ISSN 1908-515X

Patubas

MULTIDISCIPLINARY RESEARCH JOURNAL
CENTRAL PHILIPPINE UNIVERSITY
ILOILO CITY, PHILIPPINES
VOLUME 10, NUMBER 1, JUNE 2015

Patubas is an Ilonggo word for "product" or "fruit". It is a fitting description for this multidisciplinary research journal which is indeed, a product or fruit of labors of researchers or the "seekers" of truth in its varied dimensions.

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Volume 10, Number 1, June 2015

Editorial Board

Patubas is published once a year under the auspices of Central Philippine University, Jaro, Iloilo City, Philippines.

ISSN 1908-515X

TABLE OF CONTENTS

IMPACT STUDY ON THE CPU INTEGRATED OUTREACH ACTIVITY FOR BARANGAY ILONGBUKID, SAN RAFAEL, ILOILO

By Aries Roda D. Romallosa, Hope G. Patricio and Margen A. Java
Page 1

INDIGENOUS RICE WINE MAKING IN CENTRAL PANAY, PHILIPPINES

By Emma T. Gico and Evelyn R. Ybarzabal
Page 49

A TRACER STUDY FOR GRADUATES OF THAI NGUYEN UNVERSITY OF ECONOMICS AND BUSINESS ADMINISTRATION (TUEBA) AND CENTRAL PHILIPPINE UNIVERSITY (CPU) JOINT DEGREE PROGRAMS AT THAI NGUYEN CITY, VIETNAM

Lucio T. Encio, Nelia G. Bonete, Rowena M. Libo-on, Nonito S. Baldeviso and Teresita E. Crucero
Page 74

INDIGENOUS COOKING METHODS AND PRACTICES IN CENTRAL PANAY

Armando M. Hisuan, Jr., Myrna T. Luceño and Mary Ann C. Garrido
Page 91

PERCEIVED STRESS AND COPING BEHAVIORS IN CLINICAL PRACTICE OF NURSING STUDENTS' IN A PRIVATE UNIVERSITY IN ILOILO CITY

Carolyn L. Yoro, Susan A. Sumande, Janette Yap,
and Rosita Saldajeno

Page 121

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IMPACT STUDY ON THE CPU INTEGRATED OUTREACH ACTIVITY FOR BARANGAY ILONGBUKID, SAN RAFAEL, ILOILO

Aries Roda D. Romallosa, Hope G. Patricio and Margen A. Java

ABSTRACT

This study evaluated the impact of Central Philippine University (CPU) outreach interventions and activities for Brgy. Ilongbukid and adjacent communities in San Rafael, Iloilo based on recently obtained cross-sectional data vis-à-vis the 2006 and 2012 baseline results. The "post-test" or the "one shot" survey design and focus group discussion with key stakeholders were done to measure the qualitative and quantitative changes brought about by outreach implementation. Results showed that the awareness level on the CPU outreach activities was high but availment of the services among the respondents was low (18.0%) since only households with children enrolled at Ilongbukid National High School were reportedly prioritized. Those who benefited from the outreach activities claimed definite satisfaction or satisfaction. Most of the respondents (90.6%) considered the outreach activities to be important. The great majority of the respondents (94.6%) believed that the CPU outreach activities had positive impact in their barangays. Specifically, the residual earnings from the swine chain dispersal project helped finance the children's education, contributed to house improvement, provided basic needs, and increased household income.

INTRODUCTION

Background and Rationale

Ilongbukid National High School (INHS) is a newly opened barangay secondary school located at Brgy. Ilongbukid, San Rafael, Iloilo. The school also covers the surrounding barangays of San Florentino, Aripdip, and Poscolon. As a newly opened barangay high school, the school realized that it is wanting in many aspects of its operation like school facilities and needs to establish a good relationship with the parents and the covered communities. Hence, a partnership with an academe, namely, Central Philippine University was established through its outreach arm, the University Outreach Center with the then College of Agriculture (now College of Agriculture, Resources and Environmental Sciences or CARES) acting as the lead unit (Dusaran, 2006).

As a starting point, an ocular survey of the area and initial talks with the school personnel, students and the community were conducted to ascertain the needs of the stakeholders. This was followed by the signing of a Memorandum of Agreement (MOA) on December 20, 2004 between INHS and the University Outreach Center.

Literatures cited by Dusaran (2006) and Java (2010) pointed out that outreach programs should be based on the needs of the people and are decided upon by the people. “A Baseline Survey of the Ilongbukid National High School and its Serviced Areas” was conducted in 2006 by Dusaran to assess the present needs and problems of the barangays

serviced by Ilongbukid National High School located at Brgy. Ilongbukid, San Rafael, Iloilo. Results of the study revealed that the two highest problems as perceived by the respondents of the barangay in relation to their respective households were financial/lack of regular/ employment/income (83.3%) and food shortage (47.7%). And that, given their major problems, the respondents verbalized their major needs as regular work or income (79.9%) and food (64.8%). A series of extension activities had been introduced in the extension area in a span of 9 years.

Many studies have proved that there is really a need to conduct baseline surveys before the implementation of a program as well as an evaluation of the said program once it has been established. Rebori (2002) iterated that extension/ outreach workers are increasingly required to develop programs based on assessed needs and evaluate its impact. This was the reason why the baseline survey conducted in 2006 and the re-assessment conducted in the latter part of 2012 and early part of 2013 served as basis for interventions. However, no impact studies had been conducted yet, hence, the need to conduct this study.

This study was conducted to review the baseline survey that has been performed in 2006 and 2012, respectively, and evaluate the impact of the interventions and activities introduced in Brgy. Ilongbukid and its surrounding communities in San Rafael, Iloilo. Specifically, this impact survey aimed to determine the present: 1) personal profile of the respondents in terms of their age, sex, civil status, educational attainment, occupation and monthly

income; 2) socio-cultural profile of the household members; 3) economic profile of the household members;
4) organization and political involvements of the household members; 5) housing characteristics of the households and community infrastructures of the barangays; 6) health and sanitation practices of the households; 7) priority needs and problems of the barangays; 8) personal, socio-cultural and economic profiles of the respondents and compare them with the previous data; organization and political involvements of the household members, housing characteristics of the households and community infrastructures of the barangays, health and sanitation practices of the households; and 9) impact of the services of CPU to the community, specifically the Swine Chain/Dispersal Project.

METHODOLOGY

The "post-test only" or the "one shot survey" design, supplemented by a focus group discussion and in-depth interview with the school personnel, beneficiaries and barangay officials were employed in this study.

The target areas were the four (4) barangays surrounding INHS, namely: Ilongbukid, San Florentino, Aripdip and Poscolon. Arrangements for the conduct of the interviews such as permission, schedule and participants were done through the barangay captains or key leaders of each barangay prior to visiting the homes of the randomly selected respondents. The respondents were the household heads or mothers, or any responsible adult who was

knowledgeable about the personal, socio-cultural and economic profiles of the households and other related data.

The sample size was determined using the sampling formula cited in Parel, et al. (1985) with a 0.05 sampling error. Given the total number of households of 1,195, the computed sample size was 291, which constituted 24.35% of the total number of households. The sample size was allocated proportionately in the four barangays covered by the study as shown in Table 1. To identify the target households, a list of households in each barangay or a spot map was requested from the barangay secretary.

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

Where n = Sample size

N = Total household population of the four barangays (1195)

d = Sampling error (.05)

Z = Confidence level (95 percent = 1.96)

p = The estimated proportion of the population to be studied (.50)

Table 1. Number of Households and Sample Size per Barangay Covered by the Study

Barangay	Population*	No. of Households*	Percent	Sample Size
Ilongbukid	1,590	375	24.35	91
San Florentino	1,638	405	24.35	99
Aripdip	880	208	24.35	51
Poscolon	971	207	24.35	50
TOTAL	**5,079**	**1,195**		**291**

* Based on the 2015 Barangay Profile Report of the Barangay Secretary

The data were collected through personal interview using the impact study instrument adapted from Form No. CPU-UOC Form-02 made by the University Outreach Center. Interviewers were oriented and trained by the researchers and were closely supervised by them. Interviews were conducted in the homes of the respondents. The FGD was conducted last September 24, 2015 while personal interviews were accomplished in five months starting in September as well.

The data were computer-processed using the SPSS PC + Version 11 and analyzed using appropriate statistical tools such as frequency count and percentage distribution. Qualitative information on matters such as client satisfaction were summarized and tabulated for convenience of analysis.

RESULTS AND DISCUSSIONS

Respondents' Profile

The data presented in Tables 2 and 3 show that most of them were between 41 and 50 years old with a mean age of 45.59 years; generally, females, married, high school educated, dependent on farming with an average income of Php4,609.62 from both major and other sources of income.

Socio-Cultural Profile of the Household Members

Table 4 shows that most of the respondents had 3 to 4 household members. The average household size was 4.12 with means of 1.938 and 2.065 for number of male and female members, respectively. These figures were lower than the baseline data in 2006 (5.47, 2.80 and 2.67, respectively). As indicated in Table 5, the household members are still relatively young just like during the baseline survey in 2006 (Dusaran, 2006). The average age of the household members was 19.98 years and was much lower than the 2006 figure of 26.6 years. As to the sex of the household members aside from the respondent, there are almost the same number of male and female members, but slightly in favor of the male members. The majority of the other members of the household had no income because most of them were still young and, therefore, unemployed. For those with income, however, almost one-fifth earned between Php1,001.00 and Php5,000.00 with mean income of Php4,745.93 per month.

Table 2. Distribution of the Respondents According to Their Age, Sex, Civil Status, Educational Attainment and Primary Occupation.

Profile/Categories	Frequency	Percent
Age		
30 and below	35	11.7
31 to 40	65	21.8
41 to 50	91	30.5
51 to 60	72	24.2
>60	35	11.7
Total	**298**	**100.0**
Mean = 45.59		
Sex		
Male	117	39.3
Female	181	60.7
Total	**298**	**100.0**
Civil Status		
Single	6	2.0
Married	253	84.9
Widowed	23	7.7
Separated	6	2.0
Live-in	10	3.4
Total	**298**	**100.0**
Educational Attainment		
Primary (Grades 1-4)	16	5.4
Elementary (Grades 5-6)	74	24.8
Secondary (HS 1-4)	157	52.7
College level	28	9.4
Voc/Tech graduate	8	2.7
College graduate	15	5.0
Total	**298**	**100.0**
Primary Occupation		
None	23	7.7
Farming	124	41.6
Laborer	111	37.2
Business (buy & sell)	6	2.0
Transport Driver	13	4.4
Carpenter	6	2.0
Others	15	5.0
Total	**298**	**100.0**

Table 3. Distribution of the Respondents According to Their Other Sources of Income and Occupation.

Profile/Categories	Frequency	Percent
Other Sources of Income		
None	145	48.7
Farming	27	9.1
Laborer	80	26.8
Business (Buy & Sell)	15	5.0
Transport Driver	10	3.4
Carpenter	12	4.0
Others	9	3.0
Total	**298**	**100.0**
Monthly Income from Major Occupation		
None	10	3.4
Less than 1,000	25	8.6
1,000 to 2,000	81	27.7
2,001 to 3,000	82	28.1
3,001 to 4,000	27	9.2
4,001 to 5000	38	13.0
More than 5,000	29	9.9
Total	**298**	**100.0**
Mean = 3,680.37		
Monthly Income from Other Sources		
None	184	61.7
Less than 1,000	29	9.7
1,000 to 2,000	52	17.4
2,001 to 3,000	9	3.0
3,001 to 4,000	6	2.0
4,001 to 5,000	4	1.3
More than 5,000	14	4.7
Total	**298**	**100.0**
Mean = 3,057.02		
Total Monthly Income from Major Occupation and Other Sources		
None	2	0.7
Less than 1,000	20	6.7
1,000 to 2,000	66	22.1
2,001 to 3,000	60	20.1
3,001 to 4,000	35	11.7
4,001 to 5,000	47	15.8
More than 5,000	68	22.8
Total	**298**	**100.0**
Mean = 4,609.62		

Table 4. Distribution of Respondents According to Their Household Size and Number of Male and Female Household Members.

Number of Members	Total Household		Males		Females	
	f	%	f	%	f	%
None	2	0.7	0	0.0	3	1.7
1-2	61	20.5	27	23.1	33	18.2
3-4	120	40.3	52	44.4	68	37.6
5-6	82	27.5	25	21.4	57	31.5
7-8	30	10.1	12	10.3	18	9.9
Over 8	3	1.0	1	0.9	2	1.1
Total	**298**	**100.0**	**117**	**100.0**	**181**	**100.0**
Mean	**4.12**		**1.938**		**2.065**	

As shown in Table 6, the number of children who were in school was still lower than the number of school age children just like in 2006. Notably, there was a decrease in the proportion of households with 3 or more children presently in school compared with the number of school age children and the increase in the distribution of households with 2 or no children presently in school compared with the number of children of school age. This was further indicated by the very slight decrease in the mean number of children of school age (2.20 at present vs. 2.4 in 2006) and the mean number of children who were presently in school (2.09 at present vs. 2.1 in 2006). The majority of the households seen in Table 7 did not have children in school across the different levels of education. Many households had no children either in the pre-school and college. The bulk of the

children of the households were in the elementary and high school, respectively. The mean numbers for different school levels indicate that they were a little bit lower compared with the 2006 data. The result for the college children was, however, 0.01 higher which implied that there was a very slight increase in the number of college-bound students among the children of the households.

Table 5. Distribution of the Household Members' Profile Aside from the Respondent.

Profile/Categories	Frequency	Percent
Age		
2 years old and below	67	5.4
3 to 6 years old	140	11.4
7 to 12 years old	271	22.0
13 to 16 years old	187	15.2
17 to 21 years old	174	14.1
22 to 40 years old	230	18.7
41 to 60 years old	132	10.7
Above 60 years old	30	2.4
Total	**1231**	**100.0**
Mean = 19.98		
Sex		
No other household member	2	0.2
Male	634	51.5
Female	595	48.3
Total	**1231**	**100.0**
Educational Attainment of Persons Living with the Respondents		
No Formal Schooling/NA	183	14.9
Primary (Grades 1-4)	214	17.4
Elementary (Grades 5-6)	186	15.1
Secondary (HS 1-4)	435	35.3
College Level	128	10.4
Voc/Tech Graduate	31	2.5
College Graduate	54	4.4
Total	**1231**	**100.0**

Table 5 continued

Occupation of Persons Living with the Respondents		
None	896	72.8
Farming	71	5.8
Fishing	1	0.1
Laborer	139	11.3
Business (Buy & Sell)	3	0.2
Transport Driver	13	1.1
Carpenter	4	0.3
Others	104	8.4
Total	**1231**	**100.0**
Monthly Income of Persons Living with the Respondents		
None	910	73.9
Less than 500	4	0.3
501 to 1000	18	1.5
1001 to 5000	231	18.8
More than 5000	74	24.8
Total	**1231**	**100.0**
Mean = 4,745.93		

Table 6. Distribution of Respondents According to Their Number of School Age Children and Children Presently in School.

Profile/Categories	Number of School Age Children		Number of Children Presently in School	
	f	%	f	%
None	63	21.1	70	23.5
1-2 children	104	34.9	106	35.6
3-4 children	103	34.6	99	33.2
5-6 children	24	8.0	21	7.1
7 or more children	4	1.3	2	0.7
Total	**298**	**100.0**	**298**	**100.0**
Mean	**2.20**		**2.09**	

Table 8 presents the variety of food the people in the area are consuming. Likewise, almost all of the respondents

were aware of their cultural activities (Table 9) like barangay annual fiesta, Christmas party, rice harvest festival and Flores de Mayo. However, a very small proportion of the respondents could not mention any of these cultural activities.

Economic Profile of the Household Members

The data show that some of the respondents' family or household owned a sari-sari store or engaged in buy and sell. Their mean capital outlay was Php7,122.58 while their profit from business averaged Php2,174.19 per month (Table 10). Table 11 shows the households' monthly and yearly expenses on necessities. There was least spending on leisure due to the remote location of the barangays from either the town center or city. It constrained their access to urban centers and thereby limiting their expenditures on recreation.

Table 7. Distribution of Respondents According to Their Number of Children Who are Presently in the Pre-school, Elementary, High School and College.

Number of Children Presently in School	Pre-School		Elementary		High School		College	
	f	%	f	%	f	%	f	%
None	220	73.8	131	44.0	161	54.0	234	78.5
1 child	67	22.5	78	26.2	85	28.5	54	18.1
2 children	9	3.0	62	20.8	44	14.8	10	3.4
3 children	0	0.0	21	7.0	7	2.3	0	0.0
4 children	2	0.7	6	2.0	1	0.3	0	0.0
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**
Mean	**0.31**		**0.97**		**0.66**		**0.25**	

As shown in Table 12, 69.5% of the households were involved in farming with rice and corn farms having mean sizes of 0.4011 ha and 0.0789 ha, respectively. These were the only suitable crops grown in their farm lands because of the hilly topography of the barangays.

Table 13 indicated that most of the household members used inorganic fertilizer; chemicals such as insecticides and fungicides to control pests and diseases in their crops; and herbicides to control farm weeds. Rain was the source of water for their farms with excess water drained to the neighboring farm. The table further reveal that the households do not produce wastewater in their livestock production.

Table 8. Distribution of Respondent According to Food Frequently Eaten.

Food Frequently Eaten	Breakfast		Lunch		Dinner	
	f	%	f	%	f	%
Carbohydrates (rice, banana, etc.)						
Yes	298	100.0	297	99.7	297	99.7
No	0	0.0	1	0.3	1	0.3
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**
Protein (meat, fish, eggs, etc)						
Yes	293	98.3	294	98.7	282	94.6
No	5	1.7	4	1.3	16	5.4
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**
Vegetables						
Yes	230	77.2	288	96.6	185	62.1
No	68	22.8	10	3.4	113	37.9
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**
Fruits						
Yes	289	97.0	229	76.8	167	56.0
No	9	3.0	69	23.2	131	44.0
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**
Beverage						
Yes	287	96.3	6	2.0	6	2.0
No	11	3.7	292	98.0	292	98.0
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**
Others						
Yes	1	0.3	0	0.0	0	0.0
No	297	99.7	298	100.0	298	100.0
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**

Table 9. Distribution of Respondents According to Their Awareness of Presence of Cultural Activities in the Community.

