similar situation: aid serves as a momentary buffer, not a structural solution.

Another finding that is quite important is the emergence of a dependency mindset. The village head described: "The community relies on social assistance...

sometimes borrow money because they are sure that there will be BLT." This pattern indicates that assistance that should be complementary is actually used as the main focus. The Social Service itself said that some people even consider receiving social assistance as something ordinary, even an achievement: "It is rare for us mentally to get social assistance to be embarrassed, even like an achievement." This is in line with the criticism of Cabot et al. (2020), who said that social assistance without empowerment efforts risks forming *a culture of dependency*. Thus, instead of encouraging independence, aid programs actually strengthen the passive position of the poor.

This phenomenon shows the normalization of assistance in daily life. Assistance is no longer seen as a temporary intervention to reduce vulnerability, but rather as a permanent part of a survival strategy. As a result, instead of encouraging independence, assistance risks reinforcing a dependency mentality.

When viewed as a whole, the narrative above shows a consistent picture. Government assistance is present, but: (i) it is mistargeted, so that extreme poor families often do not receive, while more established families get access; (ii) full of politicized perceptions, which make its credibility questionable; (iii) only have a momentary impact, both nutrition programs and cash assistance; (iv) encourage dependence, because aid is seen as a reliable certainty. Thus, government assistance functions more as an emergency support for food security for extreme poor families, not as a structural solution. It can temporarily reduce symptoms, but it does not touch the root of poverty that makes food insecurity recurr.

j. Integration of Quantitative and Qualitative Findings

The overall findings from quantitative and qualitative data will be concluded per research objective. This narrative is made on the assumption that *mixed method research* requires a deeper interpretation between quantitative data and qualitative data. This narrative will be useful in understanding the reality in the field and building recommendations based on research results. The presentation of quantitative and qualitative data integration can be presented in a matrix

According to Creswell & Plano Clark (2018), the results of quantitative and qualitative data integration are categorized into three variations, namely: convergent, complementary, and contradictory. First, convergence occurs when quantitative and qualitative findings lead to the same conclusion. In other words, data from two different approaches reinforce each other and provide cross-validation (triangulation). Second, complementary means that quantitative and qualitative findings are not identical, but complementary. Quantitative data usually explains "how much" or "how much", while qualitative data explains "how" and "why". Both provide a more complete picture when combined. Finally, contradictions arise when quantitative and qualitative findings are not in line or even opposite. This difference does not necessarily mean an error, but it can be an indication of the existence of a hidden context or factor that one of the methods does not capture.

Table 23 is a matrix that is compiled to be able to assist in the interpretation process.

Purpose	Quan Results	Qual Results	Interpretation
Analyze the level of food security at	The majority of households are food	Five stages of survival strategy;	Complementary: HFIAS scores capture

the household level and compare the level of food security in villages and cities	insecure; The city is more severe, the dominant villages are prone to light. The difference is not significant.	Cities are more extreme, villages are more adaptive	prevalence, qualitatively explain dynamics and strategies. Cities are more vulnerable to extreme hunger, villages are more flexible.
Describe and compare food preferences, food choices, and food habits in villages and cities	Food variety is limited, monotonous menus are accepted.	Food choice = non-choice; poor nutrition; Children's preferences are formed from difficulties in accessing nutritious food	Convergent: Nutrient-poor consumption is not an option, but compulsion. Crisis habits form long-term preferences.
Analyze self-efficacy at the individual level in villages and in cities	92–93% low; The village is slightly higher significantly.	The city → surrendered; Adaptive → village. All = survival efficacy.	Convergent: Quantitative shows low efficacy, qualitative shows variation in forms: resigned (urban) vs adaptive (rural).
Analyze social capital at the community level in villages and in cities	Not analyzed using quantitative methods	Solidarity exists (sharing, borrowing, cadres), but it is fragile, uneven, often causes jealousy, depends on the individual.	Social capital is an emergency cushion, in line with the concept *of fragile solidarities*, not enough to sustain the long term.
Measuring and comparing nutrition knowledge in villages and cities	Mayoritas baik, tidak berbeda signifikan.	Knowledge is not in line with practice; economic limitations force the consumption of malnutrition.	Contradictory. The problem is not in knowledge, but in purchasing power and access. Knowledge ≠ practice.

Objectives 2 & 3. Analyze the level of food security at the household level and compare the level of food security in villages and cities

Quantitative results through HFIAS measurements show that most households are in the food insecure category, with the largest proportion being at medium and severe levels. In urban areas, households are more in the moderate (35.9%) and severe (32.8%) food insecure categories, while in villages they are dominant in the light food insecurity category (43.5%). Although the average HFIAS score of cities is higher than that of villages, the difference is not statistically significant.

The qualitative data deepened these findings by describing five stages of survival strategies: (1) not picky food, (2) dividing food, (3) reducing the frequency of meals, (4) utilizing leftover food, and (5) not eating at all. Urban households more often describe extreme experiences, such as eating only rice and salt or fasting, while rural households more often adapt by delaying meal times or replacing menus with porridge.

The integration showed that although there were no statistically significant differences, qualitative dynamics showed different patterns of food vulnerability.

Urban households are more prone to extreme hunger experiences, while rural households rely more on consumption flexibility and social networks. Thus, the two data complement each other: quantitative confirms the prevalence of vulnerability, while qualitative shows how survival strategies differ between villages and cities.

Objective 4. Describe and compare food preferences, food choices, and food habits in villages and cities

Quantitatively, the majority of respondents in both villages and cities stated that their food variety is limited and tends to be monotonous. More than half of the respondents accepted the fact that the daily menu was not varied.

Qualitative data reveals that food choice is no longer meaningful as a "choice". Poor households rely on cheap staple foods such as rice, eggs, cooking oil, and instant noodles. Poor nutrition eating habits are formed through the practice of reducing the frequency of eating, consuming leftovers, and considering fasting as a survival strategy. In the long run, children's food preferences are shaped by scarcity, for example, preferring instant noodles or diluted porridge to white rice and vegetables.

Integration shows that the consumption pattern of malnutrition is not a reflection of free preferences, but the result of economic coercion. The habit of scarcity is transforming into the next generation's preference, something that is not fully reflected in the HFAS instrument.

Objective 5. Analyze self-efficacy at the individual level in villages and in cities

Quantitatively, almost all households in both villages and cities have low levels of self-efficacy. However, there is a significant difference, where mothers in villages have a slightly higher average self-efficacy than in cities.

Qualitative data explain that self-efficacy in urban areas is generally in the form of acceptance of resignation: "sufficient as a snack" or even "if there is none, fast". In villages, self-efficacy is more adaptive, for example postponing meal times or replacing staple foods with porridge. Both of these forms are efficacy of survival, which is the belief to simply survive, not to improve the quality of family nutrition.

Integration confirms that the low self-efficacy score in the quantitative data reflects structural limitations, while the qualitative data provide the nuance that urban households are more resigned, while rural households are relatively more adaptive.

Objective 6. Analyze social capital at the community level in villages and in cities

The aspect of social capital is not quantitatively measurable, but qualitative data shows that community solidarity does exist, but it is fragile. Forms of support include sharing simple food, borrowing and borrowing, cooking activities together (tobas leaves tobas plates), to volunteer work of posyandu and PKK cadres. Cadres often bear personal expenses, store groceries in their household facilities, and organize spontaneous dues when there are cases of malnutrition.

However, social capital is not always present evenly. Some informants complained about the lack of concern for neighbors, while the distribution of aid actually triggered jealousy. Thus, social capital serves as an emergency cushion, but it is not capable of being the foundation of long-term food security.

Objective 7. Measuring and comparing nutrition knowledge in villages and cities

Quantitative data show that the majority of mothers have good nutritional knowledge, with no significant differences between villages and cities. Almost all respondents understood the function of protein and vitamin A, but some were still confused in classifying fat and protein sources, as well as in understanding the recommended amount of water consumption.

Qualitative data show that there is a gap between knowledge and practice. Many mothers know the importance of balanced nutrition, but still give their children poor nutrition due to limited purchasing power.

Integration shows a contradictory interpretation: that the main problem lies not in the lack of knowledge, but in economic constraints and limited food choices. In other words, good nutrition knowledge does not guarantee the implementation of adequate nutrition practices.

