

GROWTH AND SENSORY EVALUATION OF BROILER CHICKEN FED WITH PIGEON PEA AND SUPPLEMENTED WITH ORIENTAL HERBAL NUTRIENTS

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ABSTRACT This study was conducted to determine growth and sensory evaluation of broiler chicken fed with pigeon pea and supplemented with Oriental herbal nutrients. This was a double factor study using Factorial Experiment in Completely Randomized Design (F-CRD). Based on the Analysis of Variance (ANOVA), on the final weight of broilers, Factor 1 (representing the levels of pigeon pea) showed significant effect at 5% level of significance and Factor 2 (representing the levels of OHN) showed no significant effect. On the weight gain of broilers, Factor 1 (representing the levels of pigeon pea) showed a highly significant effect and Factor 2 (representing the levels of OHN) showed no significant effect. In terms of feed intake, Factor 1 (representing the levels of pigeon pea) showed significant effect at 1% level of significance and Factor 2 (representing the levels of OHN) showed no significant effect. As to water intake, both Factor 1 (representing the levels of pigeon pea) and Factor 2 (representing the levels of OHN) showed a highly significant effect. While on feed conversion efficiency, both Factor 1 (representing the levels of pigeon pea) and Factor 2 (representing the levels of OHN) showed a highly significant effect. Furthermore, based on the sensory evaluation, the tenderness, taste and the general acceptability are highly significant only in the respondents and not in both factors 1 and 2. Odor was significant only in the respondents while the textures (fresh and cooked) were not significant in both factors 1 and 2 as well as in the respondents. All interaction means show no significant effect to the growth and sensory evaluation. Broilers fed with treatment B (10% pigeon pea) had a significant effect on the final weight. It is highly significant in the weight gain and feed conversion efficiency. However, it is insignificant in the feed and water intake, since the results found that broilers not fed with pigeon pea showed significant effect. On the other hand, broilers supplemented with OHN at 20ml/1L H₂O showed a highly significant effect in water intake. Broilers supplemented with treatment Y (15ml OHN in 1L H₂O) had showed a highly significant effect in the feed conversion efficiency. Combinations of pigeon pea and Oriental Herbal Nutrients (OHN) have no significant effect in the growth and sensory evaluation of broilers.

Keywords: Growth performance, Broiler, Pigeon pea meal, Oriental Herbal Nutrients

INTRODUCTION

Broiler is a tender meat young chicken of male or female that grows from a hatch weight of 40 grams to a weight over approximately around 1.5 kg-2 kg in about 6 weeks' time period only. Broilers today has emerged as the one of the fastest growing poultry segment with the increase acceptance of the broiler chicken meat in cities, towns and villages, the demand and consumption of broiler chicken is increasing day by day in a fast pace. (agrifarming.in/broiler-farming, 2015)

Pigeon pea (*Cajanus cajan*) is an important grain legume commonly grown and consumed in tropical and subtropical regions of the world (ICRISAT, 1986). Pigeon pea occupies an important aspect in human nutrition as a source of dietary proteins in several countries. Pigeon pea contains a high level of crude protein ranges from 21-30% (Udedibie and Igwe, 1989; Amaefule and Onwudike, 2000).

The major item of cost in poultry production is feed; one of the first manifestations of this problem for feeding animals is the competition for feedstuff that can commonly be used by human and livestock. Consequently there is a worldwide interest in the search for the new plant species. The source of protein for poultry feed are expensive and they constitute about 30-35% of their diet.

Objectives of the Study

Generally, this study was conducted to determine growth and sensory evaluation of broiler chicken fed with pigeon pea and supplemented with Oriental herbal nutrients. Specifically, this sought:

1. To determine the growth performance of broilers fed with Pigeon pea meal and supplemented with Oriental Herbal Nutrients in terms of:
 - a. final weight;
 - b. weight gain;
 - c. feed intake;

- d. water intake; and
- e. feed conversion efficiency;
- 2. To determine the sensory analysis of the broilers fed with Pigeon pea meal and supplemented with Oriental Herbal Nutrients (OHN) in terms of:
 - a. Tenderness
 - b. Odor
 - c. Texture
 - d. Palatability
 - e. General Acceptance
- 3. To determine the significant difference between the growth performance of broilers fed with Pigeon pea meal and supplemented with Oriental Herbal Nutrients in terms of:
 - a. final weight;
 - b. weight gain;
 - c. feed intake;
 - d. water intake; and
 - e. feed conversion efficiency;
- 4. To determine the effective amount of feeds with Pigeon pea meal on the growth performance of broilers and dose of OHN in terms of:
 - a. final weight;
 - b. weight gain;
 - c. feed intake ;
 - d. water intake; and
 - e. feed conversion efficiency;
- 5. To determine the significant difference on the sensory analysis of the broilers fed with Pigeon pea meal and supplemented with OHN in terms of:
 - a. Tenderness
 - b. Odor
 - c. Texture
 - d. Palatability
 - e. General Acceptance

MATERIALS AND METHODS

Research Design and Lay-out

The study have utilized experimental research design to determine the growth and sensory performance of broiler chicken fed with pigeon pea supplemented with organic herbal nutrients laid out in factorial Complete Randomized Design (f-CRD). The experiment has 27 variates, composed of two factors, five treatments replicated three times. Factor 1 are the locally mixed feed with different levels of pigeon pea and factor 2 are oriental herbal nutrients in different concentration. Each variates have 3 chicken per cage.

Table 1. Treatments Combination

Factor 1	Factor 2		
	X	Y	Z
A	AX	AY	AZ
B	BX	BY	BZ
C	CX	CY	CZ

Table 2. Experimental Lay-out

AY	AX	CZ
CY	BY	BZ
BX	BX	CY
AX	BZ	BY
BY	CZ	BX
CX	CY	AY
CZ	AZ	AX
AZ	CX	CX
BZ	AY	AZ

Legend:

FACTOR 1 - Locally mixed feeds with different levels of Pigeon pea
 Treatment A-Control (No Pigeon pea)
 Treatment B-10% Pigeon Pea
 Treatment C-15% Pigeon Pea

FACTOR 2 – Oriental Herbal Nutrients (OHN) at different levels
 Treatment X-Control (Pure water) 1L H2O
 Treatment Y-15ml OHN/L of H2O
 Treatment Z-20ml OHN/L of H2O

Materials, Tools, Equipment and Supplies

The following are the materials used for the construction of cages: bamboo poles, assorted nails, ruler, 25 watts incandescent bulb, speaker wire, newspapers and rice hulls. Major D was used as disinfectant.

The tools and equipment are the following: weighing scale (digital and clock type), bull jars, step-in feeders and feeding troughs. These were used as feeds and feed ingredients: chick booster mash, corn grits, corn bran, cassava meal, rice bran, copra meal, fish meal, pigeon pea meal, salt, lime. Others were used to replenish and maintain the health of the chicks like vetracin gold and electrolytes powder. Water is also important in the study. 90 heads of broilers were used in the study.

The following were utilized in making Oriental Herbal Nutrients (OHN): garlic, onion, ginger, siling labuyo, lemon grass, molasses, beer, coconut vinegar, unprinted Manila paper, pail, weighing scale, rubber, stirring rod and dropper.

Experimental Design

This was a double factor study using Factorial Experiment in Completely Randomized Design (F-CRD). There were composed of nine (9) treatments which are the combination of the two factors: Factor 1-locally mix feeds with different levels of Pigeon pea: Treatment A-control (No Pigeon pea); Treatment B-10% pigeon pea; and Treatment C-15% pigeon pea. Factor 2-Oriental Herbal Nutrients (OHN) at different levels: Treatment X-Control (pure water); Treatment Y-15ml/L of H₂O; and Treatment Z-20ml/L of H₂O. Each of the treatment was replicated three (3) times making a total of 27 variates. There were three (3) experimental birds per replication plus nine (9) heads as reserved stocks with a total of 90 heads of broilers.

Construction of the Poultry Cages

The housing for broiler chickens were deep litter system: the floor was covered with 5 to 10 cm deep layer of rice hull. During brooding period, the day old chicks were confined in a brooder cage measuring 3 meters by 1.5 meters. During the rearing period, the birds were fully confined in a cage. Each bird required a floor space of 1.2 ft. by 1 ft. The fully enclosed poultry system had protected the birds from thieves and predators and is suitable for specially selected commercial breeds of egg or meat-producing poultry (layers, breeder flocks and broilers). This had also minimized the risk of coccidiosis and tunnel ventilation allows a certain degree of control of the in-house environment, thus, limiting stress factors that would predispose the birds from disease.

Preparation of Feed Ingredients

The feed ingredients are mixed one week before the actual feeding to the broiler chickens. And another batch is mixed again whenever the feed stock can't sustain the feeds needed by the chicks. Factor 1 was the locally mixed feeds which was composed of the following treatments: Treatment A-Control (No Pigeon pea); Treatment B-10% pigeon pea was incorporated in the local feed formulation; Treatment C-15% pigeon pea was incorporated in the local feed formulation.

Preparation of Oriental Herbal Nutrients (OHN)

Oriental Herbal Nutrients (OHN) was made from plants with fungicidal and pesticidal properties. These are Garlic, Ginger, Onion, Hot Pepper and Lemon grass. These plants were fermented in order to maintain their properties.

Steps:

- 1) 1 kg of the chosen herbs were chopped and combined.
 - 2) It was placed in a pail.
 - 3) Beer was added to the level of the ingredients.
 - 4) The pail was covered and kept in a dark, cool place.
 - 5) After 12hrs, 250 mL of Molasses was added and covered with Manila paper.
 - 6) It was kept in a cool, dark place. It was fermented for 7 days.
 - 7) 3 liters of Coconut Vinegar was added, equivalent to 3x the amount of Beer that was used on day1.
 - 8) It was covered again and kept in a dark, cool place.
 - 9) After 3 days, the same volume of Gin or Coconut Vinegar that was added was harvested on top.
- You may repeat from step5 onwards for 3 cycles. The sludge may be fed to your animals.

Booking and Selection of Stocks

The stocks are booked one week before the actual study in a Commercial Hatchery. The chicks (Arbor Acre) were paid on cash bases after delivery at Php 38/head. The chicks were carefully selected to ensure healthy stocks. The chicks that were utilized for the study had the following characteristics: chicks look active and have dry and fluffy feathers, bright eyes (clear eyes) and well-healed navels, no nasal discharges, good appetite, and free of defects and abnormalities.

Arrival of Stocks

One (1) hour before the arrival of the stocks the electric bulbs inside the brooder were switched-on to make the floor and wall heated and to have the desired brooding temperature. Bull jars were filled with clean and potable drinking water. Upon arrival, the chicks were placed inside the brooder, and kept them undisturbed for more than four (4) hours.

The broiler chicks were provided with electrolytes in their drinking water upon arrival. The purposed of adding electrolytes in their water is that it will help replenished the depleted energy in the chicks due to long period of transportation. It had also stimulated the chicks to consume feed. Sweet water can also loosen up the impacted intestine and prepares the gut linings of chicks for the incoming feeds. Thereafter, they had given fresh feeds and water.

Brooding Management

Broiler chicks do not produce adequate body heat during the first few days of their lives. Consider brooding period as the time from hatching to 15 days which is the most critical and important time in a birds life. Desired amount of Vetracin gold was diluted in drinking water to ensure that the birds will develop a stronger immunity. For them to grow healthy and active, we attained all the brooding requirements.

A heated area is highly advisable in handling chicks at this stage. The stocks were put in a disinfected brooder cage with 4 incandescent light bulb (25 watts each) that had provided the amount of heat they needed. The incandescent light bulbs were placed above eight inches from the litter materials. The brooding ratio is one is to one (1:1), one bird is to one watt to attain their brooding temperature.

Pre-conditioning of the Bird

During the 13th day, the birds were distributed in each cages, randomly. Three (3) days before the actual application of the treatments, the birds were pre-conditioned. Minimal amount of the combined treatments were given to the birds as shown in the Table 5 and 6 below. This had given the birds enough time to entirely adopt the treatments during the study. After three (3) days the desired amounts of different treatments were fully given.