Knowledge of Presence of Cultural Activity	Frequency	Percent
Yes	295	99.0
No	3	1.0
Total	**298**	**100.0**
Type of Cultural Activities		
None	3	1.0
Annual Brgy. Fiesta	175	58.7
Christmas Party	2	0.7
Rice Harvest Festival	6	2.0
Combination of Annual Brgy. Fiesta, Christmas Party, Rice Harvest Festival & Flores De Mayo	112	37.6
Total	**298**	**100.0**
Purpose of the Cultural Activities		
None	3	1.0
Thanksgiving	65	21.8
Celebrating Jesus' Birth	2	0.7
Unity	92	30.9
Companionship	23	7.7
Combination of Thanksgiving, Celebrating	113	37.9
Total	**298**	**100.0**

Table 10. Distribution of the Economic Profile of the Households (Engagement in Business, Nature of Business, Capital of Business and Monthly Profit).

Profile/Categories	Frequency	Percent
If the Respondent's Family is Engaged in any Business		
Yes	31	10.4
No	267	89.6
Total	**298**	**100.0**
Nature of Business		
None	267	89.6
Sari-Sari Store	26	8.7
Buy and Sell	5	1.7
Total	**298**	**100.0**
Business Capital		
None	267	89.6
1,000 and below	1	0.3
1,001 to 10,000	23	7.7
10,001 and above	7	2.3
Total	**298**	**100.0**
Mean = 7,122.58		
Monthly Profit		
None	267	89.6
1 to 500	5	1.7
501 to 1,000	10	3.4
1,001 to 2,000	8	2.7
2,001 and above	8	2.7
Total	**298**	**100.0**
Mean = 2,174.19		

Table 11. Distribution of the Economic Profile of the Households (Monthly and Yearly Expenses for the Education of Children, Medical Expenses, Food, Clothing, Recreation, Utilities and Other Expenses).

Profile/Categories	Frequency	Percent
Monthly Expenditures for the Education of Children		
None	56	18.8
1 to 500	37	12.4
501 to 1,000	71	23.8
1,001 to 5,000	125	41.9
5001 and above	9	3.0
Total	**298**	**100.0**
Mean = 2,096.69		
Yearly Expenditures for the Education of Children		
None	56	18.8
1 to 2,500	2	0.7
2,501 to 5,000	13	4.4
5,001 to 10,000	47	15.8
10,001 and above	180	60.4
Total	**298**	**100.0**
Mean = 26,519.83		
Monthly Expenditures for the Medical Expenses		
None	38	12.8
1 to 500	90	30.2
501 to 1,000	75	25.2
1,001 to 5,000	91	30.5
5,001 and above	4	1.3
Total	**298**	**100.0**
Mean = 1,286.89		
Yearly Expenditures for the Medical Expenses		
None	38	12.8
1 to 2,500	30	10.1
2,501 to 5,000	17	5.7
5,001 to 10,000	47	15.8
10,001 and above	166	55.7
Total	**298**	**100.0**
Mean = 13,549.92		
Monthly Expenditures for the Food		
1 to 500	1	0.3
501 to 1,000	10	3.4
1,001 to 5,000	268	89.9
5,001 and above	19	6.4
Total	**298**	**100.0**
Mean = 3,734.00		

Table 11 continued

Yearly Expenditures for the Food		
5,001 to 10,000	1	0.3
10,001 and above	297	99.7
Total	**298**	**100.0**
Mean = 35,536.70		
Monthly Expenditures for Clothing		
None		45
1 to 500		134
501 to 1,000		76
1,001 to 5,000		40
5,001 and above		3
Total		**298**
Mean = 1,053.76		
Yearly Expenditures for Clothing		
None		45
1 to 2,500		22
2,501 to 5,000		26
5,001 to 10,000		100
10,001 and above		105
Total		**298**
Mean = 10,091.70		
Monthly Expenditures for Recreation		
None	156	52.3
1 to 500	118	39.6
501 to 1,000	17	5.7
1,001 to 5,000	6	2.0
5,001 and above	1	0.3
Total	**298**	**100.0**
Mean = 508.80		
Yearly Expenditures for Recreation		
None	156	52.3
1 to 2,500	50	16.8
2,501 to 5,000	13	4.4
5,001 to 10,000	53	17.8
10,001 and above	26	8.7
Total	**298**	**100.0**
Mean = 6,054.93		
Monthly Expenditures for Utilities		
None	16	5.4
1 to 500	233	78.2
501 to 1,000	37	12.4
1,001 to 5,000	10	3.4
5,001 and above	2	0.7
Total	**298**	**100.0**
Mean = 476.03		

Table 11 continued

Yearly Expenditures for Utilities		
None	16	5.4
1 to 2,500	134	45.0
2,501 to 5,000	72	24.2
5,001 to 10,000	40	13.4
10,001 and above	36	12.1
Total	**298**	**100.0**
Mean = 4,816.78		
Monthly Expenditures for Other Expenses		
None	297	99.7
5,001 and above	1	0.3
Total	**298**	**100.0**
Mean = 1,000.00		
Yearly Expenditures for Other Expenses		
None	297	99.7
10,001 and above	1	0.3
Total	**298**	**100.0**
Mean = 12,000.00		
Total Monthly Expenditures		
1,000 and below	2	0.7
1,001 to 5,000	106	35.6
5,001 to 10,000	129	43.3
10,001 to 15,000	47	15.8
15,001 to 20,000	11	3.7
20,001 and above	3	1.0
Total	**298**	**100.0**
Mean = 6,999.33		
Total Yearly Expenditures		
10,000 and below	3	1.0
10,001 to 20,000	8	2.7
20,001 to 50,000	66	22.1
50,001 and above	221	74.2
Total	**298**	**100.0**
Mean = 82,864.91		

Table 12. Distribution of the Household Members' Farming Activities (Household Members' Engagement in Crops and Livestock Farming).

Profile/Categories	Frequency	Percent
Member of Household Engaged into Farming		
Yes	207	69.5
No	91	30.5
Total	**298**	**100.0**
CROPS		
Rice Farming		
None	152	51.0
.01 to 1 hectare	124	41.6
1.01 to 2 hectares	13	4.4
2.01 hectares and above	9	3.0
Total	**298**	**100.0**
Mean = 0.4011		
Corn Farming		
None	271	90.9
.01 to 1 hectare	24	8.1
1.01 to 2 hectares	2	0.7
2.01 hectares and above	1	0.3
Total	**298**	**100.0**
Mean = 0.0789		
LIVESTOCK		
Piggery		
None	232	77.9
1 to 2 heads	57	19.1
3 to 10 heads	8	2.7
11 heads and above	1	0.3
Total	**298**	**100.0**
Mean = 0.36		
Poultry		
None	249	83.6
1 to 2 heads	6	2.0
3 to 10 heads	35	11.7
11 heads and above	8	2.7
Total	**298**	**100.0**
Mean = 1.59		

Table 12 continued

Goats		
None	292	98.0
1 to 2 heads	4	1.3
3 to 10 heads	2	0.7
Total	**298**	**100.0**
Mean = 0.05		
Ducks		
None	269	90.3
1 to 2 heads	5	1.7
3 to 10 heads	21	7.0
11 heads and above	3	1.0
Total	**298**	**100.0**
Mean = 0.56		
Other Animals *(cow, carabao)*		
None	293	98.3
1 to 2 heads	4	1.3
3 to 10 heads	1	0.3
Total	**298**	**100.0**
Mean = 0.04		

Table 13. Distribution of Household Members' Farming-Related Activities.

Profile/Categories	Frequency	Percent
Plant Nutrients Used in Crops		
None	128	43.0
Organic Fertilizer	46	15.4
Inorganic Fertilizer	120	40.3
Foliar Fertilizer	1	0.3
Combination	3	1.0
Total	**298**	**100.0**
Used to Control Pests and Disease in Crops		
None	128	43.0
Chemicals (Pesticides/Fungicides	167	56.0
Biological Control	2	0.7
Combination	1	0.3
Total	**298**	**100.0**
Method Used to Control Weeds		
None	128	43.0
Herbicides	163	54.7
Handpulling	3	1.0
Combination	4	1.3
Total	**298**	**100.0**
Source of Irrigation Water		
None	128	43.0
Rainwater	136	45.6
NIA Irrigation	13	4.4
Communal Irrigation System	10	3.4
Tube Well Pump	5	1.7
River	1	0.3
Combination	5	1.7
Total	**298**	**100.0**
Drainage of Excess Field Water		
None	137	46.0
Neighboring Farm	158	53.0
Own Farmer Reservoir	3	1.0
Total	**298**	**100.0**

Table 13 continued

If the Household Produce Wastewater in Livestock Production		
N/A	202	67.8
Yes	7	2.3
No	89	29.9
Total	**298**	**100.0**
Drainage of Wastewater		
N/A	290	97.3
Neighboring Farm	3	1.0
Own Farmer Reservoir	4	1.3
Nearby River	1	0.3
Total	**298**	**100.0**
Manner of Animal Waste/Manure Disposal		
N/A	270	90.6
Compose Pit	23	7.7
Septic Tank	4	1.3
Collected by Neighbors	1	0.3
Total	**298**	**100.0**

Table 14 presents that the majority of the respondents were aware of the presence of organizations in their barangays. However, only a little over one-third were members of these organizations with the majority having only membership. Most of them were members of the 4P's. All of the respondents were reportedly active but the majority was just members with only few as officers. As for political participation, 96.0% of the respondents had voted in the last election. Some respondents had been a candidate for any elective position and mostly in the barangay level.

Respondents' Housing Characteristics

It could be seen from the data in Tables 15 to 23 that the majority of households had semi-permanent materials such as wood/plywood and galvanized iron (GI) roofing for

their housing materials; electricity as lighting source and firewood for cooking is used. These fuel was home-sourced. The respondents believe that there is a functional road in their barangays and these functional roads are composed of plain sand and gravel only. However, there is no functional drainage facility in their barangays and if there is, it is an open drainage system. All the respondents had observed the presence of pre-collegiate schools that included pre-, elementary, and high schools in their barangays. The majority of them were aware of their functional health center that is accessible either daily or once a week. All of them believe in the presence of a recreational facility in their barangays such as a basketball court.

Majority of the households sourced water for drinking and cooking from the pump/artesian well. Most of them had a water-sealed kind of toilet and mostly relied on an open drainage for their waste/used water disposal and garbage pit for their solid waste disposal (Table 17). Majority of them had a combination of common illnesses such as cough, colds, flu and fever while others have fatty liver and high blood pressure.

Table 14. Distribution of Respondents According to Their Knowledge of Presence of Organizations Existing in Their Barangay and Their Membership in these Organizations.

Profile/Categories	Frequency	Percent
Knowledge of Presence		
Yes	223	74.8
No	75	25.2
Total	**298**	**100.0**
Membership		
Member	106	35.6
Non-member	192	64.4
Total	**298**	**100.0**
Number of Organizations		
1	107	87.7
2	14	11.5
3	1	0.8
Total	**122**	**100.0**
Organizations in the Barangay		
Barangay Officials	8	6.5
Barangay Tanod	15	12.3
BHW	14	11.5
Women's	28	23.0
Farmers' Organization	1	0.8
4 P's	52	42.6
Barangay Lupon	3	2.5
Commando Brotherhood	1	0.8
Total	**122**	**100.0**
Position		
Officer	11	9.0
Member	111	91.0
Total	**122**	**100.0**
Involvement		
Active	122	100.0
Inactive	0	0
Total	**122**	**100.0**

Table 14 continued

Has Voted in the Last Election		
Yes	286	96.0
No	12	4.0
Total	**298**	**100.0**
Has Been a Candidate for Any Elective Position		
Yes	34	11.4
No	264	88.6
Total	**298**	**100.0**
Level of Candidacy of the Respondent		
None	264	88.6
Barangay	31	10.4
Municipal	3	1.0
Total	**298**	**100.0**
Regular Assembly Meeting		
Yes	298	100.0
Total	**298**	**100.0**
Frequency Barangay Assembly Meeting		
Monthly	283	95.0
Quarterly	2	0.7
Twice a Year	8	2.7
Once a Year	5	1.7
Total	**298**	**100.0**
Barangay Ordinances Passed		
Yes	229	76.8
No	69	23.2
Total	**298**	**100.0**
Barangay Ordinances Passed		
No Answer	69	23.2
Curfew	167	56.0
Proper Waste Disposal	9	3.0
Illegal Logging	1	0.3
Anti-Drug	3	1.0
Combination of these answers	49	16.4
Total	**298**	**100.0**

Table 15. Distribution of the Housing Characteristics of the Households.

Profile/Categories	Frequency	Percent
Housing Materials		
Permanent (concrete walls/GI roofing	49	16.4
Semi-Permanent (wood/plywood/GI roofing	212	71.2
Temporary (bamboo/nipa)	37	12.4
Total	**298**	**100.0**
Source/Means of Lighting		
Electricity	272	91.3
Air Pressure (petromax/LPG)	4	1.3
Kerosene lamp	19	6.4
Others (chargeable flashlight; solar panel)	3	1.0
Total	**298**	**100.0**
Fuel Used for Cooking		
Firewood	242	81.2
Charcoal	24	8.1
LPG	1	0.3
Combination	31	10.4
Total	**298**	**100.0**
Source of Firewood/Charcoal		
Homegrown	265	88.9
Bought	25	8.4
Others (bukid)	8	2.7
Total	**298**	**100.0**

As can be seen from the data in Table 18, the top three major problems perceived by the respondents in relation to their households needs included financial or lack of income (86.6% vs. 83.3% in 2006), food shortage (49.3% vs. 47.7% in 2006), and sickness and lack of medicine

(30.9% vs. 8.3% in 2006). Given their major problems, the respondents had verbalized the following major needs: regular work/income (78.5% vs. 79.9% in 2006), food (69.8% vs. 64.8% in 2006), and medicine and health care (35.2% vs. 19.3% in 2006).

Table 16. Distribution of the Community Infrastructures of the Barangays.

Profile/Categories	Frequency	Percent
Presence of a Functional Road		
Yes	298	100.0
Total	**298**	**100.0**
Type of Road in the Barangay		
Plain sand and gravel only	290	97.3
Concrete	8	2.7
Total	**298**	**100.0**
Presence of a Functional Drainage Facility		
Yes	19	6.4
No	279	93.6
Total	**298**	**100.0**
Type of Drainage System		
None	275	92.3
Open drainage	23	7.7
Total	**298**	**100.0**
Presence of a School		
Yes	298	100.0
Total	**298**	**100.0**
Type of School/s		
Pre-collegiate	298	100.0
Total	**298**	**100.0**
Presence of a Functional Health Center		
Yes	249	83.6
No	49	16.4
Total	**298**	**100.0**

Table 16 continued

Availability of the Health Center		
None	48	16.1
Daily	124	41.6
Twice a week	8	2.7
Once a week	99	33.2
Others (depending upon availability of health workers)	19	6.4
Total	**298**	**100.0**
Presence of a Recreational Facility		
Yes	298	100.0
Total	**298**	**100.0**
Type of Recreational Facilities		
Basketball Court	294	98.7
Volleyball Court	1	0.3
Both	3	1.0
Total	**298**	**100.0**

Table 17. Distribution of the Health and Sanitation Practices of the Households.

Profile/Categories	Frequency	Percent
Source of Water for Drinking/Cooking		
Piped-in water	48	16.1
Pump/artesian well	216	72.5
Open well	19	6.4
Combination	15	5.0
Total	**298**	**100.0**
Kind of Toilet		
Water sealed	244	81.9
Antipolo	41	13.8
Open Pit	13	4.4
Total	**298**	**100.0**
Manner of Waste/Used Water Disposal		
Open drainage	232	77.9
Septic tanks	56	18.8
Blind drainage	10	3.4
Total	**298**	**100.0**
Manner of Solid Wastes Disposal		
Garbage pit	221	74.2
Burning	59	19.8
Thrown away	9	3.0
Combination	9	3.0
Total	**298**	**100.0**
Common Illness Experienced by the Household Members		
Cough	13	4.4
Colds	6	2.0
Flu/influenza	5	1.7
Fever	6	2.0
Others (fatty liver; high blood)	3	1.0
Combination of these illnesses	265	88.9
Total	**298**	**100.0**

Based on comparative results of the recent perceived major problems and needs of the households vis-a-vis those of 2006, it could be observed that they were qualitatively similar although the degree of incidence was slightly higher for the recent year.

Table 18. Distribution of Respondents According to the Major Problems and Needs of the Households in the Barangay (Multiple Responses, N = 298).

Profile/Categories	Frequency	Percent
Problems		
Financial/lack of income	258	86.6
Food shortage	147	49.3
Lack of medicine/sickness	92	30.9
Inadequate household facilities	13	4.4
Inadequate water supply	5	1.7
Educational support for children	4	1.3
Relationship conflicts	4	1.3
No electricity	2	0.7
Needs		
Regular income/livelihood	234	78.5
Food	208	69.8
Medicine/health care	105	35.2
Household facilities	7	2.3
Water supply	6	0.2
Electricity	3	0.1
Clothing	3	0.1

The three major problems and needs of the barangays listed in Table 19 were damaged barangay hall and stage, lack of unity and cooperation and lack of water supply. The major needs were water supply, livelihood, and repair of barangay hall and stage. For men (Table 20), the major problems were: drinking liquors which led to other problems, quarreling among themselves and gambling. It could be deduced from these data that these problems stemmed from lack of stable jobs that led the men to imbibe

liquor and forget their problems and also because the CVOs were not active in maintaining peace and order in the barangays. On the other hand, the verbalized major needs of the men were stable job and presence of active government officials/CVO.

Table 19. Distribution of Respondents According to the Major Problems and Needs of the Barangay (Multiple Responses, N = 298).

Profile/Categories	Frequency	Percent
Problems		
Damaged barangay hall and stage	22	7.4
Lack of water supply	10	3.3
Lack of unity/cooperation	18	6.0
Street light	7	2.3
Vices/gambling	8	2.7
Flood	3	1.0
No livelihood/poverty	3	1.0
Loud music of some neighbors	2	0.7
Needs		
Water supply	22	7.4
Livelihood	9	3.0
Repair of barangay hall/stage	8	2.7
Street light	6	2.0
Active CVO	3	1.0
Medicine facilities/equipment	2	0.7
Mutual aid	1	0.3
Limit the selling of liquors	1	0.3
Unity	1	0.3

Table 20. Distribution of Respondents According to the Major Problems and Needs of Men in the Barangay (Multiple Responses, N = 298).