CONCLUSION AND RECOMMENDATIONS

a. Conclusion

The majority of parents of children under five, both in urban and rural areas, have a last education level of elementary school or equivalent. The low education level has implications for the type of work of household heads, who mostly work as laborers with low incomes, which affects access to food resources. The proportion of household expenditure on food ≥60% of total spending is higher in rural areas (95.2%) compared to urban areas (90.6%).

Household food security is low in both areas, dominated by the food-insecure category. Limited food access occurs due to restricted purchasing power, so many households still rely on social assistance. This dependency indicates that the sustainability of fulfilling food needs is not fully independent and remains vulnerable to changes in economic conditions and social assistance policies.

Eating habits show that most households, both in urban and rural areas, regularly have breakfast, eat twice a day, cook at home, eat together as a family, and consume animal-based foods that are generally fried or stir-fried. Vegetable consumption is generally in the form of clear soup or stir-fried vegetables, while fruit and fast-food consumption is relatively rare. The energy and protein adequacy of children under five is classified as good (>80%). However, micronutrient adequacy for iron, phosphorus, and calcium remains far below the recommended intake (<77%). Overall, food consumption is relatively diverse in both urban and rural areas.

Most mothers have good to moderate nutritional knowledge; however, mothers' self-efficacy regarding family food consumption is generally low in both areas. Self-efficacy regarding children's consumption differs significantly ($p<0.05$), slightly higher in rural areas than urban areas, although both are still dominated by the low category. Qualitative data indicate that these differences are not just numbers but reflect different characteristics of self-efficacy. In urban areas (Kelurahan Sayang), self-efficacy often manifests as resignation: minimal food is considered sufficient, and fasting is seen as a survival strategy. In rural areas (Ciwalen), despite similar limitations, self-efficacy is more expressed as confidence in adaptation: adjusting meal times, delaying consumption, or replacing staple foods with available alternatives.

Self-efficacy in extreme poor households in this study is more accurately understood as survival efficacy—the belief in the ability to survive and feed the family in any way possible, even if the approach is fragile, short-term, and often nutritionally inadequate. Differences in social context and community solidarity make rural households' survival efficacy relatively more adaptive than urban poor households, who tend to be more resigned.

Qualitative data show a gradual pattern reflecting limitations in food selection, habit formation, and preference determination. Initial stage: families eat anything without choice (rice with salt, fried foods, sweet tea), reflecting highly limited food choice. Next stage: portions are reduced or shared (food habit adjusts quantity). More severe stage: meal frequency is reduced (once a day) or staple foods are replaced with cheaper options/porridge (food preference shifts due to necessity). Extreme stage: consuming leftovers or fasting. These findings indicate that food

choice, habit, and preference in extreme poor families reflect gradual survival strategies rather than rational free choice.

Social capital remains a support mechanism, in the form of mutual aid, spontaneous contributions, and volunteer cadres' sacrifices. However, it is fragile: limited, individual-dependent, and unsustainable. Social capital functions as an emergency buffer, not a structural solution. Assistance, in the form of BLT, BPNT, or PMT, is present but problematic: mis-targeted, invalid data, politicized, and temporary. Assistance serves more as a fragile safety net, postponing crises momentarily without addressing the root causes of poverty.

Self-efficacy in extreme poor households is generally low. Their confidence is not directed at improving nutritional quality but at surviving day by day: "making do," earning whatever daily income is available, feeding children minimally, or fasting when no alternatives exist. In urban areas, self-efficacy tends to be fragile and resigned, whereas in rural areas it is slightly more adaptive, including delaying meal times or substituting food types

b. Recommendations

The results of this study emphasize that food insecurity in extremely poor families is not merely a matter of food availability, but also of limited food choices, habits, and preferences shaped by economic compulsion, weak social support, inconsistent government assistance, and low household self-efficacy. Therefore, efforts to improve food security should not rely solely on temporary aid but should be directed toward more comprehensive strategies.

First, the government needs to improve access to healthy and nutritious foods at affordable prices, so that the food choices and habits of poor families are not trapped in cheap, nutrient-poor foods. This can be achieved by strengthening local markets and small shops to provide nutritious foods consistently.

Second, community solidarity, which has so far functioned as an emergency support system, should be facilitated to become more sustainable. Programs such as community kitchens, nutrition savings groups, or community-based food banks can help transform spontaneous solidarity into more structured social support, reducing dependence on individual initiatives like posyandu cadres.

Third, the social assistance system requires fundamental reform. Assistance should not serve as a short-term political instrument or merely a consumptive measure but must be accompanied by improvements in data accuracy, nutritional guidance, and integration with family economic empowerment programs. In this way, assistance can function as a structural solution rather than a temporary patch.

Finally, nutrition intervention programs should aim to strengthen positive self-efficacy in poor families. Currently, their self-efficacy largely reflects survival confidence rather than the ability to improve dietary quality. Practical nutrition counseling using inexpensive but nutritious foods, intensive guidance by cadres, and reinforcing parents' identity as competent food providers can help build their confidence in providing healthy meals. Cross-sector collaboration also needs to be strengthened to support food availability, control staple food prices, and encourage the use of local foods to meet nutritional needs, particularly for mothers, young children, and other family members.

Nutrition education and support programs for mothers should be enhanced to develop feeding practices aimed at increasing consumption of carbohydrate

sources, high-quality protein, vegetables, and fruits, as well as promoting healthier cooking methods. Education to reduce household cigarette consumption should also be intensified to minimize non-priority spending.

Through these measures, it is expected that food security in extremely poor households can be improved not only in terms of food supply but also from social and psychological perspectives

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APPENDICES

a. Ethical Clearance Letter

KOMISI ETIK PENELITIAN KESEHATAN
FAKULTAS ILMU KEPERAWATAN DAN KESEHATAN
UNIVERSITAS MUHAMMADIYAH SEMARANG
Jl. Kedungmundu Raya No.18 Semarang 50272, Jawa Tengah
Email: komisietikfikkes@unimus.ac.id

ETHICAL CLEARANCE

No. 761/KE/11/2024

Komisi Etik Penelitian Kesehatan Fakultas Ilmu Keperawatan dan Kesehatan Universitas Muhammadiyah Semarang, setelah melakukan kajian atas usulan penelitian yang berjudul:

"KETAHANAN PANGAN PADA PENDUDUK MISKIN DI DESA DAN KOTA: TINJAUAN MODAL SOSIAL, EFIKASI DIRI, DAN PENGETAHUAN GIZI"

Peneliti utama:
Dr. Annisa Utami Seminar, M.Si.
Anggota Peneliti
Prof. Dr. Ali Khomsan, MS.
Hana Fatimah, S.Gz

dengan ini menyatakan bahwa usulan penelitian di atas telah memenuhi prasyarat etik penelitian. Oleh karena itu Komisi Etik Penelitian Kesehatan Fakultas Ilmu Keperawatan dan Kesehatan Universitas Muhammadiyah Semarang merekomendasikan agar penelitian ini dapat dilaksanakan dengan mempertimbangkan prinsip-prinsip yang dinyatakan dalam Deklarasi Helsinki dan panduan yang tertuang dalam Pedoman Nasional Etik Penelitian Kesehatan (PNEPK) Departmen Kesehatan RI tahun 2004.