Table 5.Pre-confor FACTOR 1 (Levels of Pigeon pea)

TREATMENT	AGE IN DAYS		
	13 th	14 th	15 th
A	25% of LMF (No pigeon pea) and 75% of CF	50% of LMF (No pigeon pea) and 50% of CF	75% of LMF (No pigeon pea) and 25% of CF
B	25% of LMF (10% pigeon pea) and 75% of CF	50% of LMF (10% pigeon pea) and 50% of CF	75% of LMF (10% pigeon pea) and 25% of CF
C	25% of LMF (15% pigeon pea) and 75% of CF	50% of LMF (15% pigeon pea) and 50% of CF	75% of LMF (15% pigeon pea) and 25% of CF

Table 6.Pre-con table for FACTOR 2 (Levels of OHN)

TREATMENT	AGE IN DAYS		
	13 th	14 th	15 th
X	Pure H ₂ O	Pure H ₂ O	Pure H ₂ O
Y	3.75 ml OHN in 1 L H ₂ O	7.5 ml OHN in 1 L H ₂ O	11.25 ml OHN in 1 L H ₂ O
Z	5 ml OHN in 1 L H ₂ O	10 ml OHN in 1 L H ₂ O	15 ml OHN in 1 L H ₂ O

Light Management

Light is an important aspect of an animal's environment. In this study the light program was based on the table below.

Table 7. Light program for Broilers.

Age of Chicks	Hours of light
0-3	23 hours
4-7	16 hours
8-14	12 hours
14-28	8 hours

The proper temperature was maintained inside the brooding house to make the chicks feel comfortable. The behavior of the broiler chicks in the brooder was used as a practical guide in determining adequate brooder temperature. During night time the birds were provided with enough light in order for them to eat and drink well.

Water Management

Water is the most important nutrient for poultry. Although the necessity of providing a plentiful supply and sufficient access is well understood, the importance of water quality on performance is often misunderstood or neglected. Providing a clean and safe water supply is critical to ensure that broilers perform at their best. Water quality takes on an increasingly valuable role as public concern over antibiotic use in animal feed. This study is intended to shift the poultry industry away from the use of antibiotics.

The experimental birds were provided with drinking water diluted with Vetracin gold for 12 days of brooding period using bull jars. On the 13th day was the pre-conditioning period as stated in Table 6. During the rearing period, OHN was added to the water to strengthen their immune system. Factor 2 was the Oriental Herbal Nutrients (OHN) at different levels: Treatment X-Control (1L pure water), Treatment Y-15 ml OHN/L of H₂O, and Treatment Z-20 ml OHN/L of H₂O.

Table 8. Daily and weekly water requirements per chicken per day.

Age (week)	Liters/day	Liters/week
1	0.54	3.8
2	0.82	5.8
3	1.08	7.6
4	1.40	10.0
5	1.86	13.0
6	2.28	16.0
7	2.40	17.0
8	2.80	21

Feeding Management

Proper nutrition plays a vital role in broiler performance. The genetic potential of broiler chickens can be expressed only if proper nutrition and management will provided to them. The experimental birds were fed in Ad libitum system of feeding. From day 1-12 days old, step in feeders were used and chicks were fed with chick booster mash in the brooding cage. They were pre-conditioned during the 13th-15th days as shown in Table 5 before fully administering the treatments or whenever you changed the feeds. In 8 days (16-23 days), the birds were fed with one hundred percent (100%) locally mixed starter feeds; in 15 days (27-36 days), the birds were fed with one hundred percent (100%) locally mixed grower feeds. (see appendices table 1 and 2)

Disease Prevention and Control

Hygiene and sanitation is one of the critical factors that determine successful brooding of broiler chicks. From brooding to the entire period of the study strict hygiene and sanitation was observed. One (1) week after the construction of cages, the building and materials was disinfected using Major D disinfectant. This kept the building free from contamination.

The entrance was strictly monitored. Authorized persons were only allowed to enter the research area. The foot bath was placed at the entrance that contained major D solution to avoid the entry of infectious agents which can affect the broilers. Cleanliness of the experimental area was maintained. The disinfection of the foot bath was conducted once a week. The feeding troughs and bull jars was cleaned before administering the new feeds and water. The floor, dropping, board and garbage was managed properly as well as the waste disposal and litter materials.

To enhance the chicks' vigor and resistance against microbial infections and diseases, Vetracin gold was added to their drinking water. Burlap sacks or used G.I sheet was hanged at the grills to protect the birds from abrupt changes

of climatic conditions and to maintain the temperature of the experimental area.

During one (1) week of age, the birds were vaccinated with New Castle Disease (NCDB1B1) vaccine. The birds which are weak and diseased will be quarantined and treated to avoid the spread of disease to other birds.

Gathering of Data

The data were gathered every five (5) days, except the average initial weight which was taken before the distribution of chicks. The data gathered were as follows: average final weight, average weight gain, average feed intake, average water intake, feed conversion efficiency, incremental weight, and sensory evaluation. Where:

Weight gained

= average final weight – average initial weight

Feed intake

= Amount of feeds given daily – Amount of remaining feeds

Water intake

= Amount of water given daily – Amount of remaining water

F. C. E. = $\frac{\text{Feed consumed}}{\text{Weight gained}}$

Sensory Evaluation

Sensory evaluation was done to test the tenderness, odor, texture, and taste of meat of broilers fed with pigeon pea and supplemented with Oriental Herbal Nutrients. Twenty seven (27) meat samples (breast parts) were taken and tested following the ratings below.

<i>Tenderness</i>	<i>Description</i>	<i>Chew count</i>
<i>Rating</i>		
4.21-5.00	Very tender	1-5
3.41-4.20	Tender	6-10
2.61-3.40	Just Tender	11-15
1.81-2.60	Tough	16-20
1.00-1.80	Very tough	21-25

<i>Odor</i>	<i>Description</i>
<i>Rating</i>	
4.21-5.00	Extremely desirable chicken odor
3.41-4.20	Moderately desirable chicken odor
2.61-3.40	Just normal chicken odor
1.81-2.60	Slightly undesirable chicken odor
1.00-1.80	Extremely undesirable chicken odor

<i>Texture</i>	<i>Description</i>
<i>Rating</i>	
4.21-5.00	Extremely rigid
3.41-4.20	Moderately rigid
2.61-3.40	Rigid
1.81-2.60	Loose
1.00-1.80	Extremely loose

<i>Palatability (Taste)</i>	<i>Description</i>
<i>Rating</i>	
4.21-5.00	Extremely desirable chicken taste
3.41-4.20	Moderately desirable chicken taste
2.61-3.40	Just normal chicken taste
1.81-2.60	Slightly undesirable chicken taste
1.00-1.80	Extremely undesirable chicken taste

Composition of Testing Panelists

The testing panelist for sensory evaluation of meat was composed of five professionals, five students and five farmers. Before the evaluation started, there was a short briefing for them to be informed about the rating of the samples.

Statistical Analysis of Data

The data gathered were analyzed using Two-Way Analysis of Variance (ANOVA), which determined the tabulated F at 5% and 1 % levels of significance of Duncan's Multiple Range Test (DMRT).

RESULTS AND DISCUSSION

Average Initial Weight

The second column of Table 12 presents the average initial weight of chicks at the start of the study. For factor 1 (representing the levels of Pigeon pea), the highest mean was obtained by treatment C (15% pigeon pea/kg LMF) which is 521.9633 g, followed by treatment B (10% pigeon pea/kg LMF) which is 520.8889 g and treatment A (Control-No pigeon pea) got the lowest mean which is 517.4444 g.

For factor 2 (representing the levels of OHN), the highest mean was obtained by treatment Z (20ml OHN/L H₂O) which is 527.8156 ml, followed by treatment X (Control-Pure H₂O) which is 527.2589 ml and treatment Y (15ml OHN/L H₂O) got the lowest mean which is 505.2222 ml.

For treatment combination, data shows that treatment AX has 1573 g, treatment AY has 1500.66 g and treatment AZ has 1583.34 g. Treatment BX has 1605.33 g, treatment BY has 1536 g and treatment BZ has 1546.67 g. Treatment CX got 1567 g, treatment CY got 1510.34 and treatment CZ got 1620.33 g.

Average Final Weight

The third column of Table 12 presents the average final weight obtained by the birds at the end of the study. For factor 1 (representing the levels of pigeon pea), the data show that the highest mean of 1004.11g was obtained by treatment B (10% pigeon pea), followed by treatment C (15% pigeon pea) that obtained 964.29g and the lowest mean was obtained by treatment A (Control) that has 908.66g. Analysis of variance showed significant effect of pigeon pea to the final weight of broilers at 5% level of significance.

DMRT shows that the broilers with different levels of pigeon pea have higher final weights compared to broilers not supplemented with pigeon pea. Among treatments, treatment B (10% pigeon pea) had significant effect.

For factor 2 (representing the levels of OHN) treatment Z (20ml OHN) got the highest mean of 972.52ml, followed by treatment Y which got 954.77ml and treatment X (pure H₂O) obtained the lowest mean of 949.77ml. Analysis of variance shows that levels of OHN had no significant effect to the final weight of birds.

For the treatment combination, the data shows that treatment BX has the highest mean which is 3055.32g, followed by BZ has 3010.99g, BY has 2970.66g, CY got 2933.99g, CZ has 2907.66g, followed by treatment CX which got 2836.99g, AZ has 2833.99g, treatment AY has 2688.32g and treatment AX got the lowest mean which got 2655.66g. Based on the analysis of variance there is no significant effect in the interaction of treatments to the final weight of broilers. Coefficient of Variance is 6.7%.

Average Weight Gain

The fourth column of Table 12 presents the average weight gained by the birds for the whole period of the study. For factor 1 (representing the levels of pigeon pea), it shows that the highest mean of 1,450.63g was obtained by treatment B (10% pigeon pea), followed by treatment C (15% pigeon pea) that obtained 1,319.22g and treatment A (control) got the lowest mean which obtained 1,137g. Analysis of variance showed highly significant effect of pigeon pea to the weight gain of broilers in both 1% and 5% levels of significance.

DMRT shows that the broilers with different levels of pigeon pea have higher weight gained compared to broilers in control group which is not supplemented with pigeon pea. Among treatments, treatment B (10% pigeon pea) had a highly significant effect.

For factor 2 (representing the levels of OHN extract) treatment Y (15ml OHN) got the highest mean of 1,341.85, followed by treatment Z (20ml) got 1, 297.44, treatments X (control) got the lowest mean which is 1, 267.56. Analysis of variance shows that levels of OHN had no significant effect to the weight gain of birds.

For the treatment combinations, the data show that treatment BZ got the highest mean which is 1464.33g, followed by BX which has 1450.01g, then treatment BY which has a mean of 1437.56g, followed by CY which has a mean of 1400.32g, CZ which has a mean of 1287.33g, CX which has a mean of 1270g, next is treatment AY which has a mean of 1187.68g, AZ which has a mean of 1140.65g and treatment AX got the lowest mean which has 182.67g. Analysis of variance shows that the treatment interactions had no significant effect to the weight gain of the birds. Coefficient of Variance is 12.5%.

Average Feed Consumption

The fifth column of Table 12 presents the average feed consumption of broilers during the entire period of the study. For factor 1 (representing the levels of pigeon pea), it shows that treatment C (15% Pigeon Pea) got the highest mean 114.66g, followed by treatment B (10% Pigeon Pea) which got 113.75g and the treatment A (control) which got the lowest mean of 97.19g feed consumption. Analysis of variance showed significant effect of pigeon pea in feed consumption at 1% level of significance.

DMRT shows that the broilers with no pigeon pea have lower feed consumption compared to broilers supplemented with pigeon pea. Among treatments, treatment A-control (no pigeon pea) has a significant effect.