Profile/Categories	Frequency	Percent
Problems		
Drinking liquors which leads to other problems	53	17.8
Men's quarrel	48	16.1
Gambling	4	1.3
No livelihood	2	0.7
No unity	2	0.7
Needs		
Stable job	38	12.8
Active gov't. officials/CVO	11	3.7

The problems that beset the women in the barangay (Table 21) were no livelihood and no family planning and gambling. Moreover, their needs as perceived by the respondents were somewhat related to their problems such as having a stable job and eliminating gambling in their respective areas.

Table 21. Distribution of Respondents According to the Major Problems and Needs of Women in the Barangay (Multiple Responses, N = 298).

Profile/Categories	Frequency	Percent
Problems		
No livelihood	4	1.3
No family planning	2	0.7
Gambling	2	0.7
No unity	1	0.3
Needs		
Stable job	31	10.4
Stop gambling	1	0.3

For the youth (Table 22), the perceived common problems were being out of school youth or not schooling, vices including cellphone addiction and early pregnancy/marriage. Moreover, their needs included education and scholarship programs, stable job and recreational activities. This implied that if their needs were met, their problems could be minimized. If they had work or recreational activities that could occupy their time, these could preclude them from engaging in premarital sex and avoid early pregnancy or marriage. For the children (Table 23), these major problems were health-related such as lack of medicines/ vitamins/ food, being out of school, lack of clothing, and being undisciplined. Their needs included books, playground, and food.

Table 22. Distribution of Respondents According to the Major Problems and Needs of Youth in the Barangay (Multiple Responses, N=298).

Profile/Categories	Frequency	Percent
Problems		
Out of school/not schooling	52	17.4
Vices/cellphone addiction	6	2.0
Early pregnancy/marriage	3	1.0
No livelihood	1	0.3
Fraternities	1	0.3
Robbery	1	0.3
Needs		
Education/scholarship programs	7	2.3
Stable job	6	2.0
Recreational activities	5	1.7
Trainings/discipline	4	1.3
Food	1	0.3
Shelter	1	0.3

Table 23. Distribution of Respondents According to the Major Problems and Needs of Children in the Barangay (Multiple Responses, N = 298).

Profile/Categories	Frequency	Percent
Problems		
Health/lack of medicines/vitamins/food	9	3.0
Out of school	4	1.3
Lack of clothing	4	1.3
Undisciplined	4	1.3
Child labor	1	0.3
Needs		
Books	42	14.1
Playground	39	13.1
Food	15	5.0
Medicine supply	10	3.3
Clothing	4	1.3
Education	1	0.3
Parents' attention	1	0.3

Respondents' Housing Characteristics

Table 24 shows that the majority of the respondents were aware of the outreach activities done by CPU in their barangay or neighboring barangays. However, only 6% were able to avail of these outreach activities. Non-availment had to do with limited CPU outreach in the barangay and that households with children enrolled at INHS were the ones first notified on the upcoming activity in the area. Those who had availed were either definitely satisfied (55.6%) or satisfied (44.4%). However, when all the respondents were asked about the importance of these outreach activities in

their barangays, a great majority (90.6%) perceived them to be important while 9.1% considered them to be definitely important.

The majority of respondents were aware of the swine chain/dispersal program of CPU (Table 25). All the other outreach activities were known by only about a quarter of them. Examples of these activities were seminars on lacatan production and on social accountability. The lacatan production seminar was held more than five years ago with some residents able to avail of banana plantlets for propagation and production. The seminar on social accountability, on the other hand, was conducted in Brgy. Ilongbukid two years ago and was mostly attended by local officials. This information was affirmed by the FGD results from all the FGD participants who stated their awareness of the outreach activities conducted by CPU in their respective barangays. Moreover, the participants enumerated the following CPU outreach activities: Swine Chain Dispersal, Organic Farming, Waste Management, Lacatan Production, Seed Distribution, Composting and FAITH Gardening. Teachers from INHS who were also FGD participants added that they also availed of the Book and Chair Donations from the CPU College of Education.

Table 24. Distribution of the Respondents' Awareness, Availment, Assessment and Importance of Outreach Activities in Their Barangays Conducted by CPU.

Profile/Categories	Frequency	Percent
Awareness		
Yes	221	74.2
No	77	25.8
Total	**298**	**100.0**
Availment		
Yes	18	6.0
No	280	94.0
Total	**298**	**100.0**
Reasons of Not Availing the Outreach Activities		
None	18	6.0
Did not reach the household yet in the Barangay	256	85.9
Only with kids at INHS are being prioritized	21	7.0
No idea of the program	1	0.3
Not chosen as a recipient	2	0.7
Total	**298**	**100.0**
Assessment of Outreach Activities		
Satisfied	8	44.4
Definitely Satisfied	10	55.6
Total	**18**	**100.0**
Importance of Outreach Activities		
Undecided	1	0.3
Important	270	90.6
Definitely Important	27	9.1
Total	**298**	**100.0**

Table 25. Distribution of the Respondents' Awareness of the Different Outreach Activities.

Aware-ness	Swine Chain/ Disper-sal		Lacatan Product-ion/		Composting		Organic Farming		Vegeta-ble Product-ion		Seed Distribu-tion		Communal Gardening		Social Accounta-bility		Waste Management	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Yes	219	73.5	77	25.8	73	24.5	66	22.1	63	21.1	70	23.5	64	21.5	60	20.1	63	21.1
No	79	26.5	221	74.2	225	75.5	232	77.9	235	78.9	228	76.5	234	78.5	238	79.9	235	78.9
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**

Only few respondents had availed of the outreach activities out of the nine implemented by CPU in the surrounding barangays of INHS (Table 26). These were the Swine Chain/Dispersal Project, Lacatan Production Seminar and Seed Distribution activity.

Table 26. Distribution of the Respondents' Availment of the Different Outreach Activities

Availment	Swine Chain/ Dispersal		Lacatan Produc-tion		Composting		Organic Farming		Vegeta ble Produc -tion		Seed Distribu-tion		Communal Gardening		Social Accou nta-bility		Waste Manage ment	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Yes	18	8.2	1	1.3	0	0	0	0	0	0	1	1.4	0	0	0	0	0	0
No	201	91.8	76	98.7	0	0	0	0	0	0	69	98.6	0	0	0	0	0	0
Total	**219**	**100.0**	**77**	**100.0**	**0**	**0**	**0**	**0**	**0**	**0**	**70**	**100.0**	**0**	**0**	**0**	**0**	**0**	**0**

Respondents who had availed of the outreach activities were either definitely satisfied or satisfied (Table 27). For example, among the beneficiaries of the Swine Chain/Dispersal, more were definitely satisfied than just satisfied. The only recipient of the Seed Distribution and

Seminar on Waste Management was definitely satisfied with it. The one who attended the Lacatan Production Seminar, however, was undecided on its benefit to him.

Table 28 shows that a great majority of the respondents believed that the different CPU outreach activities in the surrounding barangays of INHS were important. Only a minimal proportion of the respondents believed that all these outreach activities except for the Swine Chain/Dispersal Project were not important.

Table 27. Distribution of the Respondents' Assessment of the Different Outreach Activities.

Assessment/ Satisfaction	Swine Chain/ Dispersal		Lacatan Produc-tion/		Composting		Organic Farming		Vegetable Production		Seed Distributi on		Commu nal Garden ing		Social Account a-bility		Waste Management	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Undecided	1	5.6	1	100.0														
Satisfied	6	33.3																
Definitely Satisfied	11	61.1									1	100.0						
Total	**18**	**100.0**	**1**	**100.0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**100.0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 28. Distribution of the Respondents' Importance of the Different Outreach Activities

Import-ance	Swine Chain/ Dispersal		Lacatan Produc-tion/		Composting		Organic Farming		Vegetable Produc-tion		Seed Distribu-tion		Communal Gardening		Social Accounta-bility		Waste Managem ent	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Not Important			2	0.7	2	0.7	2	0.7	2	0.7	2	0.7	2	0.7	2	0.7	2	0.7
Important	274	91.9	27	91.3	273	91.6	273	91.6	273	91.6	265	88.9	273	91.6	273	91.6	273	91.6
Definitely Important	24	8.1	24	8.1	23	7.7	23	7.7	23	7.7	31	10.4	23	7.7	23	7.7	23	7.7
Total	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**	**298**	**100.0**

These results were affirmed by the FGD participants who all believed that the CPU outreach activities were undoubtedly important to the lives of the people in the neighboring barangays of Ilongbukid National High School.

The distribution of the changes in the life of the respondents brought about by the outreach activities are presented in Tables 29 and 30 while the list of persons responsible for these changes in their lives is found in Table 31.

Table 29. Distribution of the Changes in the Life of the Respondents Brought About by the Outreach Activities.

Profile/Categories	Frequency	Percent
Yes	18	100.0
No	0	0
Total	**18**	**100.0**

Table 30. Specific Changes Brought About by the Outreach Activities (Multiple Responses, N = 19).

Profile/Categories	Frequency	Percent
Helped the recipients' children in their schooling/finishing their degree and now working already	15	83.3
Helped the recipients to buy basic needs and other materials inside the house and construction of house	15	83.3
Helped neighbors to avail of the swine dispersal project	15	83.3
Provided additional income for the family	4	22.2
Cannot verbalize the change/impact in their life	3	1.6

Table 31. Persons who Contributed to the Change/Improvement in Their Lives (Multiple Answers, N = 19).

Profile/Categories	Frequency	Percent
CPU Personnel	15	83.3
Ilongbukid NHS Faculty & Staff	15	83.3
Cannot specify the persons who were of help	3	1.6

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, the following conclusions are drawn:

1. The respondents were middle-aged, married, female-farmers with meager sources of income.
2. The respondents had 3-4 member-households with almost the same number of young male and female high school or elementary educated members who were dependent to the family, and had rice, banana, meat, fish, vegetables, and for breakfast, lunch and supper.
3. The respondents were aware that their barangay annual fiesta was the cultural activity in their community meant for uniting them.
4. The expenses of the households were very meager, whether for education, medical, clothing, recreation, utilities and other expenses.

5. Farming was the main source of income with a small farm to till and few livestock to meet their expenses. They use inorganic fertilizer, insecticides, fungicides, herbicides and rainwater in their farming activities.
6. The respondents were aware of the presence of organizations in their barangays and are active members of them; had voted in the last election.
7. Most the respondents had semi-permanent housing materials such as wood/plywood and GI for roofing; had electricity as lighting source; used firewood as fuel for cooking and used home-sourced firewood/charcoal.
8. They had a functional plain sand and gravel road in the barangays but only had an open drainage system. They also had a school, health center and a basketball court.
9. Pump/artesian well was the main source of water for drinking and cooking. They had a water-sealed toilet, an open drainage for waste/used water disposal, garbage pit for solid waste disposal, and had a combination of common illnesses such as cough, colds, flu and fever.
10. It can be deduced from the stated problems and needs of the barangays, households, men, women, youth and children that if the income of the family could be increased through regular work, most of the major problems in the barangays such as gambling, drinking, health problems and other social ills could be mitigated if not fully addressed.
11. The respondents were aware of the outreach activities done by Central Philippine University in their barangay or neighboring barangays and perceived them to be important. Although only a few had availed of these

outreach activities, they were definitely satisfied or satisfied with them.

12. The respondents believed that there were positive changes brought about by the CPU outreach activities in their barangays. Specifically, it had helped finance the education of their children especially through the swine chain dispersal project; helped them construct/renovate/build their houses, provided their basic needs and augmented their income among others.

Based on the findings and conclusions of the study, the following are recommended:

1. Since the respondents and their households were primarily dependent on farming for their income, it is recommended that their farming activities and practices should be improved so that their income could increase.
2. Since the respondents who had availed of the outreach activities done by CPU had attested that their lives had been changed, it is recommended that these outreach activities be extended to other barangay residents.
3. The identified major problems and needs of the respondents' households, their barangays in general, and the men, women, youth and children in their barangays should be considered when planning for outreach activities in these barangays.

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ACKNOWLEDGMENT

The authors express their sincerest gratitude to the following:

Central Philippine University and its University Research and Outreach Centers, their technical partners and staff, the people and barangay officials of Brgy. Ilongbukid and nearby communities of San Rafael, and the faculty and staff of Ilongbukid National High School. To all the respondents and FGD participants for their willingness and honesty in sharing valuable information to validate the efforts/services that were delivered by CPU during the recent years.

Above all, to God Almighty for His wisdom, guidance, and sustaining grace toward the completion of this work.

INDIGENOUS RICE WINE MAKING IN CENTRAL PANAY, PHILIPPINES

Emma T. Gico and Evelyn R. Ybarzabal

ABSTRACT

This study was conducted to document the process of making rice wine called *'pangasi'* by the Panay Bukidnon indigenous people (IP) in Tapaz, Capiz. Specifically, it aimed to describe the ingredients and procedure used and to compare them with other rice wines made in the Philippines. Likewise, it also aimed to describe and discuss the emerging themes deduced from documenting the making of '*pangasi'* rice wine by the Panay Bukidnon IP. Information were collected through direct observation and semi-structured interview gathered from key cultural informants who were also the participants in the focus group discussion. They are members of the Council of Elders of the Tapaz Indigenous People's Organization (TIPO). The information gathered were cross-checked with existing literature of documented traditional wine making from different areas in the Philippines.The indigenous rice wine, '*pangasi'* used by the Central Panay Bukidnon Indigenous People in Tapaz, Capiz is different from the '*pangasi'* made by the Subanons in Zamboanga del Norte The main ingredient used in making '*pangasi'* of the Central Panay Bukidnon (IP) is ordinary, non-waxy, upland rice while the 'pangasi' of the Subanen indigenous people of Zamboanga del Norte, makes use of cassava tubers as the main ingredient and a starter consisting of a concoction from 24 to 60 species of plant herbs, as reported by Nabua (2013). However, it is similar to' *pangasi'* or '*gasi'* which is a traditional drink among the Subanuns of Mindanao, made also from rice with added crushed ginger root and red hot pepper, but water is added to it. It is almost the

same as '*pangasi'* made from rice in North Western Mindanao, specifically in Bukidnon, in a study cited by Sanchez (2008) from Sakai and Caldo (1985b). However, they reportedly used sugar solution which is added for the second stage of fermentation instead of sugar cane juice, which is used by the Central Panay Bukidnon IP in Tapaz, Capiz. The use of leaves in the processing of '*pangasi'* which included, '*adgaw', 'talus'*, and young coconut leaves have not been mentioned in earlier related studies. However, regarding their local knowledge on cleanliness and sanitation, it is believed that these leaves are naturally clean, especially if they are 'ugbus' or young, and have not been too exposed yet in the environment. Indigenous women have an important role to play in using and preserving this valuable local knowledge. They just have to be better recognized and supported by the community. The value of ''*pangasi'* is much more than just a traditional drink one can hold in his hand, rather it is one that holds the indigenous community altogether. Aptly described by Fox (1984) as having this social and ritual value, the use of rice wine may be seen as a powerful integrating force which links and binds the individual to the group (Fox, 1984). The local knowledge of the Panay Bukidnon (IP) in making '*pangasi'* is comparable to the other local knowledge of other indigenous cultures in the Philippines. They just need to have it standardized so that their practice will no longer be always as per 'estimate' basis but would be quantifiable or in terms of measured quantities so as to yield a consistent, quality product.

INTRODUCTION

Background and Rationale

Philippine indigenous groups

The Philippines is a multi-cultural country. According to the Summer Institute of Linguistics, there are 183 living languages in the Philippines and 175 of them are indigenous, that is, still being spoken by its respective ethnolinguistic group (Lewis, 2009). One of these language groups is called *Sulod* located in Central Panay, with alternate names as *Bukidnon,* or *Mondo* (Ethnologue. Languages of the world, Philippine country report). Some of the members of this ethnolinguistic community are residents of Tapaz, a municipality in the province of Capiz, Philippines, in the center of Panay Island.

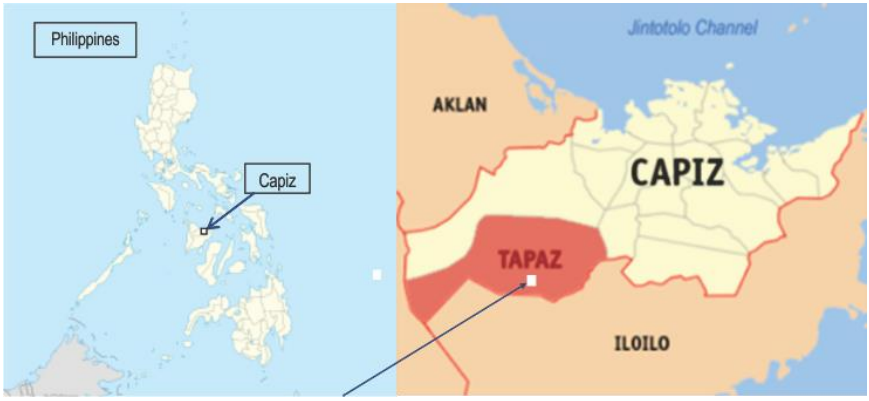

Figure 1. Site Area

Tapaz lies within the central mountain ranges of Panay Island with 58 barangays, 28 of these are within ancestral domain or land of the indigenous peoples (IPs)

known as the Panay Bukidnon. More than 10,000 indigenous people (IP) are living in these 28 hinterland barangays.

The Tapaz IPs have brown to fair skin, with straight black hair and spread out in the upland barangay in about 40,000 hectares of land, considered as the biggest IP communities in Western Visayas. (The Manila Times, February 20, 2016).

The indigenous people (IP) like the Panay Bukidnon have a knowledge of the natural resources that make-up their food environment. They have learned to develop a wealth of experiences and explanations relating to the mountainous environment in which they live in. This traditional knowledge is often referred to as indigenous or local knowledge. Rees (1999) as cited by Balayan et al (2016) pointed out that this indigenous knowledge is accumulated store of cultural knowledge generated and transmitted by communities from one generation to another about how to adapt to, make use of, and act upon physical environments and their material resources in order to satisfy human wants and needs. This local knowledge is important since it is the main asset they invest in the struggle for survival, to produce food, provide for shelter or achieve control of their own lives. Significant contributions to global knowledge have originated with local people even dating back for instance, to an age-old tradition of fermenting food as in making wines. Such local knowledge is developed and adapted continuously to a gradually changing environment. It is passed down from generation to generation and closely interwoven with people's cultural values (FAO, 2017).

