

Alangan Mangyans' Household Coping Strategy During Food Shortage in Occidental Mindoro, Philippines

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Abstract

The study was conducted to determine the household coping strategy employed by the Alangan Mangyans during food shortage in Sablayan & Sta Cruz, Occidental Mindoro, Philippines. The study employed a descriptive design. The research instrument used were the Radimer/Cornell Hunger and Food Insecurity Instrument and Coping Strategy Index (CSI). The Alangans are middle-aged with an average age of 41 years old. They have medium average household sizes of five persons per household, had only reached lower secondary education. They experienced “food insecure without hunger,” which resulted to employing dietary change. The Alangan Mangyan households are considered poor due to low agricultural production and lack of diversified sources of income which resulted in the adequate food supply in the household. The low agricultural production is the “highly serious problem” related to food security because of this, they change their diet relying on less preferred plant food sources and cheaper instant foods readily available in the community.

Keywords: dietary change, food shortage, Alangan, coping mechanism

1. Introduction

The United Nations' Committee on World Food Security, defines food security as a “means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life (IFPRI, 2019).”

The 2014 Global Hunger Index (GHI) in the Philippines had reached 13.1, which makes the country ranked 29th in the world, categorized as a “serious problem.” The GHI is established on the following indicators: undernourishment, child underweight, and child mortality (IFPRI, 2019). Also, in the first quarter of 2015, the Social Weather Station Survey (SWS) reported that 36 percent of the Filipino population is considered as “food poor (Cepeda, 2015).”

The regions that are the most affected by hunger and food insecurity are rural. In Occidental Mindoro, Mangyan's are an ethnically marginalized people consist of six tribes, namely: Hanunuo, Buhid, Ratagnon, Tau-Buid, Alangan and Iraya. They live below the poverty threshold of the province due to seasonal agricultural production and are generally lacking in basic educational, nutritional, and healthcare support. Their livelihood is dependent on slash-and-burn or "kaingin" farming, which has essentially remained at subsistence level.

Declaro-Ruedas (2015) had studied the status of food security of the different Mangyan ethnolinguistic groups in Occidental Mindoro, Philippines. The studies showed that the different ethnolinguistic groups experienced different food security status and employed diverse coping mechanisms. The Buhid Mangyan in the province had experienced "food insecurity with moderate hunger" in which members of the families with and without children have practiced food reductions intake. The Ratagnons and Iraya's experienced "food insecurity without hunger," in which there is ample food supply but with reduced quality of food and increased unusual coping patterns (Declaro-Ruedas, 2015&2019).

Hence, this follow up study was conducted to study a different Mangyan population specifically, the Alangans of Sablayan, & Sta. Cruz, Occidental Mindoro, Philippines.

2. Methods

The study was conducted in Sablayan, & Sta. Cruz, Occidental Mindoro, Philippines, wherein the majority of Alangan population resides.

The study employed a descriptive research design. Triangulation technique was also conducted, which includes survey, focus group discussion, and 'food diary' were methods used in the collection of data.

The 87 (75% of the 70 households) mothers was selected using simple random sampling in the Alangan household served as the respondents of this study. The study was conducted from 2018 to 2019 at Sitio Pandurucan, Brgy. Pag-asa, Sablayan and Sta. Cruz, Occidental Mindoro.

To comply with the research ethics protocol, the researchers obtained consent from the community and permit e at NCIP-Sablayan, Occidental Mindoro on July 19, 2018.

The Radimer/Cornell Hunger and Food Insecurity instrument was modified according to the cultural needs of the community. Further, only the items in the Coping Strategy Index (CSI) that applied to rural and food-producing households were used. Descriptive statistics were used to describe the respondents' attributes and the coping mechanisms employed.

Objectives of the Study

It aimed to describe the food security status and problems of the Alangan households; determine the household coping strategies employed by the Alangans during food shortage.

3. Results

Socio- economic Characteristics of Alangan Households

Table 1 presents the socio- economic characteristics of Alangan households, in terms of age, number of years spent in school, household size, household monthly income; and source of income.

Alangan Mangyans respondents' age ranges from 22-63 years old with a mean age of 41.00 years old. Their average monthly income per household with 5.25 members is Php 1,412.23 and almost half of the average income is allocated to food, which ranges from Php 450.00-1,200.00.