For Factor 2, (representing the levels of OHN) the highest mean of 113.46 feed consumption was obtained by treatment X (control), followed by treatment Z (20ml) that obtained 107.59, followed by treatments Y(15ml) which got the lowest mean of 104.54 in terms of feed consumption. Analysis of variance showed no significant effect of the OHN to the feed consumption of broilers.

For the treatment combinations, treatment BX got the highest mean which is 370.63g, followed by treatment CX which got a mean of 363.32g, treatment CZ has a mean of 339.12g, then CY which has a mean of 329.5g, BY which has a mean of 326.8g, BZ which got 326.33g, AZ has a mean of 302.89, AX which got 287.18g and treatment AY got the lowest mean which is 287.18. Analysis of variance showed no significant effect in the treatment interactions to the feed intake of the birds. Coefficient of variance is 13.7%.

Average Water Intake

The sixth column of Table 12 presents the average water intake of broilers. For factor 1 (representing the levels of pigeon pea), it shows that treatment C (15% pigeon pea) got the highest mean 845.51ml, followed by treatment B (10% pigeon pea) that obtained 790. 59ml, followed by treatment A (control-no pigeon pea) which got the lowest mean of 656.55ml. Analysis of variance showed highly significant effect of pigeon pea in water intake in both 1% and 5% levels of significance.

DMRT shows that the broilers with no pigeon pea have lower water intake compared to broilers supplemented with pigeon pea. Among treatments, treatment A (Control-no pigeon pea) has a highly significant effect.

For Factor 2, (representing the levels of OHN) the highest mean of 794.32ml water intake was obtained by treatment X (control), followed by treatment Y (15ml) that obtained 755.35ml, followed by treatment Z (20 ml) which got the lowest mean which obtained 742.98ml. Analysis of variance showed highly significant effect of the OHN to the water intake of broilers in both 1% and 5% levels of significance.

DMRT shows that the broilers supplemented with OHN have lower water intake compared to broilers not supplemented with different levels of OHN. Among treatments, treatment Z(20ml OHN in 1L H₂O) had a highly significant effect.

For the treatment interactions, treatment CX got the highest mean which is 852.673ml, followed by CY which got 850.8333ml, BX got 842.8166ml, CZ has 833.0233ml, BZ has 785.3233ml, BY has 743.6333ml, followed by AX which has a mean of 687.4833ml, AY which got 671.5833ml and treatment AZ got the lowest mean of 610.6ml. Analysis of variance showed no significant difference to the treatment interactions in the average water intake of broilers. The coefficient of Variance is 3.9%.

Average Feed Conversion Efficiency

The seventh column of Table 12 presents the average feed conversion efficiency of birds or the required amount of feeds per bird to gain a kilo of live weight. For factor 1 (representing the levels of pigeon pea), it shows that the most efficient feed conversion was obtained by treatment B which has a mean of 0.714g, followed by treatment A (Control) that obtained 0.7799g and treatment C(15% pigeon pea) got the highest feed conversion efficiency which obtained 0.7859g. Analysis of variance showed highly significant effect of pigeon pea to the feed conversion efficiency of broilers

in both 1% and 5% levels of significance.

DMRT shows that among treatments, treatment B (15% pigeon pea) had a highly significant effect in the feed conversion efficiency.

For factor 2 (representing the levels of OHN) treatment Y (15ml OHN) that obtained 2.1529g was the most efficient in feed conversion, followed by treatment Z (20ml OHN) with a mean of 2.2581g and treatment X (pure H₂O) got the highest feed conversion efficiency which has a mean of 2.4285g. Analysis of variance showed that the levels of OHN have a highly significant effect to the feed conversion efficiency of birds in both 1% and 5% levels of significance.

DMRT shows that among treatments, treatment Y (15ml OHN) had a highly significant effect in feed conversion efficiency.

For the interaction of treatments, analysis of variance for feed conversion shows significant results. The most efficient feed conversion efficiency was obtained by treatment B which got a mean of 0.71g, followed by treatment A that obtained 0.77 g and treatment C obtained 0.78 g. Based on the analysis of variance there is a significant effect of treatment combinations to the feed conversion efficiency of broilers. The coefficient of variance is 3.95%.

Table 12. Summary of all means on the initial weight, final weight, weight gained, feed intake, water intake, feed conversion efficiency and incremental data.

Treatments	Initial Wt. (g/ml)	Final Wt. (g/ml)	Wt. Gained (g/ml)	Feed Intake (g/ml)	Water Intake (ml)	F.C.E. (g/ml)
FACTOR 1						
A	517.4444	908.66b	1137c	97.19b	656.55b	0.7799
B	520.8889	1004.11a	1450.63a	113.75a	790.59ab	0.714
C	521.9633	964.29ab	1319.22b	114.66a	845.51a	0.7859
F-Test		*	**	*	**	**
FACTOR 2						
X	527.2589	949.77	1267.56	113.46	794.32	2.4285
Y	505.2222	954.77	1341.85	104.54	755.35	2.1529
Z	527.8156	972.52	1297.44	107.59	742.98	2.2581
F-Test		Ns	Ns	Ns	**	**
CV %		6.7%	12.5%	13.7%	3.9%	3.9%

Sensory Evaluation

Tenderness. For factor 1 (representing the levels of pigeon pea) the lowest mean of chew count was obtained by treatment A (no pigeon pea) which has 22 chew counts, followed by treatment B (10% pigeon pea) which obtained 23 chew counts and treatment C (15% pigeon pea) got the highest mean which is 25 chew counts. Analysis of variance (ANOVA) showed no significant effect on the tenderness of meat of broilers supplemented with pigeon pea. The remarks showed that the meat was just tender.

For factor 2 (representing the levels of OHN) the lowest mean of chew count was obtained by treatment X (pure H₂O) and Z (20ml OHN) which both had 23 chew counts and treatment Y (15 ml OHN) got the highest mean which is 24 chew counts. Analysis of variance (ANOVA) showed no significant effect on the tenderness of meat of broilers supplemented with OHN. The remarks showed that the meat was just tender.

For the respondents, the highest mean was obtained by the professionals which is 38 and remark showed that it was tough, followed by the students which has a mean of 20 and they remarked the meat as just tender, and the farmers got the lowest mean which is 12 and the meat got a tender remark. Analysis of Variance (ANOVA) showed a highly significant effect on the respondents. The coefficient of variance is 21%.

Odor. For factor 1 (representing the levels of pigeon pea), the highest mean was attained by treatment A (no pigeon pea) and C (15% pigeon pea) which both got 3.20 and treatment B (10% pigeon pea) got the lowest mean of 3.08. Analysis of variance (ANOVA) showed no significant effect on the meat odor of broilers supplemented with pigeon pea. The remarks showed that the meat odor was just normal.

For factor 2 (representing the levels of OHN) the highest mean was obtained by treatment Z (20 ml OHN) which is 3.29, followed by Y (15 ml OHN) which has a mean of 3.16 and treatment X (pure H₂O) got the lowest mean of 3.02. Analysis of variance (ANOVA) showed no significant effect on the meat odor of broilers supplemented with OHN. The remarks showed that the meat odor was just normal.

For the respondents, the lowest mean was obtained by the students which has a mean of 2.94, followed by the farmers which has a mean of 3.26 and the professionals got the highest mean of 3.28. The Analysis of Variance (ANOVA) showed significant effect on the respondents in the meat odor of broilers. The Coefficient of Variance is 15%. The remarks showed that the meat odor was just normal.

Texture (fresh). For factor 1 (representing the levels of pigeon pea) the highest mean was obtained by treatment C (15% pigeon pea) with a mean of 3.12, followed treatment B (10% pigeon pea) which has a mean of 3.09 and treatment A (no pigeon pea) got the lowest mean of 3.08. The Analysis of Variance (ANOVA) showed no significant effect

of supplementing pigeon pea to the texture of the fresh meat of broilers. The remarks were all rigid.

For factor 2 (representing the levels of OHN) the lowest mean was obtained by treatment Y (15ml OHN) which has a mean of 3.03 followed by treatment X (pure H₂O) which got a mean of 3.06 and treatment Z (20ml OHN) got the highest mean which is 3.20. Analysis of Variance showed no significant effect of supplementing OHN to the texture of fresh meat of broilers. The remarks were all rigid.

For the respondents, the highest mean was obtained by the students which has a mean of 3.17, followed by professionals with a mean of 3.08 and the farmers got the lowest mean of 3.03. Analysis of variance (ANOVA) showed no significant effect on the respondents to the texture of fresh meat of broilers. The coefficient of variance is 11%.The remarks were all rigid.

Texture (cooked). For factor 1 (representing the levels of pigeon pea) the highest mean was obtained by treatment C (15% pigeon pea) which has a mean of 3.39, followed by treatment B (10% pigeon pea) which got a mean of 3.29, and treatment A (no pigeon pea) got the lowest mean of 3.24. The Analysis of Variance (ANOVA) showed no significant effect of supplementing pigeon pea to the texture of the cooked meat of broilers. The remarks were all rigid.

For factor 2 (representing the levels of OHN) the highest mean was obtained by treatment Z (20 ml OHN) which has a mean of 3.44 and it is moderately rigid, followed by treatment Y (15 ml OHN) which got 3.31 and treatment X (pure H₂O) got the lowest mean which is 3.11, both were rigid. The Analysis of Variance (ANOVA) showed no significant effect of supplementing OHN to the texture of the cooked meat of broilers.

For the respondents, the highest mean was obtained by the students which is 3.39, followed by the farmers which has a mean of 3.28 and the professionals got the lowest mean of 3.19. Analysis of variance (ANOVA) showed no significant effect on the interaction of treatments to the texture of cooked meat of broilers. The coefficient of variance is 12%.The remarks were all rigid.

Taste. For factor 1 (representing the levels of pigeon pea) the highest mean was obtained by treatment C (15% pigeon pea) which is 3.39, followed by treatment B (15% pigeon pea) which got a mean of 3.29 and treatment A (no pigeon pea) got the lowest mean of 3.24. The Analysis of Variance (ANOVA) showed no significant effect of supplementing pigeon pea to the taste of cooked of broilers. The remarks were all just normal.

For factor 2 (representing the levels of OHN) the highest mean was obtained by treatment Z (20 ml OHN) which got 3.37, followed by treatment Y (15 ml OHN) which has a mean of 3.32 and treatment X (pure H₂O) got the lowest mean of 3.22. The Analysis of Variance (ANOVA) showed no significant effect of supplementing OHN to the taste of cooked of broilers. The remarks were all just normal.

For the respondents, the highest mean was obtained by the farmer which is 3.62 and they said that the meat has an undesirable taste, followed by the professionals which has a mean of 3.23, and the lowest mean was obtained by the students which is 3.06, both got a just normal remark. Analysis of variance (ANOVA) showed a highly significant effect on the respondents to the texture of fresh meat of broilers. The coefficient of variance is 11%.

General Acceptability

For factor 1 (representing the levels of pigeon pea) the highest mean was obtained by treatment C (15% pigeon pea) which got a mean of 3.26, followed by treatment A (no pigeon pea) which got 3.19, and treatment B (10% pigeon pea) got the lowest mean of 3.18. The Analysis of Variance (ANOVA) showed no significant effect of supplementing pigeon pea to the general acceptability of broilers. The remarks were all moderate.

For factor 2 (representing the levels of OHN) the highest mean was obtained by treatment Y (10 % OHN) which is 3.33, followed by treatment Z (15 ml OHN) which has a mean of 3.22, and treatment X (pure H₂O) got the lowest mean which is 3.07. The Analysis of Variance (ANOVA) showed no significant effect of supplementing OHN to the general acceptability of broilers. The remarks were all moderate.

For the respondents, professionals got the highest mean which is 3.37, followed by the farmers which got 3.24 and students got the lowest mean of 3.01. The analysis of variance (ANOVA) showed a highly significant effect on the respondents to the general acceptability of broilers. The remarks were all moderate.