> *Barnhardt and Kawagley (2005) affirmed that Indigenous people throughout the world have sustained their unique world views and associated knowledge systems for millennia, even while undergoing major social upheavals as a result of*

> *transformative forces beyond their control. Many of the core values, beliefs and practices associated with those worldviews have survived and are beginning to be recognized as having an adaptive integrity that is as valid for today's generations as it was for generations past.*

Likewise, as cited by Olaide (2012), the World Bank (1998) stated that

> *Today, many indigenous knowledge systems are at risk of becoming extinct because of rapidly changing natural environments and fast pacing economic, political, and cultural changes on a global scale. Practices vanish, as they become inappropriate for new challenges or because they adapt too slowly. However, many practices disappear only because of the intrusion of foreign technologies or development concepts that promise short-term gains or solutions to problems without being capable of sustaining them. The tragedy of the impending disappearance of indigenous knowledge is most obvious to those who have developed it and make a living through it. But the implication for others can be detrimental as well, when skills, technologies, artifacts, problem solving strategies and expertise are lost.*

Specifically, a lot of studies have been done about ethnic fermented foods and alcoholic beverages of Asia (Tamang, 2015). In addition, more specific studies have already been published on indigenous fermented foods of

Southeast Asia (Owens, 2015). In the Philippines, Halili (2004) pointed out that wine manufacture included *basi*, an Ilocano wine from sugar cane; *pangasi,* a Visayan wine made from rice; *lambanog*, a Tagalog wine produced by distillation of tuba (made from coconut sap); and the *tapuy,* an Igorot wine made from rice. On the other hand, Dampier (as cited by Sanchez (2008)) mentioned an alcoholic drink made by natives of Mindanao, from boiled rice that was allowed to steep in water for some time in earthen jars. According to Sanchez (2008), the Bukidnon method of preparing starter culture for making *pangasi* begins with soaking nonwaxy rice overnight. The soaked rice is then drained, pounded finely, and mixed with ginger root extract, a small amount of old *tapay* (termed *agonan*) and sufficient water to make dough. The tapay is flattened and shaped spherically and allowed to dry for two weeks inside a room and another two weeks under the sun. A variation in the method is made specifically for the Preparation of *agkud*, a three-day-old fermented rice similar to the Northern Luzon *binubudan*. In the preparation of *agkud* (starter culture), sugarcane juice instead of water is mixed with ginger root extract and *agonan.*

Furthermore, Sanchez (2008) pointed out that the Subanun or Bukidnon method for the preparation of rice wine, locally called *gasi*or *pangasi,* was first reported by Christie (1912); later studies were done by Sakai and Caldo (1985a).

Specifically, Sanchez (2008), cited Chistie (1912) that a traditional drink made from rice isgasior *pangasi,* is popular with the Subanuns of Mindanao, in the southern part of the Philippines. *Gasi* is the principal drink offered to visitors of rank. It is also offered to souls of the dead and to various classes of spirits. The *gas i*s placed on or beneath the altar or the image, and the spirits are formally invited by a medicine man to partake of it. Subanuns occasionally drink *gasi* during religious and marriage ceremonies.

The Subanuns prepare *gasi* by mixing parts of certain plants with pounded rice. The mixture is cooked and set aside to ferment, after which, it is formed into small balls, dried and stored for future preparation of *gasi*. The wife prepares the *gasi.* Cooked rice is spread on a mat; while still warm, it is thoroughly mixed with one or more balls of the previously prepared mixture (n powder form). The mixture is allowed to ferment for a few hours. The bubbling mash is then transferred to a Chinese jar, and a calculated amount of water is added to it. In some cases, crushed ginger root and red hot pepper are added for flavor. As soon as liquid is formed, '*gas*i' is consumed by siphoning the liquid off with a bamboo tube with small diameter. Sometimes, a sweet-smelling herb is placed on top of the liquor before it is served. The amount withdrawn from the jar is replaced with water so that as gasi is consumed, the strength of the alcohol decreases.

Nabua, *et al* (2013) conducted a study to determine the production, processing and marketing of '*pangase'* wine as an identity of the Subanen tribe in Zamboanga del Norte. They reported the use of three raw materials such as cassava tubers, rice hull and a concoction of herbs called "tapay" (made from 24 to 60 herbs). The pangase wine undergoes fermentation process in a ceramic jar called "*bandi"* or "tibod" for two weeks to three years. Its potential in the market is promising but there are a few known producers to supply it.

Meanwhile, Sanchez (2008) cited the studies conducted by Sakai and Caldo (1985b) on '*pangasi'* made in North Western Mindanao, specifically in Bukidnon. They reported that it is prepared like '*tapuy',* except for slight variations in the process. The cooled cooked non-glutinous rice is inoculated evenly with approximately 7% powdered *tapay* (starter) and allowed to undergo saccharification in a bamboo basket lined and covered with leaves of '*hindang'* (Macarangahispida [Blume] Muell. Arg.) for 3 days. The

mixture is transferred to earthen jars for several weeks of fermentation. The liquid formed (termed '*lihing'*) is siphoned through a bamboo tube with small diameter called *usok*. A small amount of sugar solution is added for the second stage of fermentation that usually lasts until most of the rice mixture is hydrolyzed and fermented.

So far, only Hamili (2004) has made mention of '*pangasi'* wine in the Visayas but it did not specify as to the specific location. In fact, there have been no documented cases yet of making *pangasi* rice wine in Western Visayas.

For this reason, the Panay Bukidnon indigenous people (IP) in Tapaz, Capiz might face the potential loss of this knowledge in making rice wine due to lack of use by younger members of the society and to gradual loss of elder members who know the most about these resources. Thus, local knowledge about making rice wine *'pangasi'* must be documented. However, as Shava (2005) pointed out, there is a need to have some practical application of this local knowledge to benefit the members of the indigenous community themselves.

In this connection, the researchers would like to document the making of *'pangasi'* rice wine by the indigenous people in Central Panay as part of their tradition so as to preserve their local knowledge.

Objectives of the Study

In general, in this study we aimed to describe the process of making rice wine called *'pangasi'* by the Panay Bukidnon indigenous people in Tapaz, Capiz.

Specifically, we aimed to:

1. describe the ingredients and procedure used in making '*pangasi'* by the Panay Bukidnon (IP);
2. compare the ingredients and procedure used in making '*pangasi'* by the Panay Bukidnon IP with other rice wines made in the Philippines; and,
3. describe and discuss the emerging themes deduced from documenting the making of *'pangasi'* rice wine by the Panay Bukidnon IP.

Definition of Terms

Indigenous Peoples. Indigenous peoples were referred to as "national minorities by the 1973 Philippine Constitution and as "national cultural minorities" by the 1987 Constitution. With the passage of the Indigenous Peoples' Rights Act of 1997 (RA No. 8371, or simply IPRA, they are now referred to as indigenous peoples (IPs) or indigenous cultural communities (ICCs). According to IPRA, indigenous peoples are a group of people or homogeneous societies identified by self-ascription and ascription by others, who have continually lived as organized communities on community bounded and defined territory, and who have, under claims of ownership since time immemorial, occupied, possessed and utilized such territories, sharing common bonds of language, customs, traditions, and other distinctive cultural traits, or who have, through resistance to political, social, and cultural in roads of colonization, non-indigenous religions and cultures, become historically differentiated from the majority of Filipinos.

In the Philippines, these groups have been referred to, through the years mainly by the government, as indigenous cultural communities, cultural minorities, tribal Filipinos, ethnic minorities, and highlanders. The United Nations popularized the use of the term "indigenous people,"

especially after the declaration of 1993 as the Year of the Indigenous People (Molintas, 2013).

Indigenous knowledge. It is knowledge that is unique to a given culture or society (Grenier, 1998). In this study, indigenous knowledge includes local knowledge, skills known, and practiced in making 'pangasi' rice wine and passed down from one generation to another.

Fermentation. Production of acids or alcohol or subtle flavors and aromas from starchy or sugary medium with the action of microorganisms, such as yeasts and bacteria (Worku, et al, 2015) In this study, fermentation is the process of production of traditional alcoholic beverage from rice called '*pangasi'*.

Significance of the Study

The results of this study could be beneficial to the following:

Government officials. It could provide them with valuable information to enable the indigenous community to meet food security and livelihood needs.

Members of the indigenous community (Panay-Bukidnon). It could help to preserve their culture specifically in terms of traditional food preservation methods and be able to apply these for livelihood purposes.

Other researchers. They could also benefit from this study to develop better utilization of these local food resources.
Students and the General public. They could be made aware of the indigenous culture of the Panay Bukidnon so as to learn from them and to appreciate them as well.

Scope of the Study

The study was conducted in the mountainous area of Barangay Sinunod, Tapaz, Capiz in Central Panay among the indigenous people who are referred to as Panay-Bukidnon. The focus of the study was on documenting their traditional *'pangasi'* rice wine making in the context of the indigenous communities in Tapaz, Capiz. The study site was in one of the IP Barangays, that is located in Brgy. Sinunod. This is where the other cultural informants met for a focus group discussion and how they can have practical application to benefit the local IP community. These informants are authorized representatives or tribal chieftains in the other IP Barangays such as BrgySinunod, Bato-bato, Maliao, Rizal Norte and Tacayan.

There were no physico-chemical analyses conducted on the '*pangasi*' rice wine.

METHODOLOGY

This study aimed to describe and understand the making of '*pangasi'* rice wine by the indigenous people (IP) in Central Panay. Information were collected through direct observation and semi-structured interview. Due to limited immersion time of four days, important information were gathered from key cultural informants. These people were selected by the key cultural informant from the National Commission on Indigenous Peoples (NCIP) in Tapaz, Capiz. These people also comprised the participants in the focus group discussion. They are members of the Council of Elders of the Tapaz Indigenous People's Organization (TIPO). Likewise, they are tribal chieftains of selected IP Barangays such as Brgy Sinunod, Bato-bato, Maliao, Rizal Norte and Tacayan . The information gathered were cross-

checked with existing literature of documented traditional wine making from different areas in the Philippines.

An interview guide and focus-group discussion guide were used to collect information. A digital recorder and camera were used to transcribe information for proper documentation and data analysis.

Ethical considerations

The researchers sought permission from the Regional Office of the National Commission on Indigenous People (NCIP), other local authorities such as the Mayor of Tapaz, Capiz and community leaders, to visit the IP barangay. The cultural informants gathered at the Barangay Health Center of Brgy. Sinunod. The researchers stayed there for four (4) days to establish rapport and to interact with the indigenous people, especially those belonging to older generations to get to know the traditional methods of making rice wine.

The data gathering process was properly guided by representatives from the National Council for Indigenous Peoples (NCIP), Tapaz Indigenous Peoples' Organization (TIPO) and local government officials.

The respondents were given a chance to review the findings of the study for consistency and validity. This was done during the IP research presentation conducted as part of the Indigenous Peoples' Day Celebration at Central Philippine University, Jaro, Iloilo City on March 7, 2017.

Data Analysis

Thematic analysis was used in analyzing the data collected. Information gathered were categorized according to emerging themes.

RESULTS AND DISCUSSION

Rice wine is a popular traditional alcoholic beverage in the Philippines. Specifically, It is called '*pangasi*' by the Central Panay Bukidnon indigenous people (IP) of Tapaz, Capiz,. The informant demonstrated two types of rice wine, one that is fermented for a longer period of time and used for special occasions such as in wedding ceremonies, rituals, etc, and they called it *'pangasi'*. On the other hand, another type of rice wine is for ordinary, commercial use and fermented for a shorter period of time, called **'***baluk'*.

According to the informants, rice is abundant in their locality and it is one of their agricultural products. In fact, boiled rice is their traditional staple food. Any rice variety may be used but the ordinary, non-waxy, upland rice was used in this case. Rice has to be pounded using their wooden mortar and pestle because it is what they have as an indigenous tool. They would not use milled rice, because according to them, if they have it milled somewhere else, it might get contaminated with dirt from other produce that might have used the same rice mill.

There have been a lot of studies on traditional fermented alcoholic beverages, such as rice wine in almost all countries of the world. Starch is the major constituent of rice and makes up 90% of rice in dry weight. According to Suresh, et al. (1999) as cited by Wadhai and Gondane, most biological processes concerned with the conversion of starchy materials into alcoholic beverages have three steps, such as liquefaction of starch, enzymatic saccharification and fermentation. The main ingredient used in making 'pangasi' of the Central Panay Bukidnon (IP) is ordinary, non-waxy, upland rice, since it is abundantly available in their natural environment. This is in contrast to the 'pangasi' traditional wine among the Subanen indigenous people of Zamboanga del Norte, as reported by Nabua, et al, (2013)

which makes use of cassava tubers as the main ingredient and a starter consisting of a concoction from 24 to 60 species of plant herbs and the specification of the mixture is even a guarded secret handed down to a selected few throughout the generations. On the other hand, Sanchez (2008) cited Christie (1912) as having referred to "***pangasi"*** or "***gasi"*** as another traditional drink among the Subanuns of Mindanao, made also from rice with added crushed ginger root and red hot pepper, but water is added to it. Another similar study cited by Sanchez (2008) is from Sakai and Caldo (1985b) who conducted studies on "***pangasi"*** made from rice in northwestern Mindanao, specifically in Bukidnon. However, they reportedly used sugar solution which is added for the second stage of fermentation instead of sugar cane juice, which is used by the Central Panay Bukidnon IP in Tapaz, Capiz. This usually lasts until most of the rice mixture is hydrolysed and fermented. In a way, the adding of sugar cane juice or sugar solution to the remaining mash after two weeks of fermentation is also similar to what Sanchez (2008) reported in the traditional Bontoc and Benguet methods of making rice wine and the Ifugao method of rice wine called 'tapuy'. But the Ifugaos used red glutinous or waxy rice which is roasted instead.

Their rice wine, "*baluk"* which has a shorter shelf life, just like "*tapuy"* in Northern Philipines is normally harvested and directly consumed as soon as liquid forms in saccharified cooked rice. Similarly, their "*pangasi"*, like "tapuy" is also normally consumed after one month of fermentation without further processing. As mentioned by the informant earlier in this study, if the sugar cane juice to be added in the "pangasi" is cooked first and its volume in the cooking pot is reduced by 2 inches from the top, the resulting rice wine would last longer and would be of a better quality. He likewise noted that if it were so, it could last up to six months or even one year. This observation affirms what Sanchez (2008) likewise reported, that pasteurization of "*tapuy"* is needed for product quality improvement.

Plants Used for Fermentation Starters

In a study by Sota and Tetsuo (2011), plants used in making fermentation starters in Cambodia are either spices and herbs, such as red chili pepper (*Capsicum frutescens*) and ginger *(Zingiberofficinale)* and a sweet ingredient such as sugar cane (*Saccharum officinarum).*Spices and herbs are known for their antimicrobial properties (Dung et al. 2005; Saono et al. 1982) as cited by Sota and Tetsuo (2011).The informant from the Central Panay Bukidnon IP mentioned that red chilli pepper and ginger are hot and spicy and are strong flavoured. So, just like the Cambodians as cited in an earlier study by Sota and Tetsuo (2011, it was believed that rice wine made with starters containing them would be hot and strong as well. Dorantes, et al (2000) as cited by Omolo, et al (2014) noted that the pungency of chili peppers is due to the accumulation of capsaicinoids, a group of naturally produced compounds that are unique to the *Capsicum* genus. A study by Omolo, et al (2014) also reported the natural antimicrobial properties of chilli peppers. On the other hand, antioxidant properties of ginger root (*Zingiber officinale*) have been reported in a study by Adel & Prakash (2010).

As mentioned earlier, the use of sugar cane *(Saccharum officinarum*) would make the rice wine taste sweet. As cited by Sota and Tetsuo (2011), Hayashida and Kinoshita (2004) reported that saccharides act as nutrients that promote the growth of yeast and as the source of ethanol fermentation, which inhibits the growth of unwanted bacteria.

The use of leaves in the processing of "*pangasi"* in Central Panay Bukidnon which included, "*adgaw"* (*Premnaodoratablanco*), "*talus" (Alpiniahaenki Pres)*, and young coconut leaves were not mentioned in earlier related studies. According to (Pinzon, undated).

"Alagau" plant or "*adgaw"* in Visayan is scientifically named as *Premnaodorata Blanco (Verbenaceae)*. It is native to the Philippines where it is not commonly cultivated and thrive in the less accessible limestone forests. In the Philippines, the leaves are used as an ethnomedicine for various ailments. It is one of the seven components of a commercialized Philippine herbal preparation called "*Pito-Pito*."

The Panay Bukidnon IP informant 1996) used "adgaw" *(Premnaodoratablanco)* leaves to clean their tools because these have been traditionally used by their ancestors to clean their tools also.

He said, "*Matinlo dya nga klase ka dahon" (This kind of leaves are clean.)*

In another study by Pinzon *et a*l, and Ali *et al*, (2011), "Adgaw" *(Premnaodoratablanco)* leaves have been widely used in Malaysian indigenous medicine (traditional, ethno- and folk-medicine) for antiviral and cytotoxic activities, antimicrobial, anti-inflammatory and chemopreventive flavones have been reported from "adgaw" (*Premnaodoratablanco)* leaves. On the other hand, "*talus" (Alpiniahaenki Pres*.) leaves was reported by Madulid, *et al* (1989) as being used by the Ati tribe in Nagpana, Barotac Viejo, Iloilo as a traditional medicine for boils.

Gender Issues in Making Rice Wine

Among the elders in the Tapaz Indigenous Peoples' Organization (TIPO) who were interviewed, only one of them was a woman, who was also knowledgeable about their indigenous culture. The rest of the elders were men and when they were asked who taught them how to make "*pangasi",* each one made mention of the following:

One informant said,

> *"Ini nga paghimo sang pangasi, sang buhi pa si Nanay ko, amoni ang obra nya..Kon may okasyon gani, bisan didto sa pihak, siya ang ginasugat nga mag-obra sini".* (When my mother was still alive, this is what she used to do, and whenever there are special occasions, she is the one who is picked to make the '*pangasi*",even if she has to go to a distant barangay to do it.)

Still, another informant said, *"Natun-an koni kay Lola ko*" (I learned it from my grandmother).