The Alangan Mangyans' are still in the middle age and capable of performing the work requirements in doing reproductive and productive activities. The majority has attended formal schooling, with basic education up to Grade 8. They can read and write their names and perform basic mathematical operations. Today, they value education that much as they will be able to send their children to school through the help of Pantawid Pamilyang Pilipino Program (4 P's) which caters one hundred percent (100%) of Alangan community, and the fact that their community is just fifty meters away from the secondary school.

The annual per capita poverty threshold for the Occidental Mindoro, Philippines in 2015 stood at P16, 169.00. In the Philippines, a household with five family members needs at least Php 6,365.00 to meet its monthly food threshold (PSA,2015).

The Alangans subsist on rice, banana, sweet potato, and other root crops. Thus, they live "below" the poverty line. They also experienced "*tag kiriwi*"(lean months) from July to September. At this time, activities in the *kaingin* and lowland farms were already finished. Thus, they do not have a daily source of income, and they do not rely on weaving. The Alangans' raise an income through animal raising, stick and soft broom production, basket or bay-ong making, and daily wage labor for some Alangans. For sustenance, they rely on planting root crops, vegetables, and palay. They also sell their '*kaingin*' rice to the market.

Table 1. Socio-economic characteristics of the Alangan households.

Socio-economic Variables	Mean	Range
Age	41.00 years old	22-63 years old
Formal years spent in school	8.00 years	0-12 years
Household size	5.25 members	3-7 members
Household Monthly Income	Php 1412.23	Php 800.00-5000.00
Monthly Income allotted for food	Php 823.25	Php 450.00-1200.00

Although they do not have sources of income daily, Table 2 reveals that Alangans rely on various sources with monetary value and for subsistence.

Table 2. Sources of income for the Alangan households

Particular	Yes	No
<i>Source of income with monetary value</i>		
Animal raising (chicken, goat and pig)	/	
Stick/soft broom production	/	
Basket or bay-ong making	/	
Weaving		/
Daily wage labor	/	
<i>Source of income for subsistence</i>		
Planting of root crops (cassava, name etc.)	/	
Planting of vegetables	/	
Planting and selling of palay	/	

Food Insecurity Status and Problems of the Alangan Households

Result shows in Table 3 that only five households (9.62%) are ‘food secure’, wherein the household have enough food to eat, while eight out of fifty two households (15.38%) are experiencing food insecurity with moderate hunger, which means there is no enough foods to eat. However, there is a reduction of food for adults but not for children. Two households (3.85%) are experiencing food insecurity with severe hunger. At this level, individuals being after 18 years old in the households with and without children have experienced decrease in food intake.

According to FAO, IFAD and WFP (2013), households are food secure when there is the right access to adequate and diverse safe food in order to lead an active and healthy life. While, in the household level, food security refers to the capacity of the household to get adequate food to meet the dietary needs of all members of the household either from its production or through acquisition (FAO, IFAD and WFP, 2013).

The status of food security was categorized based on the following: a. food secure; b. food insecure without hunger; c. food insecure with moderate hunger; and d. food insecure with

severe hunger. The result shows that the Alangan households experienced ‘food insecure without hunger,’ in which there is enough food supply but with reduced quality of food and increased unusual coping patterns during the lean months from July to September.

Table 3. Status of food security

Status of food security	Frequency	Percentage (%)
Food secure	5	9.62
Food insecure without hunger	37	71.15
Food insecure with moderate hunger	8	15.38
Food insecure with severe hunger	<u>2</u>	3.85
Total	52	100.00

Problem of Food Insecurity

Table 4 shows the group identification of the problem of food insecurity encountered by the Alangan households. Most of them are *kaingin* farmers that experienced a highly serious problem (mean=4.52) on low agricultural production wherein they could only store 10-15% of their harvest and sold the remaining produce in the lowland market. This resulted in low level of income (mean= 3.93) and insufficiency of food items (mean = 3.60) causing food shortages among households.

The low agricultural production is due to the high cost of farm inputs, lack of irrigation facilities, and changing weather conditions. Natural disasters such as floods, typhoons, soil erosion, and drought (mean=3.61) were rated as a “serious problem.”