Semarang, 8 November 2024
Komisi Etik Penelitian Kesehatan
Fakultas Ilmu Keperawatan dan Kesehatan
Universitas Muhammadiyah Semarang

Kartika Nugraheni, S.Gz, M.Gizi, Ph.D

b. Qualitative Questionnaire

In-Depth Interview Guide
Social Capital and Self-Efficacy

Interview Objectives:

1. Identify groups or networks in the village
2. Knowing the trust and solidarity of the community in the village
3. Forms of collective action and cooperation
4. Dynamics of information exchange and communication
5. Social cohesion and inclusion
6. Forms of empowerment and political action

Questionnaire:

A) Social Capital Related to Food Security

1) Group/Network Availability and Activity:
   a) Are there any groups or networks in your community that support family food needs? (e.g., social gatherings, farmer groups, studies)
   b) What is the level of activity of the group in helping its members?
2) Quality of Trust and Solidarity:
   a) Do you feel that there is mutual trust among community members? In what situations is this trust most visible?
   b) Can you share an experience where you or other community members received help from the community?
3) Forms of Collective Action and Cooperation:
   a) Are there collective activities such as mutual cooperation or cheap markets that support food needs?
   b) How do you participate in the activity? What are the benefits for your family?
4) Information Exchange and Communication:
   a) Do you often share or receive information about food, such as grocery prices, cheap shopping locations, or social assistance programs?
   b) What type of information do you find most useful? How does this information help you?
5) How to Build Social Cohesion and Inclusion:
   a) How does your community create a sense of community or inclusion, especially for poor families or vulnerable groups?
   b) Do you feel like everyone in the community is involved in food activities or programs?
   c) Where do you usually often gather with your neighbors? What time is it? What do you usually talk about?
   d) Are there any assembly activities that are routinely followed?
6) Empowerment and Political Action:
   a) Are there programs that empower families to improve food security, such as cooking training or nutrition education?
   b) Are there any advocacy activities or political actions to support the food needs of the community?

B) Self-Efficacy Related to Food Security

1) Confidence in Preparing a Food Menu:

a) Do you feel confident that you can plan healthy, enough meals for your family every day?
b) Have you ever found it difficult to decide on a menu? How do you deal with it?

2) Confidence in Preparing Funds for Consumption:
   a) How do you manage expenses to ensure food needs are met?
   b) Do you feel confident that the funds available are sufficient for your family's food needs? Why?
3) Confidence in Shopping for Food Needs:
   a) How confident are you in choosing quality food when shopping?
   b) What do you usually consider when choosing a food ingredient (e.g., price, quality, brand)?
4) Confidence in Choosing a Healthy Menu:
   a) Do you feel confident that you can choose a healthy menu for your family?
   b) What challenges do you typically face in choosing healthy foods, and how do you overcome them?

PHASE 1 QUALITATIVE DATA COLLECTION GUIDE
Guide to FGD with Local Figures

Objectives of the FGD
Identify family types and their social and economic conditions

Questionnaire

A) General Conditions of the Region

1) Social and Economic Structure:
   a) How would you describe the economic conditions of the majority of people in this region?
   b) Are there certain groups that you consider to be more economically vulnerable? Why?
2) Access to Resources:
   a) How is public access to basic facilities such as markets, schools, health centers, or clean water sources?
   b) Is access to these resources different for poor and non-poor families?

B) Identification of Family Types

1) Poor Households:
   a) What do you think are the characteristics of poor households in this region?
   b) Can you name some examples of households that fall into this category?
2) Motherless Household:
   a) Are there any households in this region that are headed only by a mother or father? What are their typical challenges?
   b) Can you give us an idea of their condition?
3) Households with Disabled Members:

a) Do any households have family members with disabilities? How do they usually meet daily needs?
b) Do they get any help or support?

4) Households with >4 Members:
   a) Is there a household with a large number of members (more than 4 people)? How do they manage their daily needs?
   b) Do they have any special challenges compared to households with fewer members?
5) Other Special Conditions:
   a) Are there any other types of families in the region that you think are important to note? For example, a family that is experiencing an economic crisis or that is heavily dependent on social assistance?

C) Community Support and Local Policy

1) Social Capital:
   a) How do people here usually help each other in difficult situations, especially related to food?
   b) Are there any community groups or activities (such as social gatherings, mutual cooperation, or recitation) that actively support vulnerable families?
   c) Are there informal mechanisms (such as barter, mutual cooperation, or food sharing) still going on in these communities?
   d) Have there ever been discussions between the community and local officials to solve a problem in the village?
   e) Are there local cultures that are trusted to help each other who are having difficulties, mutual cooperation, etc.?
2) Social Assistance:
   a) Do poor households in the region receive assistance from the government or other institutions? What kind of help do they receive?
   b) Do you think that assistance is helpful enough? Why?
   c) Are there parties who should get assistance but do not get assistance?

FGD Guide with Puskesmas or Cadres

Objectives of the FGD
Identify family types, their social and economic conditions, and community insights related to food and health

Questionnaire

A) General Conditions of Food Security and Nutrition in the Community

1) Food Security Conditions
   a) What is the state of food security in the communities you serve?
   b) Are there certain groups of people who are most vulnerable to food and nutrition problems?
   c) What are the main challenges faced by the community in getting enough and nutritious food?
   d) What is the food consumption pattern of poor households in villages and cities? Are there any noticeable differences?

e) Have there been any changes in people's diets in recent years? If so, what is the main cause?

2) Social and Economic Structure:
   a) How would you describe the economic conditions of the majority of people in this region?
   b) Are there certain groups that you consider to be more economically vulnerable? Why?
3) Access to Resources:
   a) How is public access to basic facilities such as markets, schools, health centers, or clean water sources?
   b) Is access to these resources different for poor and non-poor families?

B) Identification of Family Types

1) Poor Households:
   a) What do you think are the characteristics of poor households in this region?
   b) Can you name some examples of households that fall into this category?
2) Motherless Household:
   a) Are there any households in this region that are headed only by a mother or father? What are their typical challenges?
   b) Can you give us an idea of their condition?
3) Households with Disabled Members:
   a) Do any households have family members with disabilities? How do they usually meet daily needs?
   b) Do they get any help or support?
4) Households with >4 Members:
   a) Is there a household with a large number of members (more than 4 people)? How do they manage their daily needs?
   b) Do they have any special challenges compared to households with fewer members?
5) Other Special Conditions:
   a) Are there any other types of families in the region that you think are important to note? For example, a family that is experiencing an economic crisis or that is heavily dependent on social assistance?

C) Community Support and Local Policy

1) Social Capital:
   a) What is the role of the community in helping households experiencing food difficulties?
   b) Is there a form of social support carried out by the community, such as mutual cooperation in sharing food or food resources?
   c) Are there any local groups or organizations that are active in food and nutrition issues? What is their role?
   d) Are there any community-based programs that involve the community in improving food security?
   e) How is the community's involvement in programs run by the Puskesmas or the government?

2) Social Assistance
    a) Do poor households in the region receive assistance from the government or other institutions? What kind of help do they receive?
    b) Do you think that assistance is helpful enough? Why?
    c) Are there parties who should get assistance but do not get assistance?
3) Local Food and Health Program
    a) Are there any programs or interventions that are being carried out to help people access healthier food?
    b) How effective are programs such as nutrition counseling, posyandu, or the distribution of additional food for vulnerable groups?
    c) Do the Puskesmas or cadres monitor the nutritional status of the community? If so, what is the mechanism?
    d) What are the main challenges in implementing food security and nutrition programs in these communities?
4) Food Choice, Food Preferences, and Food Habits among Poor Households
    a) How do people choose their daily food? What are the main factors that influence their food choices?
    b) Are there any unhealthy eating habits that are common in this community? What causes it?
    c) Do people consume more processed foods than fresh food? What is the reason?
    d) Are there any specific cultural beliefs or myths that influence food consumption patterns?
    e) What is the level of public awareness about nutritious food and healthy diets?
5) Self-Efficacy in Choosing a Healthy Diet
    a) What is the level of public trust in managing their own food consumption?
    b) Do people feel able to make healthier food choices despite economic limitations?
    c) What are the biggest challenges faced by the community in implementing a healthy diet?
    d) Is there any intervention from the Puskesmas or cadres to improve the self-efficacy of the community in choosing healthy food?
    e) Are there any training or educational activities that help people improve their skills in preparing nutritious food?
6) Communication of Puskesmas or Cadres with Poor Families
    a) How do Puskesmas and cadres reach poor families?
    b) How does the Puskesmas convey information about food and nutrition to the community?
    c) What are the most commonly used media or methods to educate the public about nutrition and health?
    d) Are there any challenges in conveying information to the public? What causes it?
    e) To what extent does the public understand the information provided by health workers and cadres about food and nutrition?
    f) Is there a communication strategy that is considered the most effective in changing people's behavior regarding healthy eating?

g) How can we address misconceptions or misinformation about food and nutrition in this community?