Similarly, another informant mentioned, Nakita ko ang akun Tiya nga nagahimo sang pangasi ("I saw my aunt doing the *pangasi*").

The only woman informant present in the focus group discussion who was also a member of the Council of Elders of TIPO said,

> *"Babayi gid man ang kalabanan nga nagatrabaho sini. Kay ang babayi mahipid. Mauti siya. Kag kalabanan sa nagaobra sang pangasi, isa lang siya. Gina preparar niya ang tanan antes siya mag-obra, pero pwede man siya kapangayo bulig para magsag-ob kag magpainit sang tubig kag mag-preparar nga ila-ga-un ang adgaw*." (Actually, it is really the woman in the indigenous community who is knowledgeable in doing the 'pangasi'. She is mostly left alone in the house doing the preparations all by herself, but she can also ask help to fetch water and prepare to boil the adgaw leaves).

According to her, this is to ensure that everything is kept clean and tidy. She further explained that during the focus group discussion, where most of the members of the Council of Elders were men, and they were the ones available for the interview.

This concept of women as bearers of local knowledge regarding traditional rice wine production holds true also in other cultures, such as the one studied by Sota and Tetsuo (2011) in Cambodia. The women usually produced the starters, and the men sometimes helped with the collection of plants or the pounding of rice and plants. In another study by Isnouf (2012), he found out that women in rural Sudan are often responsible for food processing and storage, collecting of water and firewood and for generating incomes for subsistence. He further reported that indigenous methods and solutions applied by women to sustain household food supplies are culturally acceptable, economically practicable, and more appropriate for the local environment and conditions than modern techniques and solutions suggested by scientific experts.

The Value of the Rice Wine

In this study, the informants who represented the different barangays in the indigenous community during the focus group discussion were elders, tribal or barangay chieftains and officers of the Tapaz Indigenous Peoples' Organization (TIPO). The president of the organization was considered an authority in making their rice wine 'pangasi', however he was not scheduled to arrive on the first day, yet. Since the researchers arrived early in the study site, they were excited to ask preliminary questions about rice wine, because the host barangay welcomed them warmly and the men in the community had recreational drinking. The informant in the village made it clear to everyone, including the researchers to wait for the person in authority to explain

about '*pangasi'*. It was a signal indeed, that rice wine has a very important part in their culture, not just for prospective profit or market value, but so much more. In fact, after the interview with the President of TIPO, he mentioned that although he is knowledgeable about rice wine and that he has taught many others how to do it, there's no one in his barangay selling the rice wine starter. Instead it is now being made and sold in the other nearby barangays. The fact remains that he is the one responsible to pass on this local knowledge about making rice wine to the next generation.

Just like in the case of the Tagbanuwa indigenous people in Palawan, the traditional values underlying the use of the rice wine are both religious and social. Fox (1984) studied the Rice Wine Complex among the Tagbanuwas of Palawan. Basically rice wine is used for ceremonial drinking associated with religious ceremonies as well as in social drinking and associated activities. It is a happy occasion for singing and dancing and for renewing ties with friends and relatives who have been invited from other places. This is also being practiced among the indigenous people of Central Panay Bukidnon. They may be referred to by other names, such as *'Ambahan'* which is similar to the drinking songs "*Sudsud'* of the Tagbanuwa in Palawan. According to Fox (1984), "*Sudsud* are simply short traditionally learned songs and verses sung in competition during the drinking parties. It is the act of singing with their veiled words and tunes which evokes an emotional response. These songs are an expression of a collective identification and of in-group superiority as well as pride. A contestant also enjoys the privilege and advantage of 'monopolizing the jar of rice wine as his 'opponent' gets engrossed with singing."

Not only is '*pangasi'* important to the Central Panay Bukidnon IP during happy occasions like harvest, weddings, birthdays and family reunions, it is so much more of cultural value during religious ceremonies or rituals, such as during times of illness or death in the family. The earthen jar

containing the '*pangasi*' is so precious that it is considered an heirloom, passed on from one generation to the next. It is a well-guarded community and family treasure which cannot be bought nor sold but can only be borrowed every time there is a need for it. In fact, one informant said that their old earthen jar has been in existence since the Spanish period in the Philippines.

Having this social and ritual value, the use of rice wine may be seen as a powerful integrating force which links and binds the individual to the group (Fox, 1984). On a personal note, the informants value the '*pangasi'* as healthful because according to them, the ingredients are natural and locally available in their environment since they do not use fertilizers for their plants. They do not have to spend money in order to have a drink. Besides they do not have money to buy commercial wines but they know how to
make their own and they take pride this local knowledge that has been handed down to them from one generation to the other.

Local knowledge regarding cleanliness and sanitation

During the focus group discussion, the informants always emphasized the need to wash and clean ingredients and all the necessary tools and improvised equipment they use in making '*pangasi'.* For instance, they make sure that they grow their own rice. They do not use fertilizers or chemicals in growing rice. This is to make sure that the rice is free from chemical contaminants. They also grow their own herbs and spices in their surroundings. This assures them that these plants have not been exposed to chemical fertilizers or pesticides. The ladles and the drinking straws they use are made of freshly gathered bamboo. They make their cooking utensils themselves, by freshly scraping or working on the bamboo to transform it into clean food containers or cooking tools such as in 'salidangdang', a kind

of bamboo tray where they dry up the starter. They also use leaves which are considered clean by nature, such as banana leaves, '*talus' (Alpiniahaenki Pres.)* or '*payaw*' and also the, 'a*dgaw'(Premnaodoratablanco)*leaves.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The study was conducted to document and steer indigenous knowledge on food preservation such as traditional rice wine making in Central Panay Bukidnon.
It aimed to describe and understand food preservation among the indigenous community. Information were collected through direct observation and semi-structured interview. Important information were gathered from key cultural informant. This information were cross-checked with existing literature on documented traditional wine making from different areas in the Philippines.
Likewise, an interview guide and focus-group discussion guide were used to collect information.

The traditional fermented alcoholic beverage, *'pangasi'* used by the Central Panay Bukidnon Indigenous People in Tapaz, Capiz is different from the '*pangasi*' made by the Subanons in Zamboanga del Norte The main ingredient used in making *'pangasi'* of the Central Panay Bukidnon (IP) is ordinary, non-waxy, upland rice while the 'pangasi' of the Subanen indigenous people of Zamboanga del Norte, makes use of cassava tubers as the main ingredient and a starter consisting of a concoction from 24 to 60 species of plant herbs, as reported by Nabua (2013). However, it is similar to' *'pangasi'* or *'gasi'* which is a traditional drink among the Subanuns of Mindanao, made also from rice with added crushed ginger root and red hot pepper, but water is added to it. It is almost the same as *'pangasi'* made from rice in northwestern Mindanao, specifically in Bukidnon, in a study cited by Sanchez (2008)

from Sakai and Caldo (1985b). However, they reportedly used sugar solution which is added for the second stage of fermentation instead of sugar cane juice, which is used by the Central Panay Bukidnon IP in Tapaz, Capiz. The use of leaves in the processing of '*pangasi'* which included, 'adgaw', 'talus', and young coconut leaves have not been mentioned in earlier related studies. However, regarding their local knowledge on cleanliness and sanitation, it is believed that these leaves are by naturally clean, especially if they are *'ugbus'* or young, and not have been too exposed yet in the environment.

Indigenous women have an important role to play in using and preserving this valuable local knowledge. They just have to be better recognized and supported by the community.

The value of ''*pangasi'* is much more than just a traditional drink one can hold in his hand, rather it is one that holds the indigenous community altogether. Aptly described by Fox (1984) as having this social and ritual value, the use of rice wine may be seen as a powerful integrating force which links and binds the individual to the group (Fox, 1984).

The local knowledge of the Panay Bukidnon (IP) in making '*pangasi'* is comparable to the other local knowledge of other indigenous cultures in the Philippines. They just need to have it standardized so that their practice will no longer be always as per 'estimate' basis but would be quantifiable or in terms of measured quantities so as to yield a consistent, quality product.

It would be much more valuable however, if '*pangasi*' could be improved to create employment to benefit the Central Panay Bukidnon Indigenous People themselves. The local knowledge of the Panay Bukidnon (IP) in making '*pangasi'* is comparable to the other local knowledge on rice wine making of other indigenous cultures in the Philippines.

They just need to have it standardized so that their practice will no longer be always as per 'estimate' basis but would be quantifiable or in terms of measured quantities so as to yield a consistent, quality product.

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A TRACER STUDY FOR GRADUATES OF THAI NGUYEN UNVERSITY OF ECONOMICS AND BUSINESS ADMINISTRATION (TUEBA) AND CENTRAL PHILIPPINE UNIVERSITY (CPU) JOINT DEGREE PROGRAMS AT THAI NGUYEN CITY, VIETNAM

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ABSTRACT

This tracer study assessed the employability of graduates of TUEBA and CPU joint degree programs at Thai Nguyen City, Vietnam for the year 2016. There were 113 graduates involved in this study who were chosen randomly from a population of 157 graduates of TUEBA and CPU joint degree programs at Thai Nguyen City, Vietnam. The results of the study showed that the graduates were predominantly male, married, with the age between 41-50 years old, and mostly MBA graduates; majority had regular or permanent employment status; a vast majority of graduates had managerial and supervisory positions and predominantly employed in the private sector; most graduates got their first job promotion after 6 months but not more than 1 year from the date of their graduation; communication skill was ranked as first among the professional skills deemed necessary for employment, and most had income of 5 million- 8 million vnd. Significant relationship existed between educational attainment and graduates' employability in terms of job position level, employment sector, employment status, and monthly salary/income. Also, there was significant relationship between age and graduates' employability in terms of job position level, professional skills, and monthly salary/income. There were few graduates who preferred to be under-employed because they had better opportunity to

earn higher monthly income. The respondents provided inputs for improvement of facilities, specifically in the maintenance of cleanliness of classrooms and rest rooms; improvement in the area of faculty and instruction by allowing the faculty-student interaction and student-student brainstorming activities, use the internet or relevant social media networks; improvement of the administrative support services by providing annual student orientation program to update students of school policies that affect them while studying at the University.

INTRODUCTION

Background and Rationale of the Study

The Thai Nguyen University of Economics and Business Administration (TUEBA) and Central Philippine University (CPU) entered into a Memorandum of Cooperation in 2009 to open the joint degree programs in Bachelor of Science in Business Administration (BSBA), Bachelor of Science in Accountancy (BSA), Bachelor of Science Master in Business Administration (MBA), and Master in Public Administration (MPA) at Thai Nguyen City, Vietnam pursuant to pertinent laws of the Socialist Republic of Vietnam, regulating the establishment and operation of foreign educational and cultural bases in Vietnam.

The TUEBA-CPU joint degree programs have already produced 157 graduates consisting of 43 of Bachelor's degree in Business and Accountancy, 99 graduates of MBA, and 15 MPA graduates but the school obligation does not end by just turning out graduates. The school has to ensure that these graduates are employed by the industry (Andres, 1999).

In the light of the above-mentioned situations, the researchers composed of five faculty members from CPU College of Business and Accountancy, decided to conduct this study.

Objectives of the Study

This tracer study for graduates of TUEBA and CPU joint degree programs at Thai Nguyen City, Vietnam was conducted in 2016 to assess the employability of graduates.

Specifically, this study had the following objectives:

1. To describe the personal profile of respondents in terms sex, civil status, age and educational attainment;
2. To describe the employability of the respondents in terms of employment status, term of employment, job position level, professional skills, employment sector, employment waiting period, job promotion waiting period, and monthly salary/income level.
3. To determine if the respondents' profile in terms of sex, civil status, age, and educational attainment was significantly related to their employability in terms of employment status, term of employment, job position level, professional skills, employment sector, employment waiting period, job promotion waiting period, and monthly salary/income level.
4. To identify the respondents' reasons for being under-employed and/or /self –employed.
5. To provide inputs for improvement in terms of facilities, faculty and instruction, curriculum, and administrative support services.

Theoretical Framework

This study was anchored on the Theory of Human Capital originated in the works of Becker as cited by Melink & Pavlin (2011). According to this theory, one of the most important ideas in labor economics, is to think of the set of marketable skills of workers as a form of capital in which workers make a variety of investments. This perspective is important in understanding both investment incentives, and the structure of wages and earnings. Hence, this theory assumes that education and training are treated as an investment process which generates a future flow of income.

As applied in this study, students' investment in education is assumed to exert a positive impact on their

productivity and in turn in their income (wages). Apart from these benefits, investing in human capital also incurs costs. These costs take the form of expenses incurred by students while studying such as school fees, costs of text books and learning materials, costs of accommodation and travel as well as opportunity costs such as loss of potential income while studying in school. It is further assumed that these costs are compensated when the knowledge and competencies accumulated in education process (human capital) generate sufficiently high rate of return and the future flow of income to a level high enough to compensate for all costs incurred.

Conceptual Framework

The conceptual model illustrated in the research paradigm provided the framework for the study. The dependent variable in this study was the employability of graduates in terms of employment status, term of employment, job position level, professional skills, employment sector, employment waiting period, job promotion waiting period, and monthly salary/income level. The independent variables are the personal profile of respondents in terms of sex, civil status, age, and educational attainment.

In this study, the null hypothesis was advanced and tested to determine if the respondents' personal profile in terms of sex, civil status, age, and educational attainment are significantly related to their employability in terms of employment status, term of employment, job position level, professional skills, employment sector, employment waiting period, job promotion waiting period, and monthly salary/income level.

This conceptual framework is graphically illustrated in Figure 1.

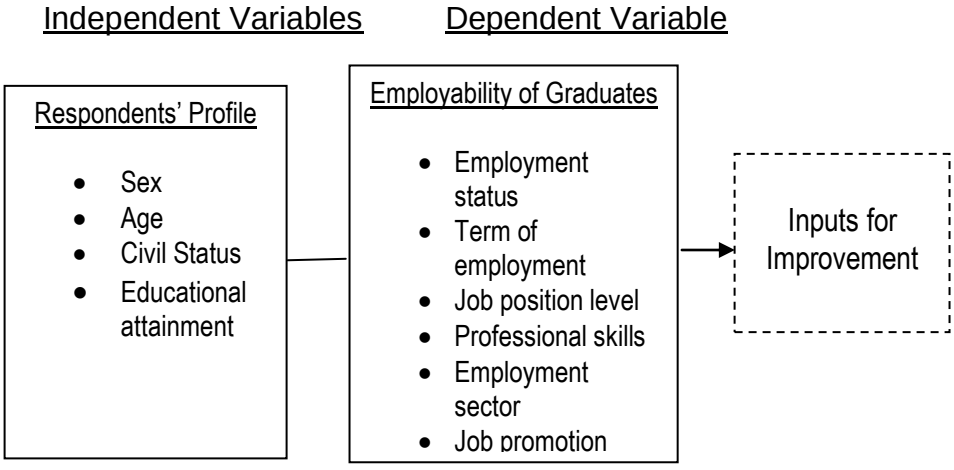

Figure 1. Research paradigm showing the hypothesized relationship between selected variables

Scope and Limitations of the Study

This tracer study, conducted in 2016 at Thai Nguyen City, Vietnam, assessed the employability for 113 graduates of TUEBA and CPU joint degree programs in terms of employment status, term of employment, job position level, professional skills, job promotion waiting period, and monthly salary/income level.

METHODOLOGY

The descriptive-correlational research design was used in this study. The data were gathered using a researcher-made questionnaire which was validated by three experts. The duly validated questionnaire was administered for trial-testing to 30 graduates of TUEBA and CPU joint programs in Vietnam which showed a reliability coefficient of 0.82. This was considered reliable because according Fraenkel and Wallen (2010), if the questionnaire has a reliability coefficient between 0.70 to 1.0, it is considered reliable.

The data obtained from the questionnaires were tabulated, computed, and analyzed statistically. The frequency count and the percentage were used to described the distribution of the respondents when grouped according to their personal profile and to determine the number of responses to each item in the questionnaire that described the employability of graduates. The *Chi-Square* was used to determine if the respondents' personal characteristics are significantly related to their employability.All inferential statistics were set at .05 level of significance.

RESULTS AND DISCUSSION

The following findings were revealed in this investigation:

Generally, majority of the graduates were male (nearly 63%), married (97%), had average age between 31-40 years old (47%), and MBA graduates (68%).Most graduates had direct full-time employment in their respective area of discipline (62%), had regular or permanent

employment status (73%), while a good number of graduates held supervisory (40%) and managerial (35%) positions, respectively.

The private industry was the most dominant employment sector (63%); most graduates of bachelor' s degree got their first employment after one year from their graduation, and a good number of graduates (44%) were promoted within 6 months to 1 year from their graduation, majority (63%) earned 5-8 million vnd per month, and claimed that communication skill was the most needed for employment (21%).

Table 1 shows a significant relationship between educational attainment and graduates' employability in terms of job position level which revealed that most MBA graduates held supervisory position while most of the MPA graduates held managerial position. The Chi-square computations indicated that there was a significant relationship between graduates' educational attainment and their employment status, (x^2 =96.711, p = .000). A significant relationship between graduates' educational attainment and their job position level means rejection of the null hypothesis. The computed Cramer's V coefficient of .925 indicated a perfect relationship between the graduates' educational attainment and their job position level. This implies that the graduates' higher position is significantly related to the higher degree.

Table 1. Relationship between Educational Attainment and Job Position Level.

Employability	Educational attainment							
	BS		MBA		MPA		Total	
	f	%	f	%	f	%	f	%
Job position level								
Managerial	0	0	32	42	8	67	40	35
Supervisory	0	0	42	54	3	25	45	40
Rank & file	24	100	3	4	1	8	28	25
Total	24	100	77	100	12	100	113	100

Chi-square = 96.711 df = 4 p =.000 Significant
Cramer's V = .925 p = .000 Significant

Also, Table 2 shows a significant relationship between age and graduates' employability in terms of job position level which revealed that most young graduates (70%) are rank and file employees, mostly in the middle-age group (68%) held supervisory position and a great majority of the oldest group (90%) had managerial positions. This implies that the higher the graduates' age bracket, the higher their job positions. The Chi-square computations shown in Table 3 reveal a significant relationship between graduates' age and their job position level, (x^2 = 13.306, p = .010). The computed Cramer's V coefficient of .730 also revealed a strong relationship between the graduates' age and their job position level.

Table 2. Relationship between Age and Job Position Level.