Table 13. Sensory Evaluation

Dependent Variable	Respondents	Mean	Remarks	Factor 1	Mean	Remarks	Factor 2	Mean	Remarks
Tenderness	Professional	38	Tough	Feed 1	22	Just Tender	OHN 1	23	Just Tender
	Student	20	Just Tender	Feed 2	23	Just Tender	OHN 2	24	Just Tender
	Farmer	12	Tender	Feed 3	25	Just Tender	OHN 3	23	Just Tender
	<i>f-test</i>	148.13**			1.63			.27	
	<i>cv %</i>	21%			21%			21%	
Odor	Professional	3.28	Just Normal	Feed 1	3.20	Just Normal	OHN 1	3.02	Just Normal
	Student	2.94	Just Normal	Feed 2	3.08	Just Normal	OHN 2	3.16	Just Normal
	Farmer	3.26	Just Normal	Feed 3	3.20	Just Normal	OHN 3	3.29	Just Normal
	<i>f-test</i>	3.96*			.35			1.49	
	<i>cv %</i>	15%			15%			15%	
Texture Fresh	Professional	3.08	Rigid	Feed 1	3.08	Rigid	OHN 1	3.06	Rigid
	Student	3.17	Rigid	Feed 2	3.09	Rigid	OHN 2	3.03	Rigid
	Farmer	3.03	Rigid	Feed 3	3.12	Rigid	OHN 3	3.20	Rigid
	<i>f-test</i>	.80			.07			1.26	
	<i>cv %</i>	11%			11%			11%	
Texture Cooked	Professional	3.19	Rigid	Feed 1	3.34	Rigid	OHN 1	3.11	Rigid
	Student	3.39	Rigid	Feed 2	3.24	Rigid	OHN 2	3.31	Rigid
	Farmer	3.28	Rigid	Feed 3	3.29	Rigid	OHN 3	3.44	Moderate
	<i>f-test</i>	1.64			.29			2.93	
	<i>cv %</i>	12%			12%			12%	
Taste	Professional	3.23	Just Normal	Feed 1	3.24	Just Normal	OHN 1	3.22	Just Normal
	Student	3.06	Just Normal	Feed 2	3.29	Just Normal	OHN 2	3.32	Just Normal
	Farmer	3.62	Undesirable	Feed 3	3.39	Just Normal	OHN 3	3.37	Just Normal
	<i>f-test</i>	9.97**			.86			.91	
	<i>cv %</i>	11%			11%			11%	
General Acceptability	Professional	3.37	Moderate	Feed 1	3.19	Moderate	OHN 1	3.07	Moderate
	Student	3.01	Moderate	Feed 2	3.18	Moderate	OHN 2	3.33	Moderate
	Farmer	3.24	Moderate	Feed 3	3.26	Moderate	OHN 3	3.22	Moderate
	<i>f-test</i>	7.10**			.27			2.27	
	<i>cv %</i>	11%			11%			11%	

CONCLUSION

Based on the Analysis of Variance (ANOVA), on the final weight of broilers, Factor 1 (representing the levels of pigeon pea) showed significant effect at 5% level of significance and Factor 2 (representing the levels of OHN) showed no significant effect. On the weight gain of broilers, Factor 1 (representing the levels of pigeon pea) showed a highly significant effect and Factor 2 (representing the levels of OHN) showed no significant effect. In terms of feed intake, Factor 1 (representing the levels of pigeon pea) showed significant effect at 1% level of significance and Factor 2 (representing the levels of OHN) showed no significant effect. In terms of water intake, both Factor 1 (representing the levels of pigeon pea) and Factor 2 (representing the levels of OHN) showed a highly significant effect. In terms of feed conversion efficiency, both Factor 1 (representing the levels of pigeon pea) and Factor 2 (representing the levels of OHN) showed a highly significant effect.

For the sensory evaluation, based on the Analysis of Variance (ANOVA), the tenderness, taste and the general acceptability are highly significant only in the respondents and not in both factors 1 and 2. Odor is significant only in the respondents while the textures (fresh and cooked) are not significant in both factors 1 and 2 as well as in the respondents. Based also on the Analysis of Variance (ANOVA), all interaction means show no significant effect to the growth and sensory evaluation.

Based on the findings, the researchers concluded that broilers fed with treatment B (10% pigeon pea) had a significant effect on the final weight. It is highly significant in the weight gain and feed conversion efficiency. However, it is insignificant in the feed and water intake, since the results found that broilers not fed with pigeon pea showed significant effect. On the other hand, broilers supplemented with OHN at 20ml/1L H₂O showed a highly significant effect in water intake. Broilers supplemented with treatment Y (15ml OHN in 1L H₂O) had showed a highly significant effect in the feed conversion efficiency. Combinations of pigeon pea and Oriental Herbal Nutrients (OHN) have no significant effect in the growth and sensory evaluation of broilers. Both treatments behave independently.

RECOMMENDATIONS

Based on the study conducted, the researchers recommended the supplementation of 10% pigeon pea in the broiler ration. Supplementation of 10% pigeon pea in the locally mixed feeds showed a highly significant result on the weight gain and feed conversion efficiency and significant result in the final weight. These results can be a great help for the increase of production output with minimal operational expenses specifically on feeding broilers. Birds will have minimal feeding requirements but with efficient feed conversion and higher final weights if they will be supplemented with the recommended level of pigeon pea which is 10% in the locally mix feeds.

Furthermore, the researchers also recommended the supplementation of 20ml OHN/L of H₂O as supported by a highly significant result in water intake and 15ml OHN/L of H₂O as supported by a highly significant result in the feed conversion efficiency Increase in water intake can improve the digestive process. Efficient utilization of nutrients in feeds can be expected. To verify further these results, the researchers recommend that similar study must be conducted using different levels of OHN and pigeon pea in the locally mixed ration.

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AWARENESS AND LEVEL OF EFFECTIVENESS OF IMPLEMENTATION OF MANDATED POLICIES, GUIDELINES, AND PROGRAMS

Josie Gaitano and Methusela Perrocha

Abstract The effectiveness and success of an organization is not only reflected in not just the result of its ability to execute such policies effectively and efficiently. This study was conducted to determine the awareness and level of effectiveness of implementation of mandated policies guidelines and programs. The descriptive research utilizing self-made instrument was used to elicit responses from the thirty-five (35) College of Teacher Education faculty members of the Guimaras State College (GSC), Academic Year 2015-2016. Study revealed that majority of the respondents were married, female, and have served for ten (10) years and below. The level of awareness of the faculty revealed that the respondents were "very aware" of the mandated policies, guidelines and programs of the Guimaras State College in all categories being assessed. The implementation of the GSC mandated policies, guidelines and programs was "very effective" in all categories being assessed. No significant differences on the level of awareness of the faculty when categorized according to their profile, however a significant difference in the level of effectiveness of implementation of GSC mandated policies when they were categorized according to academic rank. The relationship between the level of awareness and level of effectiveness of implementation of the GSC mandated policies was determined to have significant positive relationship between level of awareness and level of effectiveness. Hence, highly proficient in personal, social growth and professional characteristics should maintain to further improve these qualities.

Keywords: Awareness, Effectiveness, Mandated Policies Guidelines and Programs

INTRODUCTION

Background of the Study

The effectiveness and success of an organization is not only reflected in not just the result of its ability to execute such policies effectively and efficiently. Poor implementation of policies, guidelines can be damaging to institutions and companies alike. There is a growing need for more efficient policy implementation in as much as implementation tends to be without serious consideration as to sufficiency or resources, capacity to monitor proper communication with stakeholders in the nature and purpose of the policy imposed.

In organizations/institutions, human resources are sometimes seen as a problem instead of being solution to the problem. When policies, programs and guidelines are not clear, implementation would be a failure. This is where proper communication comes in.

Communication about the policy or program needs commitment and support from all those involved with implementation. This involves being "outward-looking", that is, a view not only from the agency/institutions' perspective of stakeholders, and in particular on how the target audience will react at the same time the best means of communication to use.

The objectives of communication should be made clear and must be in line with the initial policy objective. This is assisted by the development of communication strategy which also provides as means of assessing success or otherwise.

Statement of the problem

This study was conducted to determine the awareness and level of effectiveness of implementation of mandated policies guidelines and programs of College of Teacher Education faculty members of the Guimaras State College Academic Year 2015-2016. Specifically, this study aimed to determine answers to the following questions:

1. What is the level of awareness of the faculty on mandated policies, guidelines and programs on: Recruitment, selection and promotion, Faculty adequacy and loading, Rank and tenure, Faculty development, Professional performance and scholarly works, and Salaries, fringe benefits and incentives?
2. What is the level of effectiveness of implementation of GSC mandated policies, guidelines and programs on: Recruitment, selection and promotion, Faculty adequacy and loading, Rank and tenure, Faculty development, Professional performance and scholarly works, and Salaries, fringe benefits and incentives?
3. Is there a significant difference in the level of awareness of the faculty on mandated policies, guidelines and programs when grouped according to civil status, age, sex, length of experience and academic rank?
4. Is there a significant difference in the level of effectiveness of implementation of GSC mandated policies, guidelines and programs when grouped according to civil status, age, sex, length of experience and academic rank?
5. Is there a significant relationship on the level of awareness of the faculty and level of effectiveness of GSC mandated policies, guidelines and programs?

METHODOLOGY

Research Design

This study used the descriptive-correlational research. Descriptive research is a design which aims to describe the nature of situation as it exists at the time of the study and to explain the cause of particular phenomena.

Respondents of the Study

This study will be conducted to determine the awareness and level of effectiveness of implementation of GSC policies, guidelines and programs. The data will be gathered from the CTE faculty members of Salvador Campus, McLain, Buenavista, Guimaras and Mosqueda Campus, Alaguisoc, Jordan, Guimaras. The respondents of the study are the thirty-five (35) faculty members of the Guimaras State College-College of Teacher Education of Salvador Campus, McLain, Buenavista, Guimaras and Mosqueda Campus, Alaguisoc, Jordan, Guimaras, Academic Year 2015-2016. The respondents were classified according to civil status, age, sex, length of service and academic rank.

Data Gathering Instrument

Part I includes items on personal information of the respondents such as to civil status, age, sex, length of experience, and academic rank. Part II was conducted to determine the awareness and Part III was conducted to determine the level of effectiveness of implementation of GSC policies, guidelines and programs.

Data Gathering Procedure

The data gathered from the CTE faculty members of Salvador Campus, McLain, Buenavista, Guimaras and Mosqueda Campus, Alaguisoc, Jordan, Guimaras. The data gathered were tallied, tabulated, computer-processed, analyzed and interpreted.

Statistical Tools in the Study

The data gathered in this study were subjected to the following statistical treatments:

Mean. The scores were utilized to determine the general description of the teaching performance of education graduates.

Mann Whitney. To determine the significance of the difference in the two-level categories, the researchers employed the Mann Whitney for independent sample set a .05 level of significance.

Kruskall Wallis Test. Determine the significance of the difference in the three or more level categories of the variables, the researchers used KRUSKALL WALLIS TEST to test the significance of the differences between two or more means that were obtained from independent samples. The discussion was based on the result of these statistical tools in determining the teaching performance of education graduates.

RESULTS AND DISCUSSION

Profile of College of Teacher Education Faculty

Table 1 presents the profile of the respondents in terms of civil status, age, sex, length of service, and academic rank. Results revealed that in terms of civil status, there were eight (8) or 22.9% were single and 27 or 77.1% were married. In terms of age, there were seven (7) or 20.0% age from 21 to 40 years old, twenty-three (23) or 65.7% age from 41 to 59 years old, and five (5) or 14.3% age from 60 years old and above. In terms of sex, four (4) or 11.4% were male, and thirty-one (31) or 88.6% were female. In terms of the length of service, thirty (30) or 85.7% had 10 years and below, three (3) or 8.6% had 10 to 15 years of service, and two (2) or 5.7% had 15 years of service and above. In terms of academic rank, fifteen (15) or 42.9 % were instructors, eleven (11) or 31.4 % were assistant professors, and nine (9) or 25.7 % were associate professors. This implies that majority of the respondents were married, female, served Guimaras State College for 10 years and below and had the academic rank of instructors.