IDI Guide with Food Security and Social Service

Objectives of IDI

- Identify local government programs related to food security and poverty
- Challenges in running the program
- Communication between local governments and the community

Questionnaire

A) Food Security Policies and Programs

1) General Policies:
   a) What are the main policies implemented by food security in Cianjur Regency?
   b) How is the policy directed to help poor households, both in villages and cities?
2) Specific Programs:
   a) Are there any special programs that focus on providing food for poor households? If so, what is the program and what is the mechanism?
   b) Are there policies related to local food management (e.g., cheap markets, food subsidies)?
   c) Are there any other institutions involved in the planning, implementation, or monitoring of the program?
3) Scope and Implementation:
   a) How many poor households are covered by these programs?
   b) Are these programs effective? What are the challenges in its implementation?
   c) What kind of families generally have difficulties related to access to food?
4) Evaluation and Monitoring:
   a) How does the agency evaluate the success of food security programs?
   b) Are there any indicators or statistical data used to monitor food security in the region?

B) Social Assistance for Poor Households

1) Types of Assistance:
   a) What are the forms of social assistance provided to poor households (e.g., food assistance, cash assistance)?
   b) What is the mechanism for distributing this aid? Is it data-driven?
2) Criteria for Aid Recipients:
   a) What are the main criteria used to determine which households are eligible for social assistance?
   b) How is social assistance recipient data managed and updated?
   c) How is this criterion accepted by society? Does anyone feel that these criteria do not really represent poor families?
3) Challenges in Aid Distribution:

a) What are the obstacles that are often faced in the distribution of social assistance? (e.g., inaccurate data, geographical constraints).
b) How does the service address these challenges?
c) Are there other institutions that help in designing, implementing, or monitoring?

C) Support for Poor Families with Special Conditions

1) Focus on Special Conditions:
   a) Are there any special programs or policies to support families with members with disabilities, without mothers/fathers, or families with stunted toddlers?
   b) How does the service work with local communities or others to support these families?
   c) What are the results of approaching families with special conditions? Who is in charge or working from the field? Is it easy to monitor it?
   d) What are the challenges of involving families with special conditions?
   e) Are there any community-based programs that have been initiated by the community itself and received support from the government?
   f) Are there any programs or initiatives that involve local communities to support poor families in getting food?
   g) What is the role of community or religious organizations in supporting food security programs?

D) Expectations and Recommendations

1) New Program Requirements:
   a) Do you think there is a need for new, more specific programs to improve food security in the region?
   b) What are your recommendations for improving the effectiveness of an already running program?
2) The Role of Local Communities:
   a) How can the role of local communities be strengthened to support food security and social assistance policies?
   b) Are there any examples of successful collaborations with the community that can be replicated?

In-Depth Interview Guide
Food Preferences
Definition:

- Using the definition of (Guzek et al., 2021).
- Definition of Food Preferences: an evaluative attitude toward food, including how individuals evaluate qualitatively and how much they like or dislike certain food products. This preference is formed from childhood and is relatively stable into adulthood, although it can undergo minor changes due to factors such as changes in taste and smell sensitivity as we age

Interview Objectives:

1. Identify foods you like and don't like
2. Knowing the reasons for the food you like and don't like

3. Attitudes towards new foods

Questionnaire:

A) Preferred Types of Food:
   1) What are some of your favorite foods? Why do you like it?
   2) How would you describe the taste, texture, or aroma of food that you like best?
   3) Are there any childhood or cultural experiences that influenced the foods you love?
   4) Where can I usually buy it? Near or far? Expensive or not?
   5) How often do you eat this favorite food?
B) Types of Foods Not To Like:
   1) What foods do you not like? Why?
   2) Are there any foods that you avoid even though you've tried them? What is the reason?
   3) How was your first experience of tasting food you didn't like?
C) Food Categories:
   1) Which of the following categories do you like the most? (Vegetables, fruits, meat/fish, dairy products, snacks, carbohydrates).
   2) What difference did your experience make when choosing foods from this category?
D) Internal Factors Affecting Preferences:
   1) Does flavor (sweet, salty, sour, bitter) affect your food choices? Why?
   2) How does texture (soft, crunchy, thick) affect your taste for food?
   3) Are there certain conditions, such as mood or health, that affect the food you choose?
E) External Factors:
   1) How does your family, friends, or community influence your food choices?
   2) Do advertising, social media, or product packaging influence you in your food choices?
   3) How does the local culture influence your favorite foods?
F) Desire to Try:
   1) Do you like to try new foods? Why or why not?
   2) What was your best or worst experience when trying a new food?
   3) What usually makes you decide to try a new food (appearance, recommendations, aroma)?
G) Changes in taste:
   1) Do your food preferences change over time? What affects these changes (age, health, culture)?
   2) Have you ever decided to like a particular food for health or trend reasons?
   3) Do certain situations (e.g., parties, eating out, season) affect your food choices?
   4) What is the role of mealtime in determining your favorite foods?
   5) What do you think is the ideal food?

Food Choices

Definition:

- Understanding Food Choices by definition (Chen & Antonelli, 2020)

- *Food choices* refer to the final decisions that individuals make regarding the food consumed. These decisions are influenced by the interaction of various factors, including:
    - Food-Related Features: Characteristics of food such as taste, texture, smell, and available information (nutrition labels, packaging, and health claims).
    - Individual Differences: Factors such as physiological needs (hunger, appetite), psychological conditions (emotions, motivation), habits, experiences, and personal identity.
    - Sociocultural Features: Social and cultural elements such as societal norms, policies, and economic status

Purpose:

1. Know the decision-making process in choosing food
2. Factors supporting decision-making
3. The Influence of Environment and Culture in Food Choices

Questionnaire:

A) Decision:

1) How do you usually decide what foods you will consume in a day?
2) What influences your decision the most (e.g., taste, price, availability)?
3) Does the location of your home or work affect your food choices? How?
4) How important is food accessibility (e.g., nearby stores, time, cost) in determining the food you choose?
5) Do the opinions of family, friends, or colleagues influence your food choices? If so, how?
6) Do you feel influenced by social media or advertising when choosing food?
7) Do hunger, appetite, or energy levels affect the foods you choose?
8) How do your moods or emotions affect your decisions?

B) Habits and Experience:

1) Are there any particular habits you follow in choosing food? (For example, the same breakfast every day, light dinner).
2) Do your past experiences, such as tasting certain foods, influence your choices now?

C) Knowledge and Attitude:

1) How much does your knowledge of nutrition influence your food decisions?
2) Do you have a preference for healthy or organic food? Why or why not?

D) Social and Cultural Norms:

1) Do local cultures or family traditions influence your food choices?
2) Are there any foods that you choose or avoid because of social norms or cultural beliefs?

E) Availability and Economy:

1) How does food prices affect your choices?
2) Do you buy fresh or processed foods more often? What is the reason?

F) Options in Certain Situations:

1) How do you decide on food on a special occasion, such as a party or work meeting?

2) Are your food choices different when eating out compared to at home? If so, what's the difference?

G) Influence of Trends and Ads:

1) Do you follow food trends often? If so, how does it affect your choices?
2) How do ads or promotions affect your decision to buy certain foods?

Food Habits

Definition:

- Food Habits According to (Bauch et al., 2023)
- Definition of Food Habits: a pattern of daily eating behavior that is influenced by a variety of factors, including culture, personal habits, and social environment. Food habits include how people shop, prepare, and consume food, as well as how cultural preferences and environmental conditions affect those habits

Differences in Food Habits, Food Preferences, and Food Choices:

1. Food Habits:
    - Coverage: Food habits include broader patterns, such as the habits of buying food, cooking, and consuming daily meals. This includes social aspects such as sharing food with family or friends.
    - Traits: More structured and repetitive, often related to culture, traditions, and social conditions.
    - Focus: Highlight stable, long-term patterns of behavior.
2. Food Preferences:
    - Scope: A person's evaluative attitude toward certain foods, such as the level of likes or dislikes based on taste, texture, or aroma.
    - Traits: Subjective and related to an individual's assessment of a particular food, without regard to social or environmental context.
    - Focus: More individual and related to what a person likes, but not necessarily consumables.
3. Food Choices:
    - Scope: A person's final decision in choosing a particular food to consume. Food choices involve various considerations such as preferences, availability, price, and social environment.
    - Properties: Dynamic and contextual, influenced by external factors such as location, time, and situation.
    - Focus: More on actions or practical decisions to choose food based on various factors.