Table 4. Food insecurity problems

Problem of household food security	Mean	Interpretation
Low level of income at household level	3.93	Serious
Accessibility to market	2.58	Moderately serious
High cost of food items	2.79	Moderately serious
Insufficiency of food items	3.60	Serious
Presence of the food cash transfer program	1.71	Less serious
Low agricultural production	4.52	Highly serious
Natural disasters (flood, typhoons, soil erosion, etc)	3.61	Serious
Overall mean	3.25	Serious

Legend: 0.50-1.50- Not serious; 1.51-2.50- Less serious; 2.51-3.50- Moderately serious; 3.51-4.50-Serious; 4.51-5.00-Highly serious

Coping Strategies Employed by the Alangan's during Food Shortage

Employing the different coping strategies found in Table 5 has consequences for the Alangan households. When there is not enough money to spend for food, the respondents “always” rely on less preferable and cheaper foods (mean=4.63) and consume almost the same food every day (mean=4.52). However, they “never” send their children to eat with nearby relatives (mean=1.12) and never let some household members to beg (mean=1.12) in the municipal town or nearby municipalities.

Hoorweg and Foeken (1998) confirmed the findings that “coping” is generally used to describe farmers who had experienced a decrease in food access due to crop failure, unemployment, and loss of income and therefore face the danger of hunger (Hoorweg and Foeken, 1988).

Food insecurity has been one of the public health problems for both emerging and industrialized nations (Endale et al, 2014). Historically, household resilience to food insecurity has been characterized by several fairly regular behavioral responses which translates to coping strategies (Maxwell and Frankenberger, 2012). Scott (1986) noted that many people who lives in subsistence economies are endowed with scarce resources and low production, which may cause food shortage or even famine. On the other hand, the presence of the food cash transfer program gives them an additional source of funds to purchase food. Food shortage occurs during the transitory post-harvest periods when there is a low demand for labor, which usually is a source of income to buy food stock thereby forcing the households to employ diverse coping strategies (Faridi and Naimul, 2010).

The Alangan Mangyan' employ "dietary change" as coping strategies. They also practice betel nut chewing to satisfy hunger. To increase short-term household food availability, they "always" consume seed stock held for next season. Borrowing food from a friend or relative is "often" employed, which portrays the close-knitted characteristics of Filipino families. They "often" purchase food on credit and gather indigenous food and hunt wild animals.

Table 5. Food insecurity coping strategies

Coping mechanisms	Mean	Interpretation
Dietary change		
Rely on less preferred and less expensive foods	4.63	Always
Consume less variety of food	4.52	Always
<i>Sub mean</i>	4.58	<i>Always</i>
Increase short-term household food availability		
Borrow food from a friend or relative	4.23	Often
Purchase food on credit	4.12	Often

Reduce health or education expenditure to buy food	3.54	Often
Gather indigenous food, and hunt wild animals	4.17	Often
Consume seed stock held for next season	4.67	Always
<i>Sub mean</i>	4.15	<i>Often</i>
Rationing strategies		
Limit portion size at mealtimes	3.48	Often
Restrict consumption by adults for small children to eat	4.12	Often
Reduce the number of meals eaten in a day/ skip a meal or two during the day	4.13	Often
Skip entire days without eating	3.23	Often
<i>Sub mean</i>	3.74	<i>Often</i>
Decrease numbers of people		
Send children to eat with nearby relatives	1.12	Never
Send household members to beg	1.12	Never
<i>Sub mean</i>	1.12	<i>Never</i>

Legend: 0.50-1.50= never; 1.51-2.50= Sometimes; 2.51-3.50= Seldom; 3.51-4.50= Often; 4.51-5.50= Always

4. Conclusions

The Alangans are middle-aged with an average age of 41 years old. They have medium average household sizes of five persons per household, had only reached lower secondary education.

The Alangan Mangyan households experienced “food insecure without hunger,” which resulted in employing dietary change. They are considered poor due to low agricultural production and lack of diversified sources of income which resulted in inadequate food supply in the household. The low agricultural production is the “highly serious problem” related to food security because of this, they change their diet relying on less preferred plant food sources and cheaper instant foods readily available in the community.

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