Table 1. Profile of Respondents

	Frequency (F)	Percentage (%)
Civil Status		
Single	8	22.9
Married	27	77.1
Total	35	100.0
Age		
21 to 40	7	20.0
41 to 59	23	65.7
60 & above	5	14.3
Total	35	100.0
Sex		
Male	4	11.4
Female	31	88.6
Total	35	100.0
Length of Service		
10 years and below	30	85.7
10 to 15 years	3	8.6
15 years and above	2	5.7
Total	35	100.0
Academic Rank		
Instructor	15	42.9
Assistant Professor	11	31.4
Associate Professor	9	25.7
Total	35	100.0

Level of Awareness of the Faculty

Table 2 presents the level of awareness of the faculty on the mandated policies, guidelines and programs of Guimaras State College. They were assessed in terms of recruitment, selection and promotion; faculty adequacy and loading; rank and tenure; faculty development; professional performance and scholarly works, and salaries, fringe benefits and incentives.

Results revealed that on the category recruitment, selection and promotion (M=3.69); faculty adequacy and loading (M=4.09); rank and tenure (M=3.68); faculty development (M=3.76); professional performance and scholarly works (M=4.14); and salaries, fringe benefits and incentives (M=4.19), all were interpreted as "very aware". This means that the respondents were very aware of the mandated policies, guidelines and programs of the Guimaras State College in all categories being assessed.

Table 2. Level of Awareness of the Faculty on the Mandated Policies, Guidelines and Programs

Items	Mean	Standard deviation	Interpretation
A. Recruitment, Selection and Promotion	3.69	1.011	Very Aware
B. Faculty Adequacy and Loading	4.09	0.736	Very Aware
C. Rank and Tenure	3.68	0.884	Very Aware
D. Faculty Development	3.76	0.986	Very Aware
E. Professional Performance and Scholarly Works	4.14	0.802	Very Aware
F. Salaries, Fringe Benefits and Incentives	4.19	0.822	Very Aware
Overall Mean	3.92	0.775	Very Aware

Scale: 1.00 – 1.79 (Not Aware), 1.80 – 2.59 (Slightly Aware), 2.60 – 3.39 (Aware), 3.40 – 4.19 (Very Aware), 4.20 – 5.00 (Very Much Aware)

Level of Effectiveness of Implementation

Table 3 presents the level of effectiveness of implementation of the mandated policies, guidelines and programs of Guimaras State College. These were assessed in terms of recruitment, selection and promotion; faculty adequacy and loading; rank and tenure; faculty development; professional performance and scholarly works, and salaries, fringe benefits and incentives.

Results revealed that on the category recruitment, selection and promotion ($M=3.38$); faculty adequacy and loading ($M=3.56$); rank and tenure ($M=3.73$); faculty development ($M=3.64$); professional performance and scholarly works ($M=3.69$); and salaries, fringe benefits and incentives ($M=3.73$), all were interpreted as "very effective". This means that the implementation of the GSC mandated policies, guidelines and programs was very effective in all categories being assessed.

Table 3. Level of Effectives of Implementation of GSC Mandated Policies, Guidelines and Programs

Items	Mean	SD	Interpretation
A. Recruitment, Selection and Promotion	3.38	1.082	Effective
B. Faculty Adequacy and Loading	3.56	0.968	Very Effective
C. Rank and Tenure	3.73	1.011	Very Effective
D. Faculty Development	3.64	1.081	Very Effective
E. Professional Performance and Scholarly Works	3.69	1.007	Very Effective
F. Salaries, Fringe Benefits and Incentives	3.73	1.088	Very Effective
Overall Mean	3.62	0.944	Very Effective

Scale: 1.00 – 1.79 (Not Effective), 1.80 – 2.59 (Slightly Effective), 2.60 – 3.39 (Effective), 3.40 – 4.19 (Very Effective), 4.20 – 5.00 (Very Much Effective)

Difference in the Level of Awareness of the Faculty on Mandated Policies, Guidelines and Programs

Table 4 presents the difference in the level of awareness of the respondents when grouped according to age. Kruskal Wallis Test results revealed that there is no significant difference existed in the level of awareness when respondents grouped according to age ($X^2=468$, sig. = .631) set at .05 level of significance. Therefore the null hypothesis was failed to reject. This means that the level of awareness of the respondents does not vary whether they were young or old. Even though the mean values were different in every age bracket, but it was interpreted as equal level of awareness.

When grouped according to sex. Results revealed no significant difference existed in the level of awareness when respondents grouped according to age ($z=1052.5$, sig. = .138) set at .05 level of significance. This means that the level of awareness of the respondents does not vary whether they were male or female.

When grouped according to civil status. Results revealed no significant difference existed in the level of awareness when respondents grouped according to civil status ($z=1092.00$, sig. = 0.369) set at .05 level of significance. This means that the level of awareness of the respondents does not vary whether they were single, married, separated or widow/widower.

When grouped according to academic rank. Results revealed no significant difference existed in the level of awareness when respondents grouped according to academic rank ($X^2=2.128$, sig. = .106) set at .05 level of significance. This means that the level of awareness of the respondents does not vary whether they were contractual, instructor, asst. professor, or associate professor.

When grouped according to length of experience. Results revealed no significant difference existed in the level of awareness when respondents grouped according to length of experience ($X^2=0.676$, sig. = .614) set at .05 level of significance. This means that the level of awareness of the respondents does not vary whether they have experience of 5 years and below, 6 years to 10 years, 11 years to 15 years, or 16 years to 20 years.

Table 4. Difference in the Level of Awareness when Grouped According to the Profile of the Respondents

	Tabular	p-value	Result	H ₀ Decision
Sex (Mann Whitney)	1052.50	0.138	Not Significant	Accept
Age (Kruskall Wallis)	0.468	0.631	Not Significant	Accept
Civil Status (Mann Whitney)	1092.00	0.369	Not Significant	Accept
Academic rank (Kruskall Wallis)	2.128	0.106	Not Significant	Accept
Length of service (Kruskall Wallis)	0.676	0.614	Not Significant	Accept

Difference in the Level of Effectiveness of Implementation of GSC Mandated Policies, Guidelines and Programs

Table 5 presents the difference in the level of effectiveness of implementation of the GSC mandated policies, guidelines and program when grouped according to age. Results revealed no significant difference existed in the level of effectiveness of implementation when grouped according to age ($X^2=107$, sig. =.746) set at .05 level of significance. This means that the level of effectiveness of implementation does not vary whether they were young or old.

When grouped according to sex. Results revealed no significant difference existed in the level of effectiveness of implementation when grouped according to sex ($z=929.2$, sig. =.820) set at .05 level of significance. This means that the level of effectiveness of implementation does not vary whether they were male or female. When grouped according to civil status. Results revealed no significant difference existed in the level of effectiveness of implementation when grouped according to civil status ($z=1048.00$, sig. =.591) set at .05 level of significance. This means that the level of effectiveness of implementation does not vary whether they were single, married, separated, or widow/widower.

When grouped according to academic rank. Results revealed a significant difference existed in the level of effectiveness of implementation when grouped according to academic rank ($X^2=3.505$, sig. =.020) set at .05 level of significance. This means that the level of effectiveness of implementation varies yet, only asst. professor and associate professor differ to each other, the rest does not differ.

When grouped according to the length or experience. Results revealed no significant difference existed in the level of effectiveness of implementation when grouped according to length of experience ($X^2=1.165$, sig. =.348) set at .05 level of significance. This means that the level of effectiveness of implementation does not vary whether they have experience of 5 years and below, 6 years to 10 years, 11 years to 15 years, or 16 years to 20 years.

Table 5. Difference in the Level of Effectiveness of Implementation when Grouped According to Profile

Profile	Tabular	p-value	Result	H. Decision
Sex (Mann Whitney)	929.20	0.820	Not Significant	Accept
Age (Kruskall Wallis)	0.107	0.746	Not Significant	Accept
Civil Status (Mann Whitney)	1048.00	0.591	Not Significant	Accept
Academic rank (Kruskall Wallis)	3.505	0.020	Significant	Reject
Length of service (Kruskall Wallis)	1.165	0.348	Not Significant	Accept

Table 6 presents the relationship on the level of awareness of the faculty and level of effectiveness of implementation of the GSC mandated policies, guidelines and program. Results revealed a significant positive relationship between level of awareness and level of effectiveness. This means that the more the respondents become aware of the mandated programs the more the program will be effectively implemented.

Table 6. Relationship on the level of awareness of the faculty and level of effectiveness of GSC mandated policies, guidelines and programs

Variables	r-value	Sig.	Interpretation
Awareness*Effectiveness	.747*	.000	Significant

* $p < 0.05$ level of significance

CONCLUSIONS

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

1. Majority of the respondents were married, female, and have served for ten (10) years and below.
2. The level of awareness of the faculty revealed that the respondents were "very aware" of the mandated policies, guidelines and programs of the Guimaras State College in all categories being assessed.
3. The implementation of the GSC mandated policies, guidelines and programs was "very effective" in all categories being assessed.
4. No significant differences on the level of awareness of the faculty when categorized according to their profile, however on the there was a significant difference in the level of effectiveness of implementation of GSC mandated policies when they were categorized according to academic rank.
5. The relationship between the level of awareness and level of effectiveness of implementation of the GSC mandated policies was found to have significant positive relationship between level of awareness and level of effectiveness.

RECOMMENDATIONS

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

1. Since majority of the teacher respondents were found to be "very satisfactory" in their teaching performance, this implies that there is still room for them to improve their teaching performance. In this aspect, teachers have important role to play in terms of encouraging their students do their best and in their studies, and their commitment to the teaching profession.
2. Teacher respondents must reexamine instructional competence in order to learn new strategies to be labeled highly proficient.
3. Head of schools may recommend teachers for promotion if qualified.
4. More seminars and trainings should be attended by the teachers in order for them to develop home, community and to their exposure to the prevailing social and economic activities.
5. Teacher respondents were found highly proficient in personal, social growth and professional characteristics, this implies that they should maintain if not further improve these qualities.
6. Further studies should be conducted using other variables.

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EXTENT AND EFFECTIVENESS OF THE IMPLEMENTATION OF SOLID WASTE MANAGEMENT PROGRAM IN GUIMARAS ISLAND

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ABSTRACT This study was conducted to determine the extent and effectiveness of the implementation of Solid Waste Management Program in Guimaras Island for the year 2014. Descriptive research design was used in gathering the data. The respondents were the 396 household members chosen through random stratified sampling to determine the level of effectiveness and 16 Solid Waste Management personnel for the extent of implementation, activities developed, waste disposal practices and problems met in the implementation of the Solid Waste Management Program. The primary instrument used in gathering data for the level of effectiveness, activities developed, waste disposal practices and problems met in the implementation of the Solid Waste Management Program was the researcher-made questionnaire. The secondary data in the form of the Municipality 10-year Ecological Solid Waste Management Plan were used to determine the extent of implementation and an interview was employed to validate the information and data taken from the Ecological Solid Waste Plan. The statistical tools used in this study were the frequency count, percentage, ranking and mean. Results revealed that the Local Government Units in Guimaras have implemented the Solid Wastes Management Program in the form of development of the 10-year Solid Waste Management Plan and information and education campaign, were the fully implemented and least is the transfer mechanism. The implemented Solid Wastes Management Program of the Local Government Units was highly effective. There are activities developed by the Local Government Units in the implementation of Solid Waste Management Program where the most developed are formulation of Solid Wastes Management Plan and conduct of educational promotion and information campaign, while development of livelihood program for small recyclers, open landfill disposal are the least developed. The Local Government Units have waste disposal practices wherein education and dissemination is the most practiced while enforcement is the least practiced. The problems encountered were garbage is not segregated well at source and sanctions are not properly imposed as the most encountered and lack of information/education among stakeholders as the least encountered.