Variables	Age							
	30 yrs and below		31-40 years old		41-50 years old		Total	
	f	%	f	%	f	%	f	%
Job position level								
Managerial	1	3	13	28	26	90	40	35
Supervisory	10	27	32	68	3	10	45	40
Rank & file	26	70	2	4	0	0	28	25
Total	37	100	47	100	29	100	113	100

Chi-square = 13.306 df = 4 p =.010 Significant
Cramer's V = .730 p = .010 Significant

Table 3 reveals a significant relationship between educational attainment and monthly salary income level. The Chi-square computations showed a significant relationship between graduates' educational attainment and their monthly salary or income level, (x^2 = 69.565, p = .000). The computed Cramer's V coefficient of .785 revealed a strong association between the graduates' educational attainment and their monthly salary or income level.

Table 3. Relationship between Educational Attainment and Monthly Salary Income Level.

Employability	Educational attainment							
	BS		MBA		MPA		Total	
	f	%	f	%	f	%	f	%
Monthly salary/income level								
Below 5 million	21	87.5	10	13.0	1	8.3	32	28.32
5 million – 8 million	3	12.5	62	80.5	6	50.0	71	63.83
Over 8 million	0	0.0	5	6.5	5	41.7	10	8.85
Total	24	100.0	77	100.0	12	100.0	113	100.0

Chi-square = 69.565 df = 6 p =.00 Significant
Cramer's V = .785 p = .000 Significant

The respondents provided inputs for improvement of facilities, specifically in the maintenance of cleanliness of classrooms and rest rooms; in the area of faculty and instruction by allowing the faculty-student interaction and student-student brainstorming activities to use the internet or relevant social media networks; and in the administrative support services by providing annual student orientation program to update students of the university vision and mission statements and school policies that affect students enrolled in the University.

Conclusions and Recommendations

In view of the foregoing findings, the following conclusions were drawn:

1. The respondents are predominantly MBA graduates, male, married, and with average age between 31 to 40 years old.
2. Most graduates are directly employed with regular or permanent employment status, predominantly held

supervisory and managerial positions, work in a private sector, with short waiting period for employment and promotion, earning monthly salary/income of 5 million- 8 million vnd and have good communication skills as the most dominant professional skill.

3. There is significant relationship between educational attainment and graduates' employability in terms of job position level, professional skills, employment sector, and monthly income level.

Likewise, a significant relationship exists between age and graduates' employability in terms of employment status, and job promotion waiting period.

In view of the aforementioned findings and conclusions, the following recommendations are advanced:

1. The administration of both TUEBA and CPU should cooperatively revisit, review, and revise the curriculum every three to five years to make the curricular programs more relevant to the needs of times and to comply with the updated policies, standards and guidelines of relevant government agencies such as the Socialist Republic of Vietnam as well as the Philippine Commission on Higher Education.
2. To ensure proper solicitation of feedbacks from various sectors of the University with view of improving the quality and employability of graduates, the faculty, students, alumni, and employers or industry partners should be involved in the regular review and revision of curricular programs.
3. The University should ensure efficient and effective delivery of instruction by providing the faculty and students with updated and upgraded library books and other references for use in class instruction.

4. There should be regular supervision and monitoring of faculty and instruction to ensure constant improvement in class instruction.
5. Encourage the faculty to make judicious use of the internet or other social media networks to allow the faculty-student interaction and student-student brainstorming activities with the purpose of improving the quality of teaching-learning activities.
6. The Administration should develop a comprehensive faculty development program with adequate budget for teachers' training and attendance in seminars to keep themselves abreast with new trends and development in education and in their profession.
7. There should be regular and proper maintenance of the ventilation and cleanliness of classrooms, laboratory rooms and other facilities to make them more conducive to learning.
8. The school should provide opportunity for regular dialogue between the school administration and students through annual orientation program aimed at informing students about school policies, plans, programs that affect their lives while in school.
9. The University should establish linkages with the private industry and government sectors to ensure possible placement of graduates after graduation.
10. The results of this study should be provided to administration of both CPU and TUEBA as valuable inputs in formulating school policies, strategic plans and programs with the intention of improving the quality of graduates and enhancing their employability.
11. It is also recommended for other researchers to conduct an in-depth study and other similar or related studies in the future.

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ACKNOWLEDGMENT

The researchers expressed their most profound gratitude to the following individuals, who in one way or another, helped to make this tracer study a reality:

The Administration of Central Philippine University, headed by its President, Dr. Teodoro C. Robles; Dr. Irving Domingo L. Rio, Vice President for Academic Affairs, and Dr. Florence P. Bogacia, Vice President for Administration and Finance, for giving the researchers their financial and administrative support that made possible the successful conduct of this study possible;

Dr. Reynald N. Durasan and Dr. Mary O' T. Penetrante, former Director and OIC Director, respectively of the University Research Center and the members of the University Research Committee for their kind cooperation, suggestions and recommendations that helped the researchers to work towards the completion of this study;

Dr. April Ann P. Bañas and Dr. Carmen N. Hernadez for their expertise, invaluable suggestions, constructive

criticisms, and corrections as validators of the research instrument;

The Administration of Thai Nguyen University of Economics and Business Administration (TUEBA), especially Phuong Nguyen, among others, for their kind cooperation and full support in the distribution of questionnaires to respondents and for the retrieval of duly accomplished questionnaires; Dr. Alfonso Marquelencia, a statistician, for sharing his competent knowledge, professional skills, and expertise in statistical treatment and analysis of data, using the Statistical Package for Social Sciences (SPSS) software;

The graduates of TUEBA and CPU joint degree programs, who served as respondents in this study, for their kind support and cooperation in accomplishing the questionnaires;

Above all, the Almighty God for His blessings and spiritual guidance that provided the researchers with inner strength and drive to work towards the successful completion of this study.

The Researchers

INDIGENOUS COOKING METHODS AND PRACTICES IN CENTRAL PANAY

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ABSTRACT

Due to lack or no specific documented evidence of traditional cooking method and practices of Central Panay in the indigenous community of Tapaz, Capiz, their cuisine is handed down through an oral tradition, recipes and food wisdom from expert tribal leaders to the younger generations through demonstrations and verbal instructions. Indigenous foods, are ethnically peculiar food choices. The methods which these foods are prepared and served are unique. It can survive the challenges of development by empowering the local tastes and documentation. The study in documenting Traditional Cooking and Practices in Central was conducted in Brgy Sinonod, Tapaz Capiz. The said barangay is the last frontier of indigenous community which had not been reach by industrialization and modernization. The study was made possible through the tribal leaders representing the following barangay; Brgy. Mato-bato, Brgy. Sinonod, Bgry. Tacayan, Brgy. Maliao and Brgy. Rizal Norte. This research paper utilized a semi-structured interview compared with existing literature. Information were collected through direct observation and semi-structured interview. With limited immersion time, important information was gathered from the key cultural informants. An actual interview and focus group discussion had been used to collect information. A Digital recorder and camera were utilized to transcribe information for proper documentation and data analysis. The guide questions were formed as the bases of the inquiries, which were centered on the following: identification of ingredient, their distribution, seasonal availability and cultural usage. In documenting the interview,

the interviewee has been given the option to decline the interview process. The time spent had been around four days to establish rapport and interaction with indigenous people specially those belonging to the older generations and acquire knowledge in indigenous cooking methods. The respondents had been given a chance to review the finding of the study for consistency and validity in the recently concluded IP Week Celebrations 2017. Thematic Analysis had been used in analyzing the data collected. Information gathered had been categorized according to emerging themes in occasion, rituals, preparation and presentation. The Indigenous cooking will becomes richer and it can provide livelihood and financial opportunity to the community. The Indigenous Cooking Methods of Central Panay revolves on Binakol and Tinum-anan, it depicts a simple way of preparing, cooking and presenting their food that would compliments their daily life activities and cultural identity. Thus, pursuant to Republic Act 8371 chapter VI with regards to the Protection of Indigenous Culture, Traditions and Institutions, this research on Indigenous cooking of Central Panay, Tapaz, Capiz had been conducted.

INTRODUCTION

Background of the Study

Every person must eat and drink to sustain life. According to the IRR of PD 856 as cited by Perdigon (2006), food is defined as any raw, cooked or processed edible substances, beverages or ingredients used or intended for use or for sale in whole or in part for human consumption.

In the Philippines country culture starts in a tropical climate divided into rainy and dry seasons and an archipelago with 7,000 islands. These isles contain the Cordillera Mountains; Luzon's central plains; Palawan's coral reefs; seas touching the world's longest discontinuous coastline; and a multitude of lakes, rivers, springs, and brooks. The population-120 different ethnic groups and the mainstream communities of Tagalog/Ilocano/ Pampango/ Pangasinan and Visayan lowlanders-worked within a gentle but lush environment. In it they shaped their own lifeways: building houses, weaving cloth, telling and writing stories, ornamenting and decorating, preparing food (Fernandez, 2014).

Cooking is the art and science of preparing food for eating by the application of heat. Cooking includes the full range of culinary techniques: preparing raw and cooked for the tables; final dressing of meats, fish and fowl; cleaning and cutting fruits and vegetables; preparing salads; garnishing dishes; decorating desserts; and planning meals (Grolier Encyclopedia of Knowledge, 1998).

Indigenous people have contributed in preserving the natural environment. Most of them resist change. They continue to practice and treasure indigenous knowledge from long evolved culture and pattern of living.

Their method of preparing and cooking is surprisingly simple. There is no special tools and utensils needed. They can produce cooking tools and eating utensils by making use of what is in their surroundings even during special occasions. Although, there are modern pieces of equipment used in food preparation in kitchens but still they utilize tools that are indigenous and traditional which have been used in creating delicious meals for generations.

According to Dyson (2006), indigenous cooking is a living tradition despite dramatic changes in the ways of many indigenous peoples. Traditional foods and cookery continue to be alive to most indigenous people today. This is because the past lives vividly in the present, since the past is all about us and within, the past is the long making compared to the present, which is so small a part of time. The indigenous cooking traditions are therefore not dead but renewed in the present, through continuing practice and also through the transformation of techniques as they are adapted to the changing circumstances of modernization (Tanquezon et. al. 2012).

Theories of globalization explain how macro level forces influence the modern consumption, other forces obviously function while social structure clearly affects the production, distribution and consumption of foods, a sole focus on structural determinants obscure the agency of the people and the counter trend away from rationalization presented by the concepts of the social differentiation (Germov and Williams, 1999; Sheynon, 2005).

The cultural capital theory (Bourdieu, 1984) is theory of social differentiation that explains differences in consumption across groups in terms of taste, pleasure, and desire (Warde, 1997). Warde, Martes and Olsen (1999) define cultural capital as the cultural knowledge, competence, and disposition, identified through embodied traits, educational qualification, material position and

involvement and cultural practices. The theory views culture as complex-structure that constitutes resources that can be used as a strategy, as opposed to the view of culture as the values that suffuse aspects of belief, intention, and collective life (Sheynon, 2005; DiMaggio, 1997; Hays, 1994).

Capiz is the Seafood Capital of the Philippines and one of the culinary hot spots of the country, but there are more things to discover in Capiz. In Tapaz, there are indigenous food that only few are knowledgeable and on the verge of extinction.

Tapaz is a first class municipality in the province of Capiz located at the center of Panay Island. It is a laid back community and politically subdivided into 58 barangays, 22 of which are Indigenous community. According to the 2015 census, the population was 51,313. Brgy. Senonod is so calm and peaceful, a hidden gem of Tapaz Capiz. The place is so serene and has breath taking views complementing the rustling sound of the waterfalls and the cool breeze of the wind against the bamboo plant.

Brgy. Sinonod one of the farthest barangays in Tapaz, Capiz is not urbanized. There is no electricity in the area and their means of communication is thru “budyong”. The place can be reached by motorcycle (Habal-habal) for 2.5-hour ride from town proper, crossing a river and a 30-minute walk. However, if the current is strong, one needs to ride in a bamboo raft.

It was interesting to note that indigenous people in Tapaz Capiz have their own distinct culture and beliefs and their own social and political practices. They have strong bond with their environment and they make use of what is available in their surrounding and natural resources. They are also confined to a religious connection to their lands, and are largely dependent on their environment. They have complex customs addressing the supernatural and the

sacred places. Their land is an invaluable source of livelihood and has physical and spiritual importance to their cultural practices. Indigenous people in Tapaz, Capiz believe that rituals work for them. These are effective for them and aid them in achieving what they desire.

There are numerous indigenous food in the Philippines from indigenous people, mostly from far-flung areas. It is amazing how this tribe is able to sustain their daily need, specifically food, for it takes several days to travel to the market to their respective homes. Numerous researchers have keen interest in the Panay-Bukidnon for various reasons. The people living along the area of Panay River has been the center of academic research but only few research papers have been written and published, thus, this study was conducted to document indigenous cooking methods in Central Panay.

Objectives

The objective of the study is to document indigenous cooking methods and practices in Central Panay specifically in Tapaz, Capiz

Specifically, this study aimed to:

1. Determine indigenous cooking methods and practices in Central Panay.
2. Describe rituals pertaining to indigenous cooking methods and practices.
3. Identify procedures and or cleaning of animals
4. Describe the presentation of indigenous cooking methods and practices.

Definition of Terms

Central Panay is home to the rich biodiversity of the Central Panay Mountains (CPM) that must be conserved and protected. Straddling across 120,770.60 hectares of forestland, the Central Panay Mountains is home to diverse endemic flora and fauna and is considered as a key biodiversity area. Many of the species inhabiting the CPM are not found elsewhere.

In this study Central Panay refers to the area where the researcher conducted the study.

Cooking is the art, technology and craft of preparing food for consumption with the use of heat. Cooking techniques and ingredients vary widely across the world, from grilling food over an open fire to using electric stoves, to baking in various types of ovens, reflecting unique environmental, economic and cultural traditions and trends (United States Dept. of Agriculture. (Oct. 13, 2011). Safe Food Handling, Danger Zone)

In this study, cooking refers to how the indigenous people nourish themselves in order to sustain their daily activities.

Indigenous People is known as *first peoples, aboriginal peoples, native peoples*, or *autochthonous peoples*, are ethnic groups who are descended from and identify with the original inhabitants of a given region, in contrast to groups that have settled, occupied or colonized the area more recently (*Sanders, Douglas (1999)*).

In this study, indigenous people refers to the inhabitant of the Central-Panay to whom the study is addressed.

Panay-Bukidnon is an indigenous group of people from Capiz, Lambunao, Iloilo, Aklan, and Antique. They are also known as "Panay-Bukidnon," "Panayanon Sulud", "Tumandok," or Suludnon." In this study, Panay-Bukidnon are culturally indigenous group of people in Visayan language speaker in Western Visayas (http://greedypeg.org/ip/Tumandok-People-Suludnon-Panay-Bukidnon-Panayanon-Sulud.html).

Practices are the actual application or use of an ideas, beliefs, or methods as opposed to theories about such application or use. In this study, practices refer to the steps and procedures performed by the indigenous people in preparing and cooking their foods (www.cs.cornell.edu/~dph/ *papers/principles.pdf)*.

A ***recipe*** *is* a set of instructions for making or preparing something, especially a food dishes. In this study, recipe refers to the set of instructions that were noted down in order to document the traditional methods of cooking. (http://www.dictionary.com/browse/recipe).

Traditional is an inherited, established, or customary pattern of thought, action, or behavior (as a religious practice or a social custom). In this study, traditional are the daily ways and means of the indigenous people. (www.merriam-webster.com/dictionary/tradition).

Scope and Limitation

This study was conducted in Barangay Sinonod and nearby barangays in the Municipality of Tapaz Province of Capiz that are rich repertoire and last frontier of the indigenous culture. It focused on the Panay Bukidnon known as a group of indigenous people from Capiz.

Significance of the Study

The following will benefit from this study:

The Indigenous People. They will have a written document of their Cooking methods, recipes and procedures.

Local Government Unit. They will have a written document of the cooking methods, recipe and procedures of the Indigenous People that will help in the future plan and programs preserving the cultural resources of Capiz.

Central Philippine University. The social, ethical and moral responsibility of the institution stated in the vision and mission includes documenting and preserving culture. This study affirms the vision and mission of the university.

The College of Hospitality. The study can serve as a basis of innovating future recipes.

Future researcher. The study can be used as a springboard of future research on culture.

METHODOLOGY

This research paper utilized a semi-structured interview compared with existing literature.

Data Collecting Strategies

Information was collected through direct observation and semi-structured interview. Due to limited immersion time important data were gathered from the key cultural

informants. These data gathered were crossed-checked with existing literature, on Food, Place and Authenticity: *Local food and the Sustainable Tourism Experience* by Rebecca Sims published May1, 2009.

An actual interview and focus group discussion were conducted to collect information. A Digital recorder and camera were utilized to transcribe information for proper documentation and data analysis.

The guide questions focused on the following: identification of ingredient, their distribution, seasonal availability and cultural usage.

Ethical Consideration

The researcher sought permission from the Regional Office of the National Commission on Indigenous People (NCIP), other local authorities such as the Mayor of Tapaz Capiz and community leaders to visit the villages.during the documentation, the interviewee had the right to decline the interview. The time spent was around four days to establish rapport and interaction with indigenous people specially those belonging to the older generations and those who had acquired knowledge in indigenous cooking methods.

The respondents were given a chance to review the finding of the study for consistency and validity.

Data Analysis

Thematic analysis was used in analyzing the data collected. Information gathered were categorized according to emerging themes. Four major areas explored were occasion, rituals, preparation and presentation.

RESULTS AND DISCUSSION

Documentation of Indigenous Recipes

The following are the recipes that the team had documented. The collection and documentation of these data were guided by RA 8371, the Indigenous People Rights Acts of 1997.

Chapter VI Cultural Integrity - Section 29. Protection of Indigenous Culture, Traditions and Institutions. The State shall respect, recognize and protect the right of ICCs/IPs to preserve and protect their culture, traditions and institutions. It shall consider these rights in the formulation and application of national plans and policies".

Indigenous Culinary Terms

These are terms that the indigenous people use in their methods of cooking that the researchers have documented.

Bayó – to pound an ingredient using wooden mortar and pestle

Binakol – cooking food is in a bamboo node over a direct medium heat

Langkawas – galangal

Langkuga – is a vegetable stew by the Indigenous People of Tapaz, Capiz, consists of "*balinghoy* "or cassava," *banag*" or fresh water snails, "*takway*" or gabi runners, with or without "*labog*" or roselle and coconut milk seasoned with salt.