Interview Objectives:

1. Food Shopping Habits
2. Cooking habits
3. Food Consumption Habits
4. Socio-Cultural Aspects

Questionnaire:

A) Food Shopping Habits

1) Location and Shopping Preferences:
    a) Where do you usually shop for food? Why choose the location?
    b) Have you ever visited a particular store because the price was cheaper or a certain product was available?

c) Do you have a preference for a particular store (e.g., a large supermarket, a traditional market)?

2) Shopping Frequency:
   a) How often do you shop for food? Is there a special schedule?
   b) Do you shop in large quantities all at once or buy small quantities on a regular basis? Why?
3) Considerations in Buying:
   a) What do you typically consider when buying food (e.g., price, quality, availability of cultural foods)?
   b) Do you pay attention to nutrition labels or health claims when buying food? Why?

B) Cooking habits
1) Cooking Frequency and Skills:
   a) How often do you cook food yourself? Why?
   b) How do you rate your cooking ability? Are there any specific challenges?
2) Cooking Types and Patterns:
   a) Do you cook from scratch more often or use processed/semi-processed foods? Why?
   b) Are there certain types of food that you cook often? What is the reason?
3) Facilities and Cooking Equipment:
   a) What cookware do you usually use? Do you think it's enough?
   b) Are there any cookware that you consider important but not available? How do you deal with it?
4) Changes in Cooking Habits:
   a) Have there been any changes in your cooking habits compared to before (for example, before moving to a new location)? What causes it?
   b) How do you adapt to different food ingredients or cooking utensils?

C) Food Consumption Habits
1) Daily Diet:
   a) What do you usually eat for breakfast, lunch, and dinner? Why?
   b) Are there certain foods that you consume regularly? What is the reason?
2) Location and Meal Times:
   a) Where do you usually eat? Do you eat more often at home or outside?
   b) Is there a specific schedule for your mealtimes? What affects the schedule?
3) Frequency of Meals Together:
   a) How often do you eat with family, friends, or colleagues?
   b) How does your experience of eating together compare to eating alone?
4) Social and Cultural Aspects in Food Habits
   a) Cultural Influence:
      (1) Do family cultures or traditions influence your eating habits? How?
      (2) Do you find it difficult to maintain your cultural eating habits in a new environment? Why?

b) Influence of the Social Environment:
   (1) Do the opinions of friends, colleagues, or communities influence your eating habits?
   (2) How much does social interaction affect your diet?
c) Adaptation to New Environments:
   (1) Have there been any changes in your eating habits after moving to a new environment? What affects it?
   (2) How do you adapt to different foods or diets in a new place?

c. Quantitative Questionnaire

KUESIONER

KETAHANAN PANGAN PADA PENDUDUK MISKIN DI DESA DAN KOTA: TINJAUAN MODAL SOSIAL, EFIKASI DIRI, DAN PENGETAHUAN GIZI

A. IDENTITAS PEWAWANCARA (Sheet: IDENUM)		**KODE**
Tanggal wawancara:	……/……./2025	Intdate (Tgl/Bln/Thn)
Waktu wawancara:	Jam mulai: ……..	Starint
	Jam selesai: ……..	Endint
Pewawancara:	…….	Enum

B. IDENTITAS RESPONDEN (Sheet: IDRES)

B1. Kabupaten:	Cianjur	
B2. Kecamatan:	1. Cianjur	2. Warungkondang
B3. Kelurahan/Desa:	1. Sayang	2. Ciwalen
B4. No. Responden:		
B5. Nama Responden:		
B6. Nama Kepala Keluarga:		
B7. Nama Balita 1:		
B8. Umur Balita 1:		
B9. Jenis kelamin Balita 1:		
B10. Nama Balita 2:		
B11. Umur Balita 2:		
B12. Jenis kelamin Balita 2:		
B13. No. HP:		
B14. Alamat (RT/RW):		

C. KARAKTERISTIK KELUARGA (Sheet: KARAKTERISTIK)

Kode	Pertanyaan	Jawaban
C1	Nama Ibu	
C2	Usia Ibu	
C3	Usia Ayah	
C4	Pendidikan terakhir Ibu	a. Tidak sekolah b. SD/MI/sederajat c. SMP/MTs/sederajat d. SMA/MA/sederajat e. Universitas/sederajat
C5	Pendidikan terakhir Ayah	a. Tidak sekolah b. SD/MI/sederajat c. SMP/MTs/sederajat d. SMA/MA/sederajat e. Universitas/sederajat

Kode	Pertanyaan	Jawaban
C6	Pekerjaan Ibu	a. PNS/TNI/Polri/Karyawan b. BUMN/BUMD c. Karyawan swasta d. Nelayan e. Petani f. Buruh/supir g. Pedagang h. Wiraswasta i. Pekerjaan lainnya
C7	Pekerjaan Ayah	a. PNS/TNI/Polri/Karyawan b. BUMN/BUMD c. Karyawan swasta d. Nelayan e. Petani f. Buruh/supir g. Pedagang h. Wiraswasta i. Pekerjaan lainnya
C8	Jumlah anggota keluarga	a. ≤ 3 orang b. 4 – 6 orang c. > 6 orang

D. ASET KEPEMILIKAN (Sheet: ASET)

Aset Kepemilikan Lahan Pertanian

Kepemilikan lahan	Luas (Ha)		Sertifikasi lahan	
	Kode	Isian	Kode	Isian (1 = sertifikat; 0 = belum)
Sawah	D1		D5	
Tegal	D2		D6	
Pekarangan	D3		D7	
Tambak	D4		D8	

Aset Kepemilikan Bangunan

Kepemilikan	Luas (Ha)		Sertifikasi lahan	
	Kode	Isian	Kode	Isian (1 = milik; 2 = sewa)
Rumah	D9		D10	

Aset Kepemilikan Barang

Kepemilikan lahan	Luas (Ha)		Sertifikasi lahan	
	Kode	Isian	Kode	Isian (1 = lunas; 0 = belum)
Motor	D11		D15	
Mobil	D12		D16	
Kulkas	D13		D17	
TV	D14		D18	

E. PENDAPATAN RUMAH TANGGA (Sheet: INCOME)

E1	E2	E3	E4				E5		
No urut ART	Nama	Jenis pekerjaan	Penghasilan[1)] : Rp per				Jumlah Hari Kerja		
			Hari	Minggu	Bulan	Tahun[2)]	Hari/mgg	Mgg/bln	Bln/thn
PENDAPATAN RUMAH TANGGA DARI UPAH/GAJI YANG DITERIMA									
E7 – a.	Pinjaman								
E8 – b.	PKH/bansos								
E9 – c.	Lainnya								

Keterangan :
1) Pilih salah satu (hari, minggu, bulan, tahun);
2) Kolom E4 = bulan digunakan untuk merekap kolom sebelumnya dan harus terisi
Catatan: Semua pendapatan dikonversi ke bulan, dalam perhitungan perhatikan <u>Jumlah Waktu Kerja</u>

F. PENGELUARAN RUMAH TANGGA (Sheet: EXPENDITURE)

F1 F2 F3

No	Jenis pengeluaran	Pengeluaran Rp/per			
		Harian	Mingguan	Bulanan*	Tahunan
1.	**Pangan**				
	1. Pangan pokok, sayuran, lauk pauk, buah-buahan, minyak goreng, susu, gula, bumbu-bumbuan				
	Sub-total 1.1				
	2. Makanan jajanan (bakso, siomay, cilok)				
	Sub-total 1.2				
	3. Minuman (air kemasan, air galon, dll.)				
	Sub-total 1.3				
	4. Rokok				
	Sub-total 1.4				
2.	**Non Pangan**				
	1. Perumahan dan Fasilitas Rumah Tangga:				
	1.1 Sewa/kontrak, pemeliharaan rumah dan perbaikan ringan				
	1.2 Listrik				
	1.3 Air (PAM/pikulan/beli)				
	1.4 Telekomunikasi (pulsa HP, internet/ wifi/warnet, dll.)				
	Sub-total 2.1				
	2. Aneka Barang dan Jasa:				
	Sabun mandi, pasta gigi, sikat gigi, shampoo, sabun cuci, barang kecantikan, pembalut dll				
	Sub-total 2.2				
	3. Biaya sekolah				
	Sub-total 2.3				