Keywords: Solid Waste Management, Guimaras, Extent, Effectiveness

INTRODUCTION

Article II on State Principles of the 1987 Philippine Constitution states the Right to Health and Right of the people to a Balanced Ecology. Section 15 states that, the State shall protect and promote the right to health of the people and instill health consciousness of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.

But the Philippine environment continues to experience stresses. Our environmental literature is sated with studies on the rapid loss of biodiversity, declining fishery resources, heavy water and air pollution, depletion of minerals such as petroleum, continued conversion of agricultural lands, loss of a wide coverage of tropical forest and escalating garbage.

Nowadays, wastes are one of the major problems in the society. Anywhere you can see them, scattering along the roads, floating in the bodies of water like in the sea, in the river and in the lake. Wastes can cause pollution in air, water and in land. These problems are all caused by improper solid waste disposal.

Acknowledging the garbage predicament in 2001, President Gloria Macapagal- Arroyo authorized the implementation of RA 9003, otherwise known as the Solid Waste Management Act of 2000. It is an act providing for an ecological solid waste management. The act mandated all local government units (LGUs) to be responsible and accountable for ecological solid waste management within their jurisdictions.

Up to now, the issue of managing solid wastes, however, has not completely faded into the backyard in spite of the implementation of RA 9003. Many LGUs have not implemented the requirements of the program. Waste persisted to be the burden in many cities and municipalities. The old issues of Solid Waste management remain and new.

Guimaras Island is a province composing of five (5) municipalities mandated also by RA 9003. Are these local government units in Guimaras implementing the Solid Waste Management Act of 2000? If they are, what is the extent of their implementation? Is this Solid Waste Management Program effective?

It is for this premise why this study was conducted.

Statement of the Problem

This study aimed to determine the extent and effectiveness of the implementation of Solid Waste Management Program in Guimaras Island for the year 2014. Specifically, it sought answers to the following questions:

1. What is the extent of implementation of Solid Waste Management program among the Local Government Units in Guimaras Island?
2. What is the level of effectiveness of the implementation of solid waste management program among the Local Government Units in Guimaras Island?
3. What are the activities developed by the Local Government Units in the implementation of solid waste management program?
4. What are the waste disposal practices developed by the Local Government Units?
5. What are the problems encountered by the Local Government Units in the implementation of solid waste management program?

METHODOLOGY

Descriptive research using survey method was used in this study. It a design that is appropriate for studies which aim to find out what prevail in the present conditions or relationships, held opinions and beliefs, processes and effects, and developing trends (Ardales, 2001)

The respondents of the study were the 396 household members chosen through stratified sampling for the level of effectiveness and 16 Solid Waste Management personnel for the extent of implementation, activities developed, waste disposal practices and problems met in the implementation of the Solid Waste Management Program.

The primary instrument used in gathering data for the level of effectiveness, activities developed, waste disposal practices and problems met in the implementation of the Solid Waste Management Program was the researcher-made questionnaire. A questionnaire is intended to obtain the information about conditions or practice of which the respondents are presumed to have knowledge (Good and Scats, 2002)

The secondary data in the form of the Municipality 10-year Ecological Solid Waste Management Plan were used to determine the extent of implementation and an interview was employed to validate the information and data taken from the Ecological Solid Waste Plan. The statistical tools used in this study were the frequency count, percentage, ranking and mean.

RESULTS AND DISCUSSION

Extent of Implementation of Solid Waste Management Program among the Local Government Units in Guimaras Island

Data revealed that the five municipalities in Guimaras have developed their Ten Year Ecological Solid Waste Management Plan as part of their mandate as to Solid Waste Management Program. As to source reduction in the five municipalities this was through massive Information and Education Campaign however, in the Municipalities of Jordan and Buenavista, aside from massive campaign, they practice recycling and composting as ways of reducing their solid wastes. The Municipality of Buenavista had organized Buenavista Organic Growers Association (BOGA) which produces organic fertilizers, Bana-ag Recyclers to convert recyclable wastes into bags, mat, etc., the Libon makers who produce bayong and sold on consignment basis at MC Nester processing Center.

As to collection, Buenavista and Jordan implemented the No Segregation No Collection Policy in 12 pilot barangays for collection in Buenavista, the public market in Rizal and San Miguel, Rizal Wharf, hospital and commercial buildings along the road, their wastes are handled and transferred to the Jordan dumpsite, in Nueva Valencia, collection is done only in the Poblacion proper however, they have barangay collection where the upland, rural, coastal and island barangays shall be responsible for the segregation and collection of recyclable and biodegradable wastes, in Sibunag in 3 barangays only and in San Lorenzo, there is no clear waste collection activity in the municipality.

For segregation, the five municipalities adopt the No Segregation No Collection Policy. As to transfer practice, the municipality of Buenavista, San Lorenzo, and Sibunag have not developed the Material Recover Facility while the Nueva Valencia has the Central Material Recovery Facility has been assigned in the barangay level.

Data further reveal that for processing, all LGUs practice backyard composting and the recyclable are sold to junkshops roaming in the community. Vermi composting is handled by the Municipality Agriculture Office. In Buenavista, aside from vermin composting and selling of recyclable to junkshops they have the Bokashi production under the MAO also. In final

disposal, Buenavista, Jordan, Nueva Valencia and Sibunag have controlled dumpsite for the residual wastes while the San Lorenzo has no final disposal for residual wastes.

Level of Effectiveness of the Implementation of Solid Waste Management Programs

Data gathered from the respondents from the five (5) Municipalities in the Province of Guimaras show that for source reduction the overall mean is 3.54 interpreted as "high", for the segregation the overall mean is 4.26 interpreted as "Very high" while for processing the overall mean is 3.28 interpreted as moderate.

These reveal that the grand mean for the level of effectiveness is 3.68 which is at high level of effectiveness which implies that the residents in the province of Guimaras have put into action what the implementing agencies have transferred to them as to Solid Waste Management however improvement is still need to the level of effectiveness particularly for processing.

Table 1. Level of Effectiveness of the Implementation of Solid Waste Management Programs in Waste Reduction

Waste Reduction	Buenavista		Jordan		San Lorenzo		Sibunag		Nueva Valencia		Total	
	Mean	Int.	Mean	Int.	Mean	Int.	Mean	Int.	Mean	Int.	Mean	Int.
Waste Reduction	3.78	High	4.02	High	3.30	Moderate	2.87	Moderate	3.28	Moderate	3.54	High
Segregation	4.26	Very High	4.70	Very High	4.19	High	4.03	High	4.01	High	4.26	Very High
Processing	3.44	High	3.14	High	3.29	Moderate	3.18	Moderate	3.23	Moderate	3.28	Moderate

Scale: 1.00-1.79 (Very Low), 1.80-2.59 (Low), 2.60-3.39 (Moderate), & 3.40-4.19 (High)

Activities developed by the Local Government Units in the Implementation of Solid Waste Management Program

Data in table 2 reveal that the Local Government Units in Guimaras have developed the following activities in the implementation of Solid Waste Management Program: Formulation of Solid Waste Management Plan and Conduct education promotion and information campaign as the most developed having all the Local Government Units in the development; Conduct Technical and Capability building assistance; Formulation of local ordinance on Solid Waste Management; establish recycling Plant on Facility (Material Recovery Facility); Production and Marketing organic fertilizer; linkages with private sectors and non-government organizations; Conduct seminars and trainings on Solid Waste Management, and develop livelihood program for small recyclers and develop open landfill disposal system as the least developed activities.

Table 2. Activities developed by the Local Government Units in the Implementation of Solid Waste Management Program

Activities Developed by the LGUs in the Implementation of SWMP	Buenavista	Jordan	San Lorenzo	Nueva Valencia	Sibunag	TOTAL
1. Formulation of Solid Waste Management Plan	✓	✓	✓	✓	✓	5
2. Conduct Technical and Capability building assistance	✓	✓		✓		3
3. Formulation of local ordinance on solid waste management	✓	✓	✓		✓	4
4. Conduct education promotion and information campaign	✓	✓	✓	✓	✓	5
5. Develop livelihood program for small recyclers	✓			✓		2
6. Establish Recycling Plant or Facility (Materials Recovery Facility)	✓	✓	✓			3
7. Develop open land fill disposal system	✓				✓	2
8. Production and Marketing organic fertilizer	✓	✓	✓		✓	4
9. Linkages with private sectors and non-government organizations	✓	✓	✓	✓		4
10. Conduct seminars and training on Solid Waste Management	✓	✓		✓		3

Waste Disposal Practices Developed by the LGUs

Data revealed that the LGUs have developed the following waste disposal practices; education and dissemination as the most developed as all LGUs implemented this; segregated collection; volume reduction at the source; dumping waste in open dumpsite, establishment of materials recovery facility; composting, recycling, reusing and enforcement which is the least developed and none adopted incineration.

Table 3. Waste Disposal Practices Developed by the LGUs

Waste Disposal Practices Developed by the LGUs	Buenavista	Jordan	San Lorenzo	Nueva Valencia	Sibunag	TOTAL
Segregated collection	✓	✓	✓	✓		4
Volume reduction at the source	✓	✓		✓		3
Dumping waste in open dumpsite	✓			✓	✓	3
Establishment of materials recovery facility	✓	✓	✓	✓		4
Composting	✓	✓	✓		✓	4
Adopt incineration						0
Recycling	✓	✓	✓	✓		4
Reusing	✓	✓	✓	✓		4
Education and dissemination	✓	✓	✓	✓	✓	5
Enforcement	✓			✓		2

Problems Encountered by the LGUs in the Implementation of Solid Waste Management Program

Results revealed that in the implementation of Solid Waste Management Program the LGUs encountered problems like Garbage is not segregated well at source as to biodegradable and non-biodegradable and sanctions are not properly imposed as the most encountered; in sufficient fund; People in the community are not religiously supporting the program; LGU leaders do not take SWM as one of their priority program; lack of garbage collectors; equipment needed are insufficient; lack of monitoring/evaluating of SWMP mechanism; recycling materials are not freely utilized as an income generating and lack of information/education among stake holders as the least encountered.

Table 4. Problems Encountered by the LGUs in the Implementation of Solid Waste Management Program

Problems Encountered by the LGUs in the Implementation of SWMP	Buenavista	Jordan	San Lorenzo	Nueva Valencia	Sibunag	TOTAL
1. There is an insufficient fund for solid waste management program	✓		✓	✓	✓	4
2. The people in the community are not religiously supporting the program	✓	✓		✓		3
3. The LGU leaders do not take Solid Waste Management as one of their priority programs	✓		✓			2
4. Garbage is not segregated well at source as to biodegradable and non-biodegradable	✓	✓	✓	✓	✓	5
5. Lack of information/education among stakeholders			✓	✓		1
6. Sanctions are not properly imposed	✓	✓	✓	✓	✓	5
7. Lack of garbage collectors	✓		✓	✓		2
8. Equipment needed are insufficient	✓		✓	✓		3
9. Lack of monitoring/evaluation of Solid Waste Management Program mechanism	✓		✓	✓	✓	4
10. Recycled materials are not fully utilized as an income generating	✓		✓	✓		3

CONCLUSIONS

1. The Local Government Units in Guimaras have implemented the Solid Wastes Management Program in the form of development of the 10-year Solid Waste Management Plan and information and education campaign, were the fully implemented and least is the transfer mechanism.
2. The implemented Solid Wastes Management Program of the Local Government Units in Guimaras was highly effective.
3. There are activities developed by the Local Government Units in the implementation of Solid Waste Management Program where the most developed are formulation of Solid Wastes Management Plan and conduct of educational promotion and information campaign, while development of livelihood program for small recyclers, open landfill disposal are the least developed.
4. The Local Government Units have waste disposal practices where education and dissemination is the most practiced enforcement is the least practiced.
5. In the implementation of Solid Waste Management Program the Local Government Units encountered problems where garbage is not segregated well at source and sanctions are not properly imposed as the most encountered and lack of information/education among stakeholders as the least encountered.