Layhoban – to run through the fire; leaves pass through the fire and this strengthens the leaves and prevent from tearing.

Linubak nga dahon sang balinghoy – young cassava leaves crushed in a wooden mortar and pestle mixed with sesame seeds, simmered in a small amount of water; served as main dish or appetizer by Indigenous People of Tapaz, Capiz.

Linupak nga saging/balinghoy – is a crushed boiled banana or cassava mixed with sugar, sometimes with young coconut if available; serve as a snacks

Lubakon/bayohon – is a process of pounding any ingredients using “lusong”, a wooden mortar and pestle.

Lusong – a wooden mortar and pestle used to pound ingredients.

Paitan - a variety of fresh water fish that are found along the rivers and creeks

Sili – is a fresh water eel

Simat – a unique and creative native plate made of fresh banana leaf and coconut midrib used by the Indigenous People in Tapaz, Capiz

Suge - a variety of fresh water fish that are found along the rivers and creeks

Tinuom – is a process of cooking food wrapped in layered banana leaves on a direct heat over charcoal fire or wood in a low fire

Unog - a variety of fresh water fish that are found along the rivers and creeks

Utan - a collective name for any vegetables in the area or use in the dish

Specific Occasion Prescribes Specific Foods

Food as a part of their culture plays an important role in their day to day activities especially in situation like, nourishing mothers and dealing with marital conflicts. According to the tribal leaders *"…. breastfeeding mothers are encouraged to eat juicy vegetables like papaya, bamboo shoots, banana flower and other juicy vegetables so that she will have plenty of milk. Rice porridge is a possible alternative if vegetables were not available. It is not advisable for her to eat vegetable with juicy sap that are sticky like jack fruit and bread fruit. If native chicken was available, she is encouraged to eat this during her breastfeeding period. After a month she can eat anything because the milk is already in placed".*

Some tribal leaders relate scenario about marital dispute that *"...they bring food to the woman's home to settle the dispute, drinking spree and quarrel. The food that the man's family brought will be offered to her then they will reconcile and be reunited".*

In comparison, Doreen (1994) stated that, "food was a mirror that Filipinos could hold up to themselves. It offered an opportunity for self-knowledge that was grounded in immediate experience, embodied knowledge, and personal collective memory". Reflecting on her own work she said "One writes on and with the readers' palate one tries to get the readers to see through the words to the experience."

In a local demographic, they use available fresh indigenous that can be found around the area to sustain them in their everyday activities. The food prepared for breakfast are boiled cassava and banana with native coffee

(binayo) or cassava leaves (binayo) with sesame seeds. Rice is seldom prepared in the morning, but usually served during lunch. But sometimes they eat root crops for the whole week if rice was not available as mentioned by most elders.

> *" ….After working in the farm in the morning at around ten o'clock, before heading home, we have to pass by the river to catch some fish and get cassava root crops, grill the cassava and cook fish wrapped in banana leaves for our lunch. After lunch, we go back to the farm and when we go home after working, that is the time we can eat rice," most elders said.*

Indigenous People in Tapaz are not used to eating rice but root crops in the morning. Rice is usually eaten with utan during lunch time. Regardless of the kind of vegetables found in their area, they generally named it as "utan". In cooking utan, specifically *dagmai* or gabi leaves, it should not be stirred while boiling to prevent it from causing itchiness on the throat and tongue when eaten. To minimize irritation dagmai leaves should be fresh and not dried.

In addition, almost all elders said that they cook rice and bring it to the farm, and eat there. "If they had rice for breakfast, for lunch they would have root crops or vice versa. On their way home in the afternoon, they could pick roselle, fresh water snail from the brook and vegetables for the dinner". The IP community in Tapaz, Capiz cook two variations of Langkuga: one with roselle leaves and the other is with coconut milk. These two ingredients should not be cooked together in order not to curdle coconut milk. The fresh water snails Banag is available throughout the year and could only be found in brook or creek. Pisaw or a grater made of bamboo is used if they want to add coconut milk in the dish.

This dish that IPs call langkuga is similar to the traditional dish of fresh water snails of India. It has been a traditional food for the tribal people of Goalpara district, India where they use snails on their various recipes like snails with roselle (Scholars Academic Journal of Biosciences, ISSN 2321- 6883).

Lastly, some tribal leaders say that *"….our breakfast is cassava, our lunch is cassava and even cassava for dinner because we do not know where to get our rice. After dinner, we go to the river and catch fish. When we return home at dawn, we would tie the fish using bamboo strips and bring it to the rice seller and sell the fish in exchange for rice".*

If the indigenous people have caught enough fish, they would cook tinuom which is one of their traditional dishes.

Fishing is an important source of livelihood for many Filipinos. In 1998 around 3% of the country's labor force was involved in the Philippine fishing industry which contributed to about 3.6% of the GDP composition. Commercial fishing operations produce most of the catch but a growing percentage comes from aquaculture/ mariculture. An ordinary Filipino consumes around 98.6 grams of fish or fish products a day making it the primary source of protein in the Filipino diet. Since the Philippines is a predominantly Christian nation, fish are especially popular during Lent (FNRI 1994) (http://nap.psa.gov.ph/peenra/results/ fishery/default.asp).

In the mountainous part of the Central Panay where most of the indigenous people dwells they get fish sources from the nearby rivers and waterfalls that traverse throughout the area in order to sustain calcium nutrients in their diets. Freshwater fish are high in calcium nutrients

(www.foodandnutrition.org/March-April-2014/Freshwater-Fare*).*

All of the elders agreed that only one main dish c*alled Binatuan nga baboy - mala-mala with pangasi" as beverage, is* prepared and *served during ponsyon, or a wedding celebration of the indigenous people. The preparations consists a minimum of three pig; one from the bride and the other two are from the groom. The rice is given by the groom and the food is served in simat, a banana leaf plate. On the first day of ponsyon, dowries asked by the bride's family are discussed. This is very crucial because if any of the bride's clan does not agree with what the groom offers to give during the ponsyon, the turning down of simat can happen and that may lead to a clan war. The elders should watch keenly the negotiations and ensure that all is settled. The second day of the program is intended to hear the groom's expectation.*

Unlike with the Ifugao, when they have special occasion, they serve two dishes: the Etag, a salted pork dish and pinikpikan that it can be served with mixed greens/vegetables. Sometimes, it is spiced (Shaley, John. "Igorot Cuisines" *Igorot*. N.p., n.d. Web. 3 Nov. 2013. <http://www.freewebs.com/shaley/igorotcuisine.htm>.)

Filipinos are known to be festive people and their celebrations would not be complete without drinking lambanog. Lamabanog is a native alcohol beverage that is made from tuba or distilled sugar cane. But of course, beer is always their options. Drinking lambanog will not be complete without pulutan or finger food to complement it. Best choices are chicharon (popped pork skin), addidas (sauteed or grilled chicken feet) and mani (roasted or boiled peanuts), but most of the time, pulutan are left over food (Agua Vendita, http://www.filipinorecipe-tv.com).

Pangasi is a traditional indigenous people's alcoholic beverages made from sugarcane juice and fermented rice. Presently,it is being substituted by Tanduay for convenience.

For a woman who has given birth, they used to prepare "*linabogan nga manok nga sinabawan" or roselled native chicken stew* and other juicy vegetables except jack fruit. They avoid using jack fruit because it has a sticky sap and dries up. They believe that this will stop the production of milk for lactating mothers. In other situations when a family member is sick, they will give anything that is requested.

Roselle can be easily cultivated when the climate is favorable, that is why it is found in every family's garden. It is excellent for making jellies, jams, etc. (naldc.nal.usda.gov).

Roselle is used as a folk medicine. It is valued for its mild laxative effect and its ability to increase urination, attributed to two diuretic ingredients, ascorbic acid and glycolic acid. Because it contains citric acid, it is used as a cooling herb providing relief during hot weather by increasing the flow of blood to the skin's surface and dilating the pores to cool the skin. The leaves and flowers are used as tonic tea for digestive and kidney functions (Yadong et.al 2015) Biological Characteristics, Nutritional and Medicinal Value of Roselle, Hibiscus Sabdariffa Southern University, Agricultural Research and Extension Service. LA.

Rituals in Gathering of Foods and Related Ingredients

In the beginning of the documentation of indigenous cooking method, the elders were hesitant in the interview. It started when some of the elders presented a sili or fresh water eel. According to them, it was not easy to capture the sili. As the interview went along, the elders became more comfortable, and started talking openly about their rituals.

One of the elders named Tay Saysay narrated his experience;

"...look, I'll put this "mutya" (a talisman stone) in a glass of water, drink it with a shot of Tanduay, and go fishing in the afternoon. The longest time to catch the eel is two days. For Tatay Saysay, this ritual helps him catch sili or freshwater eel for their meal and livelihood. He can produce within the day and the longest time is two days because of that rituals.

In some cases, when they are suffering from illness or spiritual disturbance, elders believe that by preparing meals like linabogan nga manok nga sinabawan (roselled native chicken stew) makes them feel better or appeases the spirits. It is form of thanksgiving for what their gods provide them. Below is the elder's chant of thanksgiving:

> *" ….chant…" "….hmmmmm….ah ye…. kung kayaw amay si diwa hiwatan…. hmmmmm….. maningaon kanday bugto na tamun, otan sanday lutuan nga mu nga paray guin buhian, gi suronud gi sugiwan, gi matuyawan nga gi tabi-tabi-an, kana bantagu…. eh naubon…. na nagsa kanaday bugto….. sanamput, sanday lutungan, makig ambit mot binuhi….matiraus…. it pinamunga,…… hatagan mot diwa it kabakod it kanday bugto kot matatayuyun tig ginarasyahan, mot diwa pina tan-on oh diwa tam pang arit-aritan it mabugnuhan hmmmm…." (Our Father we thank you for the provision that you gave us. Those blessings that gives us strength and nourishment to our body. Even though we do not have money to buy food in the market like beef, pork and other food items that we cannot found in the local area but still we could eat everyday because God provided us of what is present in our area. The food that is available locally do not harm us but instead nourishes and gave us strength.)*

Procedures of Slaughtering and/or Cleaning of Animals

Linabugan nga native na manok (roselled native chicken stew) is a must dish to savour the freshness of the indigenous cuisine. The process of preparing native chicken starts with rubbing the dressed chicken with *bakhaw or adgao* leaves so that its stinky (langsa) smell will disappear. In the community they raise free-range chicken only.

In terms of food preparation, some people argue about the ethics of eating meat. They contend pleasure derived from eating meat outweighs the pain and suffering experienced by a cow or pig in captivity, but some say otherwise. Few argue that these animals experience no suffering at all. Many scientists who have studied the insect's nervous system, though, believe that these creatures do not feel pain. It is debatable and those who disagree would be hard-pressed to argue that insects can suffer as profoundly as a cow or pig. Raising these insects for meat, instead of cows, pigs, and chickens, would reduce the total amount of suffering that result from our appetite for meat (Stromberg, 2015).

But in the context of indigenous people, they are allowed to slaughter and eat endangered species as long as it is for their personal consumption and within their ancestral domain.

When slaughtering the pig, the IP community in Tapaz, Capiz would first tie the legs and insert a bamboo plank going through the mouth. Then they slit the lower part of the neck in order to remove the blood. The bamboo plank serves as guide to what extent the knife would cut. Once the pig is already dead, they pour with boiling water on it and shave using a bamboo plank. Another plank serves as the shaver to remove the hair. If the meat of the animals was more than what can be consumed in a day, they preserve it in two ways; by hanging the meat on top of their cooking

place, where the smoke acts as a preservative for the meat. The other one is through blanching then hanging it in similar manner mentioned earlier.

This practice is similar to the process of *pinunog* - an Ifugao smoked sausage, in which the chopped pork is seasoned with salt and garlic, inserted in pork intestines and placed on the *hay-ungan* (a compartment above a fireplace) for smoking (newsinfo.inquirer.net/829981/829981#ixzz4Vyf2iQbV).

However, the IP's of Central Panay do not have a compartment in their kitchen and do not process the food, instead the meat itself is directly hung above the fireplace.

Indigenous Food Presentation

The indigenous community in Tapaz, Capiz live simply and are very resourceful. They can make cooking and eating utensils from what is available in their area. They use banana leaves (simat) as eating utensils even during special functions. They way of eating and presenting is similar to the traditional practice in India. They grate coconut meat by means of improvised grater made of bamboo.

Bamboo is the world's largest grass and an amazingly versatile resource that has been put to many uses for millennia. Bamboo has a tensile strength as strong as steel, is fast-growing, sustainable and has been used for scaffolding, building material, bicycle frames, food, weapons, traps, containers, cooking utensils and many more.

Binakol is one of the cuisines prepared by the indigenous people using bamboo for a cooking pot. The indigenous people of Brgy. Senonod use bamboo as their primary cooking utensils in boiling and steaming, similar to the Papuans and the Aeta, Negrito and nomads of Mount

Pinatubo in the Philippines. They steam greens over hot flame by securing them in bamboo tubes with banana leaves for lids. In like manner, Sikkimese cooks have centuries used the end nodule of bamboo as the tube bottom and stuffed the other end with bamboo leaves to form a cooking chamber for fish, which they bake over a charcoal brazier (Encyclopedia of Kitchen History Snodgrass, 2004).

Likewise, in the geographical condition of the tropics and subtropics in Yunnan Province, local people often go hunting and farming in dense forests. It is inconvenient for them to cook when they go out, so they have figured out something to solve this problem. During the meal break, they cut some bamboo joints from nearby woods as food containers, get some clean spring water, and put the ingredients that they take with them, like rice and meat, into the bamboo tube, and make a fire to bake it until the food is completely cooked. They can also pick some wild vegetables to cook delicious bamboo soup, which is ideal with bamboo rice. That's where bamboo rice originated from. – Wu (2014 China highlights).

However, a word of caution is in order; the uncooked shoots of certain bamboo plants are poisonous. The wood may or may not contain the same compounds. The good news is that the cyanogenic glycoside in bamboo, taxiphyllin, degrades in boiling water *(http://www.realworldsurvivor.com/2014/12/10/cook-meal-using-bamboo).*

Tinuom is a dish wrapped with layered banana leaves. In Philippine cuisines, banana leaves are used in the traditional method of serving food, with rice and other dishes laid out on large banana leaves (*salo-salo*, reminiscent of a buffet) and everyone partaking use their bare hands (*kamayan*) (*Elizabeth Ann Quirino (16 December 2014).* "Have Filipino food, will travel"*. Inquirer*. Retrieved 6 January 2015*. and Margaret Littman.* "Authentic Filipino

Food Comes to Nashville for One-Night SALO Project Pop-Up"*. Nola Defender*. Retrieved 6 January 2015*.)*

Indigenous people of Tapaz, Capiz use banana leaf in the presentation of their cooked food. They also use it as a form of plate called simat. Banana leaves are large, flexible, and waterproof. They impart an aroma to food that is cooked in or served on them; steaming with banana leaves imparts a subtle sweet flavor and aroma to the dish (*Molina, A.B.; Roa, V.N.; Van den Bergh, I.; Maghuyop, M.A. Advancing banana and plantain R & D in Asia and the Pacific. p. 84.* Frozen Banana Leaf, Temple of Thai Food Store).

In Indonesia, the locals have long used them in food preparation. The leaves are used to wrap food before cooking it either by steaming or grilling. The Indonesian method requires no additional moisture, and in some dishes, the leaf wrappings may also be eaten. Popular Indonesian dishes that employ this cooking method include *pepes*, *botok*, *buntil*, and *otak-otak* (variations of this dish are also commonly available in neighboring Singapore and Malaysia). This method of cooking was first seen in Kerala, way back 4,000+ years ago, as a technique used to cook fish as well as other south Indian delicacies.

According to the indigenous people of Tapaz Capiz, the use of banana leaves is convenient and environmentally friendly. Aside from convenience there are scientific reasons for using it such as; *a*) *Banana Leaves have EGCG (epigallocatechin gallate**):*** EGCG are poly phenolic molecules richly found in banana leaves, making them anti-oxidant, anti-bacterial and anti fungal in nature killing all the germs in food to a large extent. EGCG is the same compound present in tea leaves and grapes. Though banana leaves cannot be digested fastly by the human body, the food wrapped with banana leaves can absorb these molecules and would contribute to the health of the consumer. *b) They are anti-diabetic:* Recent reports suggest

that the extract of banana leaves could reduce the risk of Type-2 diabetes (Source: *Beneficial effects of banana leaves (Musa x paradisiaca*) on glucose homeostasis: Multiple sites of action). *c)* In addition to their value as food wrapper for cooking, banana leaves contain large amounts of polyphenols such as epigallocatechin gallate, or EGCG, also found in green tea. Polyphenols are natural antioxidants found in many plant based foods. According to an article by Augustin Scalbert and colleagues published in the January 2005 issue of the *"American Journal of Clinical Nutrition,"* extensive research is ongoing to help determine the extent of how polyphenols affect human cells, the oxidative process and its impact on disease prevention.

In addition to keeping food moist, tinum-anan method can add marvelous flavor. “The oils in the leaves produce a sweet, nutty aroma that infuses whatever they’re wrapped around,” says Andrew Zimmern, host of the Travel Channel’s *Bizarre Foods* series and an F&W contributing editor.

Linubak is an appetizer if made of crushed cassava leaves; and a dessert if made of banana fruit or cassava root crops. They prepared “Linubak nga dahon sang balinghoy” by pounding young cassava leaves with roasted sesame seeds. A variation of coconut milk may be used instead of sesame seeds to enhance aroma and flavor of the dish. This dish is similar to that of Uganda, a traditional method of cooking cassava called sombe (https://akitcheninuganda.com/category/food/main-dish/page/2/).

However, the dish in the IP’s of Central Panay do not use garlic, peppers and onions. The popular method of grinding the leaves followed by boiling for at least 30 min removes all the cyanogens from the leaves (Bradbury; Cliff, fao.org/fsnforum).

To the indigenous people of Tapaz, Capiz boiling the leaves would remove its taste.

The linupak nga balinghoy is one of the sweet delicacies of the indigenous people in Tapaz. This dish is similar to Fufu (variants of the name include foofoo, fufuo, foufou), a staple food common in many countries of West Africa and the Caribbean. It is often made with cassava and green plantain flour. In African cuisine Fufu is served alongside the soup (*Nweke, Felix I.* "THE CASSAVA TRANSFORMATION IN AFRICA"*. United Nations*.