	4. Biaya transportasi				
	Sub-total 2.4				

Keterangan: *) semua dikonversi ke pengeluaran per bulan

G. STATUS GIZI (Sheet: STATUS GIZI)

a. Status Gizi Ibu

Tanggal lahir Ibu (Tanggal/Bulan/Tahun): _____

BB Ibu :
TB Ibu :
BB(kg)/TB^2(m) :
Status Gizi :

b. Status Gizi Balita

Tanggal lahir Balita (Tanggal/Bulan/Tahun): _____

BB Balita :
TB Balita :
Z-Score :
Status Gizi :

Note: Jika ada 2 atau lebih balita, maka yang diukur hanya balita yang sulung/paling tua

H. RECALL

A. Konsumsi Pangan Ibu (2x24 jam)

Hari 1 (Sheet: RECALL IBU HARI 1)

H1 H2 H3 H4 H5

Waktu	Nama makanan dan minuman	Bahan pangan	Kode pangan	Jumlah dimakan	
				URT	Gram
Pagi (06.00-10.00)					
Selingan pagi (10.00-12.00)					
Siang (12.00-16.00)					
Selingan sore (16.00-18.00)					
Malam (18.00-21.00)					

Hari 2 (Sheet: RECALL IBU HARI 2)

H1	H2	H3	H4	H5	
Waktu	Nama makanan dan minuman	Bahan pangan	Kode pangan	Jumlah dimakan	
				URT	Gram
Pagi (06.00-10.00)					
Selingan pagi (10.00-12.00)					
Siang (12.00-16.00)					
Selingan sore (16.00-18.00)					
Malam (18.00-21.00)					

B. Konsumsi Pangan Balita (1x24 jam) (Sheet: RECALL BALITA)

H1	H2	H3	H4	H5	
Waktu	Nama makanan dan minuman	Bahan pangan	Kode pangan	Jumlah dimakan	
				URT	Gram
Pagi (06.00-10.00)					
Selingan pagi (10.00-12.00)					
Siang (12.00-16.00)					
Selingan sore (16.00-18.00)					
Malam (18.00-21.00)					

I. *Food Frequency Questionnaire* (FFQ) dan *Food Preferences* (Sheet: FFQ)

FORMULIR *Food Frequency Questionnaire* (FFQ)
FREKUENSI PENGGUNAAN BAHAN PANGAN

Keterangan:

1. Perhatikan keterangan tulisan pada tabel.
2. Isilah frekuensi konsumsi responden pada kolom ….x/hari, ….x/bulan, ….x/tahun (dimulai pada kolom hari) berdasarkan pengelompokkan bahan makanan di bawah ini.
3. Kolom "Tidak pernah" diisi Ibu ceklis (√) apabila responden tidak pernah mengonsumsi jenis makanan yang ditanyakan.
4. Pengisian kolom kesukaan / preferensi menggunakan skala likert yaitu :
   1 = Sangat Tidak Suka (STS) 2 = Tidak Suka (TS) 3 = Suka (S) 4 = Sangat Suka (SS)

I1	I2	I3			I4	I5
No	Bahan makanan	Frekuensi			Tidak pernah	Kesukaan
		….x/Hari	….x/minggu	….x/bulan		
Makanan pokok						
1.	Nasi putih					
2.	Jagung					
3.	Singkong					
4.	Ubi					
5.	Roti putih					
6.	Mie					
Ikan dan hasil olahannya						
1.	Ikan segar					
2.	Ikan asin					
Daging, telur, dan hasil olahannya						
1.	Telur ayam					
2.	Daging ayam					

I1	I2	I3			I4	I5
No	Bahan makanan	Frekuensi			Tidak pernah	Kesukaan
		….x/Hari	….x/minggu	….x/bulan		
3.	Daging sapi					
4.	Sosis					
Kacang-kacangan dan hasil olahannya						
1.	Tahu					
2.	Tempe					
3.	Oncom					
Sayur-sayuran						
1.	Bayam					
2.	Kangkung					
3.	Daun singkong					
4.	Sawi hijau					
5.	Toge					
6.	Wortel					
Buah-buahan						
1.	Pisang					
2.	Pepaya					
3.	Jeruk					
Makanan jajanan						
1.	Donat					
2.	Bakso, siomay, batagor					
3.	Cilok, cireng, cimol, cilor, cilung					
4.	Telur gulung					
5.	Seblak					
6.	Pempek					

I1	I2	I3			I4	I5
No	Bahan makanan	Frekuensi			Tidak pernah	Kesukaan
		….x/Hari	….x/minggu	….x/bulan		
7.	Otak-otak					
8.	Chiki					
9.	Biskuit					
Minuman						
1.	Teh					
2.	Kopi					
3.	Susu					

J. KEBIASAAN MAKAN (Sheet: KEBIASAAN MAKAN)

Kode	Pertanyaan	Jawaban
J1	Apakah di rumah selalu membiasakan sarapan setiap hari bagi masing-masing anggota keluarga?	a. Tidak pernah b. Jarang (1-2 kali seminggu) c. Kadang-kadang (3-4 kali seminggu) d. Sering (5-6 kali seminggu) e. Selalu (setiap hari)
J2	Berapa kali di rumah membiasakan makan utama (makan pokok pagi/siang/sore) dalam sehari?	a. 1 kali b. 2 kali c. 3 kali d. >3 kali
J3	Apakah di rumah Ibu terdapat kebiasaan makan bersama keluarga?	a. Tidak pernah b. Jarang (1-2 kali seminggu) c. Kadang-kadang (3-4 kali seminggu) d. Sering (5-6 kali seminggu) e. Selalu (setiap hari)
J4	Apakah makanan yang disajikan di rumah lebih sering dimasak sendiri atau dibeli di luar?	a. Selalu dimasak sendiri b. Lebih sering dimasak sendiri c. Selalu dibeli di luar d. Lebih sering dibeli di luar
J5	Seberapa sering keluarga Ibu makan pangan hewani dalam seminggu?	a. Tidak pernah b. Jarang (1-2 kali seminggu) c. Kadang-kadang (3-4 kali seminggu) d. Sering (5-6 kali seminggu) e. Selalu (setiap hari)
J6	Ketika di rumah makan lauk hewani, maka paling sering cara pengolahan seperti apa yang Ibu lakukan? (pilih 2 yang paling sering!)	a. Digoreng b. Ditumis c. Direbus/dikukus d. Dipanggang
J7	Seberapa sering keluarga Ibu makan sayur dalam seminggu?	a. Tidak pernah b. Jarang (1-2 kali seminggu) c. Kadang-kadang (3-4 kali seminggu) d. Sering (5-6 kali seminggu) Selalu (setiap hari)
J8	Ketika di rumah makan sayur, maka paling sering cara pengolahan seperti apa yang Ibu lakukan? (pilih 2 yang paling sering!)	a. Dibuat sayur bening b. Ditumis c. Direbus/dikukus d. Di santan
J9	Seberapa sering keluarga Ibu makan buah dalam seminggu?	a. Tidak pernah b. Jarang (1-2 kali seminggu)

		c. Kadang-kadang (3-4 kali seminggu) d. Sering (5-6 kali seminggu) e. Selalu (setiap hari)
J10	Seberapa sering keluarga Ibu mengonsumsi makanan *fast food*? *Fast food*: ayam kentucky, seblak, burger, hotdog, dsb	a. Tidak pernah b. Jarang (1-2 kali seminggu) c. Kadang-kadang (3-4 kali seminggu) d. Sering (5-6 kali seminggu) e. Selalu (setiap hari)

K. KETAHANAN PANGAN (Sheet: KETAHANAN PANGAN)

Kode	No.	Pertanyaan	Jawaban
K1	1.	Dalam waktu sebulan terakhir, pernahkan Ibu khawatir jika keluarga Ibu kekurangan makanan atau tidak mempunyai cukup makanan? Contoh kekhawatiran : tidak cukup uang untuk membeli makanan atau tidak punya simpanan makanan	o Tidak (Lanjut No. 2) o Ya
K2		Seberapa sering ini terjadi? (1)	o Jarang (sekali atau dua kali dalam empat minggu terakhir) o Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) o Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K3	2.	Dalam waktu sebulan terakhir, apakah Ibu atau anggota keluarga Ibu pernah tidak dapat makan makanan yang diinginkan karena kekurangan sumber bahan makanan? Contoh makanan yang diinginkan: ayam, daging, ikan, telur	o Tidak (Lanjut No. 2) o Ya