The findings of the study imply, that the Local Government Units in Guimaras have complied requirement in R.A. 9003 as to the Ecological Solid Waste Management Program but the extent of implementation and level of effectiveness need to be improved for its full implementation in the aspects of source reduction, segregation, collection, transfer, processing and final disposal province wide and to the highest level of effectiveness.

There are activities and waste disposal practices developed however, these lack sustainability. The Local Government Units in the implementation of Solid Waste Management Program have encountered problems that need to be addressed.

Contributions of the Study

1. This study has provided the province of Guimaras an evaluation result of the status of its Solid Waste Management Program which is the basis of developing mechanisms to strengthen the implementation and level of effectiveness in the whole province.
2. To the Guimaras State College through its extension program in identifying where it can be involved in support to the Solid Waste Management Program like information and education, and livelihood trainings.
3. The Local Government leaders be provided with findings as to what and how their residents are getting participated in the environmental programs of the province as basis for the program improvement.
4. Development of the researchers of this study as instruments in the preservation of the mother earth through research.
5. Provide literature as reference for other Local Government Units to assess the extent of implementation and level of effectiveness of their Solid Waste Management Program.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are given:

1. LGUs in Guimaras to strengthen the extent and effectiveness of their Solid Waste Management Program.
2. Residents of the different municipalities to improve their Solid Waste Management practices for source reduction, segregation and processing practices especially the development of the Materials Recovery Facility.
3. LGUs of Guimaras to sustain the activities undertaken in the implementation of Solid Waste Management Program. Review the functions of the Solid Waste Management Board and Technical Working Group for them to be activated in order to develop more SWM related activities.
4. Development of a healthier waste disposal practices especially in the collection and dumping of waste by providing collectors and waste pickers with necessary protective suits.
5. Local Government leaders to address all problems encountered particularly fund allocation in the implementation of Solid Waste Management Program for its development.
6. Strengthen linkages with different local, national and international sectors/ organizations for the adoption of recent Solid Waste Management Technology and source of fund for the program.
7. Guimaras State College through its extension program to strengthen its support to the SWM program of the municipality especially in education and dissemination like inclusion of SWM topics in the curricula and conduct of seminars, symposia on SWM best practices and livelihood training using recycled materials as income generating project.
8. Further study on the extent and effectiveness of the implementation Solid Waste Management Program in Guimaras using other kinds of researches like experimental linking it to extension program of the college.

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STUDENTS' EXPOSURE ON TAGALOG TV PROGRAM AND THE PERCEIVED EFFECT ON THEIR PERFORMANCE IN FILIPINO SUBJECT

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ABSTRACT This study was conducted to determine the students' exposure on Tagalog TV program and the perceived effect on their performance in Filipino subject and was limited on determining the profile, the level of Tagalog TV program exposure and perceived effects on the performance in Filipino of the first year college students of Guimaras State College enrolled in Filipino 1 – Akademikong Filipino for First Semester, AY 2015-2016. The results show that out of the 144 respondents participated in the study, majority were 16 – 19 years of age, mostly females, with P5,000 and below average family monthly income, and belong to small (1-5 members) family size. Most of the respondents watched news, followed by teleserye, cartoons, entertainment, and educational shows. Moreover, news and teleserye were very often to be watched, while cartoons, entertainment, educational shows, and other shows were just sometimes to be watched. As to average number of hours spent in watching, news program have been watched daily for an average of 4.25 hours, while teleserye have been watched for 3.86 hours; 3.70 hours for cartoons; 3.26 hours for educational shows; 2.94 hours for entertainment, and 1.26 hours for others. Further, students perceived that watching tagalogtv programs result to: developed good communication skill in Filipino, got familiar and interested, enhanced inter-personal relationship, motivated to be more creative and imaginative, actively involved in classroom activities, and improved grade in Filipino subject. The type Tagalog TV programs watched, frequency of watching, and time spent in watching did not significantly correlate on the perception of the respondents on its effect on their performance in Filipino subject. The result shows that the perceived effect of watching Tagalog TV programs was not related to type, frequency and time spent on watching those TV shows.

Keywords: Tagalog TV Program, Exposure, Performance in Filipino Subject

INTRODUCTION

Background of the Study

School performance predicts educational attainment; it has the potential to affect a host of economic and health outcomes. The relation between television and movie viewing and school performance has been a subject of debate. Studies on preteens and adolescents have suggested a detrimental effect of television viewing on school performance relating it to lower homework completion, more learning problems, and worse academic achievement. However, little is known about what exactly it is about viewing television that affects school performance. Time spent watching television displaces time doing homework, or does media use influence behavioral characteristics that are ultimately related to school performance; In a cross-sectional study, it was found that hours of weekday television viewing and viewing of R-rated movie content were associated concurrently with poor school performance. These observed effects for media exposure could involve intermediate processes and several hypothesized pathways linking media variables to change in school performance (Sharif, I., et.al 2009).

Given the central role popular media plays in the lives of our children, it is important to have an understanding of the impact television viewing has on academic achievement and school performance. Parents and teachers alike ask the question of how much television viewing is too much. Few people would argue that an investigation of children's TV viewing habits could help parents better understand how youth occupy their free time. In addition, there has been growing concern over the relationship between the media and rising violence and other antisocial behaviors among youth (Thompson, 2003).

On effects of Television, more than half of U.S. students watch more than three hours of television per day on weekdays, and 60% of parents rarely or never limit their child's television viewing habits (Levine & Levine, 1996). The average television weekly viewing time is approximately 27 hours per week, while the average reading time is 8.1; a 3 to 1 ratio (Angle, 1981). Studies (Levine & Levine, 1996; Wells & Blendinger, 1997) support the finding that children watch too much TV and read too little. It has been argued that a negative side effect of high levels of viewing might include the promotion of "unintelligent consumerism" and a physically and intellectually passive dependency among our youth (Levine & Levine, 1996).

Viewing habits typically increases throughout elementary school years, and decreases during high school years. The years right before and after adolescence are the most opportune times to shape TV viewing habits (Clark, et al., 1978). Individuals in lower income brackets and with lower educational levels watch more television (Housden, 1991; Mediamark

Research Inc, 1996). Adolescents who view television during late night hours average more television viewing than do other adolescents (Potter, 1987). African American youth tend to watch more TV than their white counterparts (Caldas & Bankston, 1999). Teens who are in the lowest per week viewing category are more likely to continue their education by enrolling in college (Corporation for Public Broadcast, 1993).

On Effect of Visual Media Use on School Performance: A Prospective Study, Iman Sharif, MD, MPH, Thomas A. Wills, PhD, and James D. Sargent, MD (2009) found that the extent that school performance predicts educational attainment. The study suggested a detrimental effect of television viewing on school performance relating it to lower homework completion, more learning problems, and worse academic achievement. In a cross-sectional study, we found that hours of weekday television viewing and viewing of R-rated movie content were associated concurrently with poor school performance. Overall, the findings offer strong evidence for parental monitoring of children's television viewing time and, especially, restricting exposure to adult movie content during early adolescence.

On Television Viewing and Academic Achievement Revisited by Thompson, Franklin T.; Austin, William P. Given the central role popular media plays in the lives of our children, it is important to have an understanding of the impact television viewing has on academic achievement and school performance. Parents and teachers alike ask the question of how much television viewing is too much. Few people would argue that an investigation of children's TV viewing habits could help parents better understand how youth occupy their free time. In addition, there has been growing concern over the relationship between the media and rising violence and other antisocial behaviors among youth.

The relationship between media exposure and school performance has not been studied extensively among college students; specifically in Guimaras State College wherein students have Hiligaynon or Karay-a as their mother tongue. Hence, this study on students' exposure on Tagalog TV program and the perceived effect on their performance in Filipino subject was conducted.

Statement of the Problem

This study aimed to determine the students' exposure on Tagalog TV programs and the perceived effect on their performance in Filipino subject for AY 2015-2016. Specifically, this study sought answers to the following questions:

1. What is the personal profile of the respondents in terms of age, sex, monthly family income, and family size?
2. What is the level of Tagalog TV program exposure of the respondents as a whole and when categorized according to type of TV shows, frequency of watching and average number of hours spent in watching?
3. What is the perceived effect of Tagalog TV viewing on the performance of respondents in their Filipino subject?
4. Is there a significant relationship between the profile of the respondents and the perceived effect of Tagalog TV viewing in their academic performance as whole and when categorized as to variables?

METHODOLOGY

Research Design

This study employed descriptive method of research. According to Dr. Y.P. Aggarwal (2008) descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. This type of research method is not simply amassing and tabulating facts but includes proper analyses, interpretation, comparisons, identification of trends and relationships. This study used the design to determine the students' exposure to Tagalog TV program and the perceived effects on their performance in Filipino subject.

Locale of the Study

The study was conducted at Guimaras State College, the only government agency of higher learning in the island province of Guimaras. There are three campuses offering degree programs with Filipino subject, namely, the Mosqueda campus, in the municipality of Jordan, Baterna campus in the municipality of San Lorenzo, and Salvador campus in Buenavista. Only the Salvador campus was covered in this study for accessibility and easier conduct of data collection.

Respondents of the Study

The first year college students of Guimaras State College at Salvador campus enrolled in Filipino 1 – Akademikong Filipino for the first semester, AY 2015-2016 were the subjects of the study. The respondents were selected using the stratified random sampling. From the entire population of students with Filipino subject during the semester covered, a sample size of 144 respondents was drawn using the Slovin's formula.

Data Gathering Instrument

A researcher-made questionnaire was used in this study to determine the students' exposure to Tagalog TV program and the perceived effect on their academic performance in Filipino subject. The instrument used was composed of two parts: Part 1 covered the profile of the respondents and Part 2 focused on students' exposure to Tagalog TV programs and the perceived effects on their academic performance in Filipino.

The questionnaire used in the study was subjected to validity and reliability tests wherein four (4) juries who are experts in their field of specialization were selected to validate and test its reliability.

Data Gathering Procedure

The procedure of data gathering was followed as: after the researcher made questionnaire was found valid and reliable, the researchers secured permission and approval for the conduct of the study following the flow of research activities in approved GSC Research Manual.

Data Analysis

Data gathered from this study was tabulated, analyzed and interpreted employing both descriptive and inferential statistics. The statistical tools used in this study in analyzing the data gathered were: frequency and percentages to determine respondents distribution as a whole and according to categories of selected variables and responses for each of the items in the instrument; mean to describe the influence of the selected variables in terms of level of TV exposure, T-test for significance of correlation, Pearson r to determine the extent of relationships among variables in the study and ANOVA to determine if there are difference or deviations in correlating students' performance in Filipino with the different variables of the study.

RESULTS AND DISCUSSIONS

Profile of respondents

The profile of respondents is presented in terms of their age, sex, monthly income and family. Results reveal that of the 144, majority (80.6%) aged between 16 to 19 years of age, while only few (19.4%) aging 20 years of age and above; most of them are females with 81.9% while the male counterparts are only 18.1%; half (50%) of them had a monthly income of P 5,000.00 and below, followed by those (35.4%) earning between P 5,001.00 to P10,000.00; and just half (51.4%) belongs to small family size with 1-5 members, with near half (45.8%) having medium family size (6 to 10 members).

Table 1. Profile of the respondents

Profile		Frequency	Percent
Age	16 to 19	116	80.6
	20 & above	28	19.4
Sex	Male	26	18.1
	Female	118	81.9
Monthly Income	5,000 & below	72	50.0
	5,001-10,000	51	35.4
	10,001-15,000	10	6.9
	15,001-20,000	4	2.8
	above 20,000	7	4.9
Family Size	small (5 & below)	74	51.4
	medium (6-10)	66	45.8
	large/extended (more than 10)	4	2.8
Total		144	100.0

Tagalog TV shows

Tagalog TV shows being watched by respondents included the specific TV program, the frequency of watching and the average number of hours spent in watching. Results show that most of the respondents used to watch news (83.3%) and teleserye (81.3%); these are followed by cartoons (63.2%), entertainment (58.3%), and educational shows (52.1%). Very often, respondents watched news and teleserye, having a mean of 3.61 and 3.59, respectively. But sometimes, they also watched entertainment shows with a mean of 3.39; educational and other shows, with a mean of 3.06 respectively, and cartoons, with a mean of 3.03. As to the average number of hours spent in watching Tagalog TV program, news program have been watched at an average of 4.25 hours daily, followed by teleserye with an average of 3.86 hours, then cartoons with an average of 3.70 hours and educational shows at 3.26 hours, while only 2.94 hours daily for entertainment and only 1.26 hours for other shows.