However the linupak of the IP's is purely made of cassava and sugar while the fufu in the West Africa is served as a main dish and added with a variation of maize or mashed plantain to substitute for cassava flour. Linupak nga saging/ balinghoy is usually eaten during breakfast or snack time. If there was no rice available, this could also be served during lunch and dinner

Indigenous cooking is a living tradition despite dramatic changes in the ways of many indigenous peoples. Traditional food and cookery continue to figure in the lives of the most indigenous people today. This is because the past lives vividly in the present, since past is all about us and within, the past is the long making compared to the present, which is so small apart of time. The indigenous cooking traditions are therefore not dead but renewed in the present, through the continuing practice and also through transformation of techniques as they adapt to the changing circumstances of modernization (Dyson, et al. 2006).

CONCLUSION AND RECOMMENDATION

There is no documentation of the traditional cooking method of Central Panay in the indigenous community of Tapaz Capiz, thus their cuisine is handed down through oral tradition. Recipes and food wisdom from expert tribal leaders are passed to the younger generations through demonstrations and verbal instructions. Indigenous foods are ethnically peculiar food choices. The methods by which these foods are prepared and served are unique. It can survive the challenges of development by empowering the local tastes and improving documentation. Indigenous cooking can become richer and can provide livelihood and financial opportunity to the community. The indigenous cooking methods of Central Panay revolve on Binakol and Tinum-anan. They depict a simple way of preparing, cooking and presenting their food that would complement their daily activities and cultural identity. “Simat” is used when eating and presenting their food even during special occasion.

Recommendation

In consideration of the made to further the indigenous knowledge on menu ingredients and cooking methods it is recommended to incorporate in the Culinary Courses the indigenous cuisine and international cuisine that falls under Asian traditional cooking. It should be also incorporated with Tourism subjects that deal with Philippine History, Culture and Traditions.

And lastly, pursuant to Republic Act 8371 chapter VI with regards to the Protection of Indigenous Culture, Traditions and Institutions, we recommend to conduct more research of the culinary arts of our indigenous people.

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ACKNOWLEDGMENT

We would never have been able to finish this research paper without the guidance of our research committee members, help from friends, and support from our families. We would like to express our deepest gratitude to our adviser, Dr. Irving Domingo L. Rio, for his excellent guidance, care, patience and for providing us with an excellent atmosphere for doing research. We would like to thank Prof. Ma. Medalla P. Baliao who allowed us to experience the research of indigenous cuisine in the field and the practical issues beyond the textbooks. We thank Dr. Teodoro C. Robles for the financial support of our research. We would to thank Dr. Reynaldo N. Dusaran, Prof. Sharlene G. Gotico, Dr. Merle L. Junsay and Dr. Stella G. Fernandez for guiding our research for the past several months and helping us to develop our research background.

We would like to thank Mr. George Abordo for guiding and providing our needs in the field.

Also, thank you to our families and friends who supported and encouraged us with their best wishes. Finally, we would like to thank the IP community and IP leaders who helped us in documenting and creating the recipes for the following barangays: Barangay Mato-bato, Barangay Captain, Barangay Sinunod, Barangay Tacayn, Barangay Maliao, and Barangay Rizal Norte.

And to God who has sustained us spiritually, emotionally and physically gave the strength to make this research possible, Thank you very much.

The Researchers

PERCEIVED STRESS AND COPING BEHAVIORS IN CLINICAL PRACTICE OF NURSING STUDENTS IN A PRIVATE UNIVERSITY IN ILOILO CITY

Carolyn L. Yoro, Susan A. Sumande, Janette Yap,
and Rosita Saldajeno

ABSTRACT

College students reported to have experienced high level of stress during their academic year. Studies within and outside the country have examined stress among students but there is no local studies addressing nursing students' stress in the clinical area. Therefore, this study was conducted to assess the stress level and sources of stress in clinical practice as well as to identify the coping behavior utilized by nursing students. A combination of qualitative and quantitative approaches was used. The study involved 153 nursing students and 10 students participated in focus group discussion (FGD). Data were analyzed with the use of descriptive and inferential statistics. FGD was used to supplement and complement the survey findings. Findings revealed that most of the students in this study were 19 years old or younger, female and second year college and had moderate level of stress. The most common stress factors were stress from assignment and workload, and stress from taking care of patients. Students used diverse strategies to cope with stress with problem solving as their most common coping strategy. This study concluded that nursing students suffered from stress. The study found no significant relationship between level of stress and coping behavior. Four themes have emerged from the study: (1) initial clinical anxiety, (2) theory-practice gap, (3) clinical supervision, and (4) professional role. They cope by having support system composed of their families and friends;

prayers; avoidance and escape the situations, diversional activities and self-control. A comprehensive program for students should be developed to reduce stress and to utilize healthy coping strategies to enhance health promotion.

INTRODUCTION

Stress affects every individual and has an influence on the mind and on the individual's health and wellbeing (Shultz, 2011). College students reported to have experienced high level of stress during their academic year (American College Health Association, 2007) especially nursing students who experience more stress because they experience a clinical component which is highly stressful (Seyedfatemi, N., Tafreshi, M. & Hagani, H., 2007).

Stress during nursing education and training may also have negative effects on workforce as this may lead to a shortage of nurses entering into the clinical practice. According to Chan (2009), students reported to have experienced more stress from the clinical area than in the classroom. Thus clinical training is designed for students to acquire the necessary professional skills and develop the attitudes that will positively impact the quality of care delivered to patients (Bam, Oppong, & Ibitoye, 2014).

Literature has shown several factor-related stresses among nursing students (Jimenez & Diaz, 2010, Jimena et al., 2013). Jimenez and Diaz (2010) investigated factors related to stress among third year students in a Spanish Nursing College. Findings revealed that nursing students reported high levels of stress from clinical stressors rather than from academic and other external stressors. Jimena et al. (2013) reported that students experienced highest level of stress at the clinical setting has the highest level of stress

experienced by students followed by school setting and the least is the family setting. The study revealed that students experienced extreme stress while being evaluated by their instructor during procedures.

Coping has been viewed as a stabilizing factor that may assist individuals in maintaining adaptation during stressful events (Singh et al., 2011). Effective coping strategies help students to perform better thus reducing or relieving students' stress but if the stress is not dealt with effectively feelings of loneliness, nervousness, sleeplessness and worrying may result. Poor coping method used by student nurses were observed in many studies reviewed. Some of these studies include the studies of Bam et al. (2014) in Ghana, Kumar (2011) in New Delhi, Singh et al. (2011) in India, Liu et al. (2015) in Macao, and Lin, C. (2006) in Hongkong.

In spite of the international information available on stress and coping mechanisms among student nurses, there is a dearth of local studies among nursing students and stressors in the clinical area highlighting experiences of student nurses.

Objectives of the Study

This study was conducted to assess the stress level and sources of stress among nursing students in clinical practice as well as to identify the coping behavior utilized by nursing students in a private university in Iloilo City. It also determined the relationship of the level of stress and coping behavior of students.

Theoretical and Conceptual Framework

This study is anchored on Transactional Model of Stress and Coping by Lazarus and Folkman (1977). According to this theory, coping is defined as "cognitive and behavioral efforts to manage demands that are appraised as taxing or exceeding the resources of the person and endangering his or her wellbeing". In Lazarus' definition, coping involves efforts to alter the stressful situation (i.e. problem-focused coping), as well as efforts to regulate the emotional distress associated with the situation (i.e. emotion-focused coping).

When used correctly, coping can lead to the reduction of, adaptation to or the overcoming of a problem. In turn, when strategies are not appropriate to a given situation, they can increase stress levels. On entering university, students start a new phase of their lives, meaning they must deal with changes and adapt to this newfound environment and life's new circumstances.

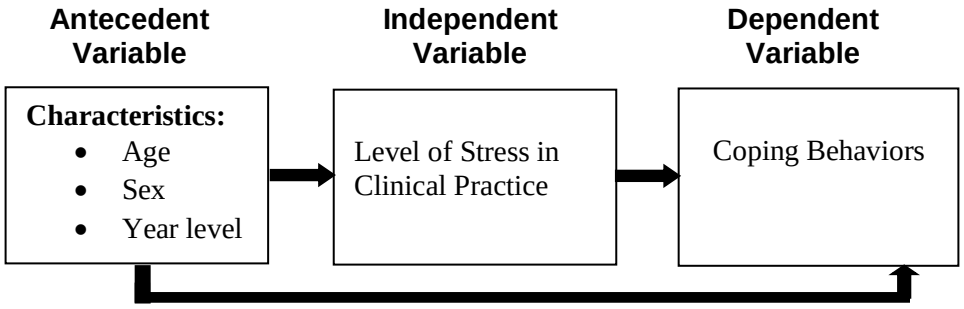

Figure 1. Assumed flow of relationship among variables

Hypotheses of the Study

- There is no significant relationship between students' characteristics in terms of age, sex, year level and level of stress.
- There is no significant relationship between students' characteristics in terms of age, sex year level and coping behavior.
- There is no significant relationship between level of stress and coping behavior of students.

Scope and Limitation

This study covered only the nursing students of the College of Nursing and Allied Sciences (CNAHS) SY 2015-2016. Stress level of the nursing students was determined using the perceived stress scale (PSS) developed by Sheu et al. (1997) while coping behavior was determined using the coping behavior inventory (CBI) developed by Sheu et al. (2002). There are many potential factors that may influence the student nurses' coping behaviors. However, in this study, the personal characteristics of the students included only age, sex, year level, and level of stress. The result of this investigation can only be generalized to the nursing students of the school and may not hold true for other nursing students in general.

METHODOLOGY

Research Design

This study was conducted using a combination of quantitative and qualitative approaches. This descriptive-relational research employed a "one shot survey" design to describe the level of stress and coping behavior of nursing

students. Beck and Polit (2009) stated that descriptive research is focused on understanding the causes of behavior, conditions and situations and which data gathering is done through observation, survey and interview.

Study Population and Participants

The respondents of this study were the nursing students enrolled in the College of Nursing in a private University in Iloilo City for SY 2015-2016. Second year to fourth year nursing students were only considered as respondents of the study because they go on clinical practice. From the population of 249, the sample size was computed using a formula. Once the desired sample size was obtained, stratified random sampling using proportional allocation for each year level was employed. Respondents per year level were selected using simple random technique. Table 1 shows the proportional allocation of respondents by year level.

Table 1. Proportional Allocation of Respondents by Year Level, AY 2015-2016.

Year Level	N	n
Level 2	104	64
Level 3	72	44
Level 4	73	45
Total	**249**	**153**

For the qualitative approach, the participants of the study were nursing students from different level (second year, third year and fourth year students) and selected through purposive sampling. Nursing students who participated in the study had experienced stress in the

clinical area and were able and willing to describe their experiences.

Instrumentation

A three part self-administered questionnaire was used: demographic data, Perceived Stress Scale (PSS) and Coping Behavior Inventory (CBI). Demographic data included: age, sex, and year level. Both the PSS and CBI were developed by Sheu et.al. (1997 & 2002). Responses for each item were weighed using Likert's five point scale which ranges from always (4) to never (0) for the level of stress; and from always (4) to never (0) for the coping strategies. Reliability and validity of the instrument were measured and revealed Cronbach's alpha of .86-.89 (Chan et al., 2009); and the content validity index was .94 (Chan et al., 2009). This indicates that the questionnaire is reliable and could be used in the study. Letter of request to adopt the instrument was sent to the author prior the conduct of the study. Approval of author was also sought thereafter.

Data Collection

The researchers seek permission to conduct the study from the Dean of the College of Nursing and Allied Sciences. Once the approval from the Dean was obtained, the data was collected utilizing a self- administered questionnaire.

A focus group discussion (FGD) was done to deepen the assessment of the level of stress and to identify the coping strategy used. Interviews were continued with participants until the data was saturated and sampling was ended with data saturation.

Ethical Clearance and Informed Consent

The study has an approved ethical clearance from Central Philippine University (CPU) Institutional Review Board (IRB). Informed consents were sought from respondents. The rights, privileges, obligations, risks and benefits of the participants were included in the orientation process. They were also oriented about the instrument and the conduct of the FGD prior to data collection. Anonymity and confidentiality were observed during the conduct of the research and the audio-tapes used in the FGD were destroyed after analysis of data.

Data Analysis

The results were analyzed utilizing Statistical Package for Social Sciences (SPSS) version 17 software. Mean, frequency counts and percentages was used to describe the characteristics of the nursing students in terms of age, sex and year level as well as the level of stress and coping behavior. Chi-square was utilized to determine the relationship between sex and level of stress as well as coping strategies. To determine the strength of the relationship between variables, Cramer's V was used. Gamma was utilized to determine relationship between selected characteristics such as age and year level to the level of stress.

Analysis of qualitative data began following the interview. The researchers read the verbatim transcripts multiple times to gain full understanding of the interview and to analyze the content embedded within each interview. Phrases and statements that stood out as significant to the overall experience were highlighted in the transcript.

RESULTS

Nursing students were 19 years old or younger (66% n=153) and mostly female (74.5%; n=153). The dominance of female student nurses is apparent in almost all schools/colleges of nursing, even in hospitals and medical centers despite the fact that more men have started joining the nursing profession for the last decade. This supports the fact that nursing is still a female dominated profession.

It can be seen in Table 2 that student nurses experienced moderate level of stress from assignments and workload (mean= 2.04), stress from lack of professional knowledge (mean=1.91), stress from taking care of patients (mean=1.89), stress from teachers and nursing staff (mean=1.77), stress from clinical environment (mean=1.74) and stress from peers and daily life (mean=1.69).

Table 2. Type of Stressors Perceived by Nursing Students in Clinical Training.

Stress Factors	Severe		Moderate		Mild		Mean	
	f	%	f	%	f	%		
Stress from assignment and workload	34	22.2	91	**59.5**	28	18.3	2.04	Moderate
Stress from Lack of professional knowledge and skills	27	17.6	85	55.6	41	26.8	1.91	Moderate
Stress from taking care of patients	23	15.0	91	**59.5**	39	25.5	1.89	Moderate
Stress from teachers and nursing staff	17	11.1	84	54.9	52	34.0	1.77	Moderate
Stress from the clinical environment	19	12.4	76	49.7	58	37.9	1.74	Moderate
Stress from peers and daily life	16	10.5	74	48.4	63	41.2	1.69	Moderate

Legend: Mild level of stress (1.00-1.33); Moderate level of stress (1.34-2.66); Severe level of stress (2.67-4.00)

The most common coping strategy utilized by the students was problem solving (mean=2.96), followed by staying optimistic (mean=2.61), having a positive attitude when dealing with everyday issues in life and avoidance (mean=1.72). Transference was less frequently utilized (mean=1.66). It was noted that students tend to employ their past experiences in order to solve problems and set up objectives to solve problems.

Table 3. Distribution of Respondents According to Their Coping Behavior Frequently Used.

Coping Behavior	f	%	Mean
Problem Solving Behavior	95	62.1	2.96
Optimistic Coping Behavior	27	17.6	2.61
Avoidance Behavior	17	11.1	1.72
Transference Behavior	14	9.2	1.66

The correlation between level of stress and coping behavior was not significant (Chi-square = 7.225 p = .301). This indicates that the moderate level of stress of students is not related to their coping behavior.

Four themes have emerged from the study, (1) initial clinical anxiety, (2) theory- practice gap, (3) clinical supervision, and (4) professional role.

These theme, initial clinical anxiety, emerged from the focus group discussion where almost of the students described the difficulties they experienced at the start of their clinical exposure. Among the issues brought up by students were fear of failure and fear of facing the procedure, feeling incompetent, feeling under pressure, and worrying about giving the wrong information to the patient.

> *"In the first day of my exposure to the operating room, my Clinical Instructor (CI) immediately assigned me to assist in the operation. I was excited and anxious at the same time. I tried to feel confident but I made the OR field unsterile. My CI reprimanded me in front of my classmates and other members of the health team. I was so embarrassed that I cried.*"

The theme theory-practice gap emerged where almost every participant in the focus group session described in some way the lack of integration of theory into clinical practice.

> *"I have learnt so many things in class, but there is not enough chance to do them in actual settings*. *My instructor does not allow me to do or perform procedures."*

Supervision by Clinical Instructor (CI) was another issue discussed by the students in the focus group sessions. One of the students said: *"We are taught mostly by our CI's. The staff nurses are not concerned about what the students learned, they are busy with their duties and they are unable to have both an educational and a service role."*

Most of the nursing students expressed that their work was "not really professional nursing". They were confused by what they have learned in the classroom and what in reality was expected of them in practice.

> *"We just do simple nursing care. ...basic nursing care….you know...eh eh….giving bed baths, keeping patients clean and making their beds, empty suction bottle, clean equipment in the operating room and make cotton balls. Anyone can do it. We spend four years studying nursing but we do not feel we are doing a professional job."*

Ways of Coping

There were diverse strategies used by the students of this study to cope with or alleviate their feelings of discomfort. These strategies were grouped into seeking spiritual support, seeking support from family and friends,

avoidance and escape of the situation, seeking diversional activities, and self-controlling.

CONCLUSION

Based on the results of the study, the majority of the students were young, female, second year, and had experienced moderate level of stress. Nursing students agonize about assignments and workload that might inhibit positive clinical learning experiences. Coping strategies commonly used by students were problem solving and optimistic coping. The respondents' level of stress has no bearing on their coping behavior.

Related Learning Experience (RLE) is important in nursing education for students to develop confidence in practice and perform the professional role. The findings of this study and literatures support the need to reevaluate the related learning experience (RLE) in nursing education. It is clear that all themes mentioned by the nursing students play an important role in student learning and nursing education in general.

RECOMMENDATION

Since most of the nursing students experienced moderate stress, students may need guidance and reassurance from a positive role model and someone whom they can trust to talk to about such pressures, otherwise they may choose negative ways to cope with the stress in their lives.

College faculty need to attend specific training and conferences regarding stress management to guide the students on how to manage their stresses in an effective way.

Some form of students support should be available in the form of mentoring and guidance to help in coping with stress and to educate them about unhealthy consequences of stress.

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ACKNOWLEDGMENT

The study was funded by Central Philippine University. Special thanks to Dr. Reynaldo N. Dusaran, Dr. llda G. Borlongan, and Dr. Margen A. Java who supported this study.