Kode	No.	Pertanyaan	Jawaban
K4		Seberapa sering ini terjadi? (2)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K5	3.	Dalam waktu sebulan terakhir, apakah ada salah satu anggota keluarga yang mengharuskan untuk mengonsumsi makan yang tidak beragam akibat sulitnya sumber (akses) makanan? Contoh: makan nasi dengan sayur saja, atau nasi dengan lauk saja.	○ Tidak (Lanjut No. 2) ○ Ya
K6		Seberapa sering ini terjadi? (3)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K7	4.	Dalam waktu sebulan terakhir, apakah Ibu atau anggota rumah lain harus makan beberapa makanan yang benar-benar tidak ingin Ibu makan karena kurangnya sumber daya untuk mendapatkan jenis makanan lain? Contoh tidak diinginkan : Makanan yang sudah basi atau tidak segar, makanan tidak disukai karna harga murah.	○ Tidak (Lanjut No. 2) ○ Ya
K8		Seberapa sering ini terjadi? (4)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir)

Kode	No.	Pertanyaan	Jawaban
			○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K9	5.	Dalam waktu empat minggu terakhir, apakah Ibu atau anggota keluarga yang lain pernah harus makan dengan porsi yang lebih sedikit dari yang dibutuhkan karena tidak ada cukup makanan?	○ Tidak (Lanjut No. 2) ○ Ya
K10		Seberapa sering ini terjadi? (5)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K11	6.	Dalam waktu sebulan terakhir, apakah Ibu atau anggota keluarga Ibu pernah terpaksa makan dengan jumlah waktu makan (berapa kali makan dalam sehari) lebih sedikit karena tidak tersedia cukup makanan? Contoh : tadinya makan 3 kali sehari menjadi 1 atau 2 kali sehari.	○ Tidak (Lanjut No. 2) ○ Ya
K12		Seberapa sering ini terjadi? (6)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K13	7.	Dalam waktu sebulan terakhir, apakah dalam keluarga Ibu pernah tidak ada makanan apapun untuk dimakan karena kurangnya sumber daya untuk mendapatkan makanan?	○ Tidak (Lanjut No. 2) ○ Ya

Kode	No.	Pertanyaan	Jawaban
K14		Seberapa sering ini terjadi? (7)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K15	8.	Dalam waktu empat minggu terakhir, apakah ada anggota keluarga yang tidur dalam keadaan lapar dikarenakan tidak cukupnya makanan?	○ Tidak (Lanjut No. 2) ○ Ya
K16		Seberapa sering ini terjadi? (8)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)
K17	9.	Dalam waktu empat minggu terakhir, apakah Ibu atau anggota keluarga Ibu dalam satu hari penuh tidak memakan apapun karena tidak tersedia makanan yang cukup?	○ Tidak (Lanjut No. 2) ○ Ya
K18		Seberapa sering ini terjadi? (9)	○ Jarang (sekali atau dua kali dalam empat minggu terakhir) ○ Kadang-kadang (tiga sampai sepuluh kali dalam empat minggu terakhir) ○ Sering (lebih dari sepuluh kali dalam empat minggu terakhir)

L. PENGETAHUAN GIZI (Sheet: PENGIZ)

Isilah dengan tanda (✓) sesuai jawaban responden!

Kode	Pertanyaan	Jawaban	
		(a) Benar	(b) Salah
L1	Makanan yang bergizi seimbang terdiri dari nasi, sayuran, buah-buahan, lauk nabati, lauk hewani.		
L2	Vitamin merupakan salah satu zat gizi yang bermanfaat agar tubuh jarang sakit.		
L3	Protein berfungsi dalam membantu proses pertumbuhan.		
L4	Margarin, jeroan, dan keju merupakan sumber protein.		
L5	Sayuran dan buah-buahan merupakan bahan makanan sumber protein dan lemak.		
L6	Wortel mengandung vitamin A yang bermanfaat dalam menjaga kesehatan mata.		
L7	Saya makan nasi sebagai sumber energi/tenaga.		
L8	Konsumsi gula berlebih dapat menyebabkan sariawan.		
L9	Konsumsi garam harus dibatasi agar hidup kita sehat.		
L10	Mudah lelah dan sakit kepala adalah ciri-ciri tubuh menderita anemia.		
L11	Anjuran konsumsi air putih sebanyak 6 gelas dalam sehari.		
L12	ASI bermanfaat agar bayi mendapat cukup gizi dan kekebalan tubuh.		
L13	ASI (Air Susu Ibu) dianjurkan diberikan sampai anak usia satu tahun.		
L14	Penimbangan berat badan secara teratur setiap bulan penting untuk anak balita.		
L15	Membeli makanan kemasan perlu memerhatikan kandungan gula, garam, dan lemak.		
L16	Mengontrol penggunaan minyak goreng dalam memasak merupakan hal yang tidak penting.		
L17	Konsumsi lemak berlebih dapat menyebabkan kegemukan.		
L18	Bahan pengawet dan pewarna buatan dapat menyebabkan penyakit.		

M. EFIKASI DIRI IBU

a. Efikasi Diri Ibu terhadap Konsumsi Keluarga (Sheet: EFIKASI1)

Kode	Pertanyaan	Jawaban
M1	Saya selalu dapat mengelola keuangan dengan baik untuk memenuhi kebutuhan pangan keluarga setiap bulan agar tidak mengalami kelaparan. (contoh probing: ` Selama ini dengan keuangan yang ada, Ibu tetap bisa mengelola keuangan agar keluarga tetap bisa makan)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin

Kode	Pertanyaan	Jawaban
M2	Saya selalu merencanakan menu makanan yang akan saya olah setiap harinya. (contoh probing: Selama ini apakah Ibu yakin sudah selalu menyusun menu yang sesuai dengan kebutuhan keluarga untuk seminggu atau beberapa hari agar pengelolaan keuangan tepat)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M3	Saya selalu membuat daftar bahan yang dibeli setiap kali belanja kebutuhan pangan agar tidak melebihi target kebutuhan. (contoh probing : Selama ini apakah Ibu yakin sudah selalu merencanakan pembelian bahan makanan sesuai kebutuhan dengan membuat list atau daftar pangan apa saja yang ingin dibelanjakan? Untuk menghindari pembelian berlebihan yang dapat menyebabkan pemborosan.)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M4	Saya selalu membandingkan harga makanan dari penjual yang berbeda untuk dapat membeli bahan pangan yang paling murah. (contoh probing : Selama ini apakah Ibu yakin sudah selalu membandingkan harga di berbagai tempat untuk mendapatkan harga belanja yang murah?)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M5	Saya selalu dapat mengatasi masalah dan menemukan solusi ketika keuangan dan bahan makanan yang tersedia tidak dapat mencukupi kebutuhan keluarga. (contoh probing : Selama ini apakah Ibu yakin sudah selalu memiliki solusi ketika menghadapi kekurangan bahan makanan atau keuangan bisa dengan mencari alternatif bahan makanan atau mengatur pengeluaran lain. Jika jawaban tidak → Apakah Ibu merasa perlu bantuan atau dukungan untuk mengatasi situasi seperti itu?)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M6	Saya selalu menyisihkan uang untuk belanja makanan agar dapat ditabung atau dialihkan pada kebutuhan lainnya.	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin

Kode	Pertanyaan	Jawaban
		(4) Sangat yakin
M7	Saya yakin dengan pengetahuan tentang gizi yang saya miliki, saya dapat memberikan makanan yang baik untuk kesehatan keluarga saya. (contoh probing : Selama ini apakah ibu sudah yakin/pede kalau ibu memiliki pengetahuan gizi yang baik untuk memberikan makanan yang bergizi untuk keluarga)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M8	Saya selalu mengarahkan dan memberikan penjelasan terkait pentingnya konsumsi makanan sehat kepada keluarga saya. (contoh probing : Selama ini apakah ibu yakin selalu mengarahkan dan menjelaskan bagaimana makan sehat untuk keluarga)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M9	Saya selalu memasak makanan selingan sesuai ide kreatif saya agar keluarga saya tidak jajan diluar. (contoh probing : Selama ini apakah ibu yakin sudah selalu membuat cemilan sendiri di rumah agar lebih sehat dan tidak jajan?)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M10	Saya selalu mengontrol berat badan keluarga saya agar tidak kurus dan gemuk. (contoh probing : Selama ini apakah ibu yakin bahwa ibu sudah mengontrol berat badan anggota keluarga ibu?)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin
M11	Saya selalu memerhatikan nilai gizi makanan ketika memasak. (contoh follow-up : Selama ini apakah ibu yakin bahwa ketika memasak ibu selalu memikirkan gizi nya (seperti harus ada karbo, protein, serat, dan vitamin (nasi+ayam+sayur+buah))?)	(1) Tidak yakin sama sekali (2) Kurang yakin (3) Agak yakin (4) Sangat yakin

b. Efikasi Diri Ibu terhadap Konsumsi Balita (Sheet: EFIKASI2)

Kode	Pertanyaan	Jawaban
MM1	Saya mendorong anak saya untuk selalu makan makanan sehat yang diolah dirumah. Apakah Ibu yakin bahwa selama ini sudah mendorong anak Ibu untuk makan cemilan yang di rumah (tidak jajan)).	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM2	Saya tidak membiarkan anak saya makan apapun yang dia mau dan selalu membimbing dan mengatur makan anak saya. Apakah Ibu yakin bahwa selama ini Ibu tidak membiarkan anak ibu makan sembarangan dan selalu mengatur makanan nya?).	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM3	Saya mendorong anak saya untuk makan makanan yang bervariasi. Apakah Ibu yakin bahwa selama ini sudah mendorong anak Ibu makan makanan yang beragam (nasi+protein+sayur+buah)?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM4	Saya mencontohkan pola makan sehat untuk anak saya dengan mengonsumsi makanan sehat yang dibuat sendiri. Apakah Ibu yakin bahwa selama ini sudah memberikan makanan sehat yang dibuat sendiri untuk anak Ibu?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM5	Saya melibatkan anak saya dalam merencanakan makan keluarga. Apakah Ibu yakin bahwa selama ini Ibu memasak menyesuaikan kesukaan anak Ibu dan mengajak anak Ibu untuk memasak?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM6	Saya selalu menerapkan makan 3 kali sehari di rumah kepada anak saya. Apakah Ibu yakin bahwa selama ini Ibu memberikan makan 3x sehari kepada anak?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM7	Jika anak saya berkata “saya tidak lapar”, saya tetap berusaha mengajaknya makan. Apakah Ibu yakin bahwa selama ini sudah menerapkan makan yang teratur walau anak tidak lapar?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin

Kode	Pertanyaan	Jawaban
MM8	Jika anak saya sedang GTM, saya mencari alternatif makanan sehat lain yang anak saya suka. Apakah Ibu yakin bahwa selama ini Ibu memiliki ide alternatif makanan yang tetap sehat ketika anak sedang GTM?) *GTM : Gerakan Tutup Mulut (menolak makan)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM9	Anak saya harus selalu makan semua makanan yang ada di piringnya. Apakah Ibu yakin bahwa selama ini Ibu mengharuskan anak makan sampai habis?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin
MM10	Saya dapat menenangkan anak saya saat sedang kesal dan tertekan dengan makanan yang saya sajikan. Apakah Ibu yakin bahwa selama ini Ibu sudah berhasil menenangkan anak yang rewel makan?)	(1)Tidak yakin sama sekali (2)Kurang yakin (3)Agak yakin (4)Sangat yakin

N. STRATEGI *FOOD COPING*

1. Pertanyaan Pendahuluan (Sheet: FOODCOP1)

Kode	Pertanyaan	Jawaban
NN1	Apakah keluarga ibu pernah mengalami kekurangan pangan dalam satu tahun terakhir?	(a) Ya (b) Tidak
NN2	Kapan saja kekurangan pangan itu bisa terjadi?	(a) Hampir setiap bulan (b) Hanya beberapa bulan tapi tidak setiap bulan (c) Hanya 1 sampai 2 bulan
NN3	Kenapa bisa terjadi kekurangan pangan?	(a) Pendapatan menurun (b) Bertambahnya anggota keluarga (c) Musim paceklik
NN4	Apakah keluarga ibu sekarang memiliki persediaan pangan?	(a) Ya (b) Tidak
NN5	Jika punya persediaan, kira-kira untuk berapa lama?	(a) Sehari ini saja (b) Kurang dari seminggu (c) Kurang dari sebulan (d) Cukup sampai bulan depan
NN6	Jika punya persediaan pangan, apakah cukup sampai punya uang berikutnya?	(a) Ya (b) Tidak
NN7	Dalam bentuk apa persediaan pangannya?	(a) Bahan pangan (beras)

		(b) Uang, (kapan saja bisa dibelikan bahan pangan) (c) Tanaman yang kapan saja bisa dipanen/dipetik (d) Ternak (e) Lainnya (……..)

2. Pelaksanaan *Food Coping Strategy* (Sheet: FOODCOP2)

Isilah dengan tanda (✓) sesuai jawaban responden!

Kode	Perilaku	Selalu (setiap hari)	Sering (setiap minggu)	Kadang-kadang (setiap bulan)	Pernah (sekali dalam 6 bulan)	Tidak pernah
		(4)	(3)	(2)	(1)	(0)
A. Meningkatkan pendapatan						
N1	Mencari pekerjaan sampingan					
N2	Menanam tanaman yang bisa dimakan di kebun/tanah dekat rumah					
B. Perubahan kebiasaan makan						
N3	Mengurangi jumlah jenis pangan yang dikonsumsi					
N4	Mengubah prioritas pembelian pangan					
N5	Membeli makanan yang yang nilainya lebih rendah					
N6	Mengurangi porsi makan					
N7	Mengumpulkan makanan liar (daun-daunan yang bisa diambil dari pinggiran sawah/kebun)					

Kode	Perilaku	Selalu (setiap hari)	Sering (setiap minggu)	Kadang-kadang (setiap bulan)	Pernah (sekali dalam 6 bulan)	Tidak pernah
		(4)	(3)	(2)	(1)	(0)
C. Penambahan akses dengan segera terhadap pangan						
N8	Menerima makanan dari saudara					
N9	Pertukaran pangan (barter)					
D. Penambahan akses dengan segera untuk membeli pangan						
N10	Mengambil uang tabungan untuk membeli pangan					
N11	Meminjam uang dari saudara dekat					
N12	Meminjam uang dari pegadaian					
N13	Membeli pangan dengan cara hutang di warung					
E. Perubahan distribusi dan frekuensi makan						
N14	Perubahan distribusi makan (prioritas ibu untuk anak-anak)					
N15	Mengurangi frekuensi makan perhari					
F. Langkah drastis						
N16	Migrasi ke luar negeri (TKI)					
N17	Memberikan anak kepada saudara					
N18	Keluarga berpisah/ bercerai					
O19	**Total Skor**					

O. INFORMASI BANTUAN SOSIAL/PANGAN (Sheet: InfBanPan)

Kode	Pertanyaan	Jawaban
P1	Apakah keluarga Ibu mendapatkan bantuan sosial/pangan?	(a) Ya (b) Tidak
P2	Sebutkan jenis apa saja bantuan sosial/pangan yang diterima keluarga Ibu? Sebutkan frekuensi nya :	(a) BAPANAS (Bantuan beras 10 kg) Frekuensi : …… (b) BLT Dana Desa (BLTDD)

	….x/bulan ….x/tahun	Frekuensi : …… (c) Kartu Indonesia Sehat Penerima Bantuan Iuran (KIS PBI) Frekuensi : …… (d) Program Keluarga Harapan (PKH) Frekuensi : …… (e) Bantuan Pangan Non Tunai (BPNT) Frekuensi : …… (f) Program Indonesia Pintar (PIP) Frekuensi : …… (g) Bantuan sosial lainnya, sebutkan dan frekuensi : 1. ……... Frekuensi : …… 2. ……... Frekuensi : …… 3. ……... Frekuensi : ……
P3	Keterangan tambahan	

c. List of Pictures