Table 2. Tagalog TV shows, frequency and number of hours spent

Tagalog TV shows watched	Frequency of watching			average # of hours spent
TV shows	F	%	Mean	Interpretation
News	120	83.3	3.61	Very often
Teleserye	117	81.3	3.59	Very often
Cartoons	91	63.2	3.03	Sometimes
Educational shows	75	52.1	3.06	Sometimes
Entertainment	84	58.3	3.39	Sometimes
Others	20	13.9	3.06	Sometimes

Perceived Effects of Tagalog TV viewing

The perceived effects of Tagalog TV viewing among respondents are ranked accordingly such as: developed good communication skill in Filipino (72.9%); got familiar and interested (68.1%), enhanced inter-personal relationship (57.6%), motivated to be more creative and imaginative (55.6%), actively involved in classroom activities (54.9%), improved grade in Filipino subject (52.1%). Other perceived effects on their academic performance in Filipino subject are: fluent in oral recitation in Filipino (48.6%), enhanced self confidence, motivated to love and appreciate the subject, and strived to study harder in Filipino at 45.1% respectively, excited with the learning environment (36.1%) and self-independence (33.3%).

Table 3. Perceived Effects of Tagalog TV viewing

Statements	F	%	rank
1. developed good communication skill in Filipino	105	72.9	1
2. got familiar and interested	98	68.1	2
3. enhanced inter-personal relationship	83	57.6	3
4. motivated to be more creative and imaginative	80	55.6	4
5. actively involved in classroom activities	79	54.9	5
6. improved grade in Filipino subject	75	52.1	6
7. fluent in oral recitation in Filipino	70	48.6	7
8. enhanced self-confidence	65	45.1	9
9. motivated to love and appreciate the subject	65	45.1	9
10. strived to study harder in Filipino	65	45.1	9
11. excited with the learning environment	52	36.1	11
12. self-independence	48	33.3	12

Relationship between the profile of respondents and the perceived effect of Tagalog TV viewing

The perceived effect of Tagalog TV viewing was not dependent on the profile of the viewers. As shown in the following table, the profile of the respondents categorized into age, sex, monthly income and family size were all interpreted as not significant. On individual item: age has a mean of 1.629 with p-value of 0.658 interpreted as not significant; sex with a mean of 2.855 and p-value of 0.894 is interpreted as not significant; monthly income has a mean of 2.208 with p-value of 0.741 is interpreted as not significant, and family size has a mean of 1.308 with p-value of 0.322 also interpreted as not significant. This implies that the perceived effects of TV viewing were homogeneous regardless of the profile characteristics of the viewers.

Table 4. Relationship between Profile of the respondents and the perceived Effect of Tagalog TV viewing

Variables	X ² -value	p-value	Interpretation
Age	1.629	0.658	Not significant
Sex	2.855	0.894	Not significant
Monthly Income	2.208	0.741	Not significant
Family Size	1.308	0.322	Not significant

CONCLUSIONS

Based on the findings of the study, the following conclusions were advanced:

1. Majority of the respondents are between 16 to 19 years of age, mostly females having family monthly income of P 5,000.00 and below, and coming from small (1-5) to medium (6-10) family size.
2. Most of the respondents used to watch news and teleserye followed by cartoons, entertainment and educational shows with news and teleserye being watch very often while entertainment, educational and other shows, and cartoons are sometimes to be watched. Respondents used to spend more time watching news program and teleserye, so with cartoons, and educational shows, and less time for entertainment and other shows.
3. The respondents perceived that watching Tagalog TV program resulted to developed good communication skill in Filipino, got familiar and interested, enhanced inter-personal relationship, motivated to be more creative and imaginative, actively involved in classroom activities, and improved grade in Filipino subject.
4. The type of Tagalog TV programs watched, frequency of watching, and time spent in watching did not significantly correlate on the perception of the respondents on its effect on their performance in Filipino subject, and that the perceived effects of TV viewing were homogeneous regardless of the profile characteristics of the viewers.

RECOMMENDATIONS

Based on the conclusions, the following recommendations were provided:

1. Media education can also be taught as part of the curriculum in schools to enlighten the young students to respond thoughtfully and critically to media content. Based on the result that exposure to TV programs developed among them communication skills in Filipino, and the fact the news program was the most frequently viewed by them. It will enable the students to put media violence into perspective and would be conscious of what is happening in the current trend situation.
2. Considering that next to watching news programs, teleserye is also frequently watched by students, with this, the Movie and Television Review and Classification Board (MTRCB) should be watchful and ensure strict rules and regulations on the films and TV programs that contain violence, nudity, ritual killings and so on.
3. All the stakeholders to this effect should become more active to ensure that the media become sensitive to the impact of violence on the Guimaras children.
4. Parents should be active participants in screening and scrutinizing carefully on the kind of TV programs their children watch. They should also responsible in limiting inappropriate or excessive media use by keeping a critical eye on the content of shows watched by their children.
5. Children who have TV sets in their rooms tend to watch more TV with less supervision; Therefore, TV sets should be removed from children bedrooms. Adults can "mediate" viewing and making TV a learning experience by sitting with the student, discussing, asking questions, and helping with interpretation of the content.

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EFFECTS OF EDUCATIONAL GAMES AS INSTRUCTIONAL TOOLS IN TEACHING COLLEGE ALGEBRA

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ABSTRACT Time and again, curriculum planners, policy makers and researchers have been exploring the extent thru which numeracy among students develops and improves via Mathematics instruction. The quality of Mathematics education in the country is alarming. Some measures have been exhausted to address this discipline's status which is attributed to multi-faceted reasons, and causes. Commonly, students in college experience the most difficult phase in learning Mathematics. No matter how difficult a subject is, a competent instructor could make it easy. Believing that everything exists with its own hidden value, educational games do have its greatest value in the field of Mathematics especially in College Algebra. Thus, to help the Math instructors and other stakeholders solve the difficulties that students encounter in College Algebra, the researchers aimed to determine the effectiveness of educational games as instructional tools in teaching College Algebra among bona fide freshman students of Guimaras State College- Mosqueda and Salvador Campuses for the first semester of academic year 2015-2016. This study utilized the thirty (30) – item pretest and posttest multiple- choice questionnaire that undergone validation and reliability (Cronbach's alpha = 0.803). Communications to proper authorities were secured. This study used pretest posttest design between two groups: experimental in Mosqueda Campus, and controlled in Salvador Campus. Each group had thirty (30) subjects taught and facilitated by the same researcher instructor. The experimental group had an intervention of educational games while the controlled group had lecture method. Both groups had been taught for one term with the same time frame and topics. Mean scores were used to determine the performances of two groups while paired samples t-tests were used to determine the differences of their test results. Results were collected, organized, presented, analyzed, and interpreted using the Statistical Package for Social Sciences (SPSS) software program. The level of significance was set at 0.05. Results revealed that subjects in the experimental group had higher performance than controlled group based on their pretest and posttest mean scores. Likewise, there were significant differences on their pretest and posttest results. Hence, the null hypotheses were rejected. These results implied that educational games as instructional tools were better than pure lecture method in the teaching-learning process of the 21st century learners. Thus, educational games shall be used in other disciplines or areas, not only in College Algebra, and these shall serve as bases for extension programs for those learners who encounter difficulties in learning Mathematics.

Keywords: Mathematics, educational games, College Algebra

INTRODUCTION

Background of the Study

Time and again, curriculum planners, policy makers and researchers have been exploring the extent thru which numeracy among students develops and improves via Mathematics instruction. The quality of Mathematics education in the country is alarming. Some measures have been exhausted to address this discipline's status which is attributed to multi-faceted reasons, and causes.

Commonly, students in college experience the most difficult phase in learning Mathematics. College Algebra is a subject that deals with symbols that are easy to visualize. This course will enable the students to think critically by solving and graphing equalities and inequalities, applying algebraic expressions and linear equations in practical contexts, solving problems on combinatorial progression, and solving problems about exponential and logarithmic functions. This can also serve as a foundation for higher Mathematics that will help them consider that this subject can be of help on their daily existence. It takes an almost mystic character as students in all parts of the world to either struggle with it and find it quite difficult or find it a great deal of enjoyment and satisfaction(The Modern Teacher. (1999) Vol. 48. No. 3. Pp. 91-94).

Instructors are no longer demonstrating basic Arithmetic at this level, but are asked to introduce difficult concepts. Although College Algebra may seem less visual, and hands on fractions, for instance, is actually very tangible. If taught correctly, College Algebra is accessible and provides the basics in critical thinking and logic skills that have impacts outside the realm.

No matter how difficult a subject is, a competent instructor could make it easy. Believing that everything exists with its own hidden value; educational games do have its greatest value in the field of Mathematics especially in College Algebra.

Thus, to help the Math instructors and other stakeholders solve the difficulties that students encounter in College Algebra; the researchers came up with the study entitled: "Effects of Educational Games as Instructional Tools in Teaching College Algebra."

Statement of the Problem

Generally, this study aimed to determine if educational games were effective instructional tools in teaching College Algebra among bona fide freshman students of Guimaras State College- Salvador and Mosqueda Campuses for the first semester of academic year 2015-2016. Specifically, it sought answers to the following questions:

1. What is the pre-test performance of the subjects between experimental and controlled groups?
2. What is the post-test performance of the subjects between experimental and controlled groups?
3. Is there a significant difference between pre-test results of the experimental and controlled groups?
4. Is there a significant difference between post-test results of the experimental and controlled groups?
5. Is there a significant difference between post-test and pre-test results of the controlled group?
6. Is there a significant difference between post-test and pre-test results of the experimental group?

METHODOLOGY

Research Design

The experimental method of research was used in this study. This study used the pre-test posttest design.

Experimental Group → Pretest → Educational Games → Posttest
Controlled Group → Pretest (same test) → Posttest (same test)

Subjects of the Study

The subjects of this study were the bona fide freshman students of Guimaras State College - Salvador and Mosqueda Campuses who took College Algebra as their subject in the first semester of academic year 2015-2016. Thirty students at Mosqueda Campus were subjected to educational games, and thirty students were not subjected to educational games at Salvador Campus.

Research Instruments

This study utilized the pretest and posttest questionnaires. The pretest and posttest were multiple-choice types of tests. These were thirty (30) - item tests that were duly validated by three experts at Guimaras State College. These instruments also underwent reliability testing with Cronbach's alpha = 0.803.

Data Gathering Procedure

This study was conducted in the first semester of the academic year 2015-2016 at Guimaras State College particularly the bona fide freshman students who took College Algebra as their subject. In the administration of this study, permission from the authorities was secured. Communication was prepared, and submitted to the proper authorities. Letter for the respondents was also facilitated.

This study used pretest- posttest design between two groups: experimental in Mosqueda Campus, and controlled in Salvador Campus. Each group had thirty (30) subjects taught and facilitated by the same researcher/ instructor. The experimental group had an intervention of educational games while the controlled group had lecture method. Both groups had been taught for one term with the same time frame and topics. Mean scores were used to determine the performances of two groups while paired samples t-tests were used to determine the differences of their test results. Results were collected, organized, presented, analyzed, and interpreted using the Statistical Package for Social Sciences (SPSS) software program. The level of significance was set at 0.05.

Statistical Tools

The Descriptive Statistics used were the mean and standard deviation to describe the performance of freshman students after the use of educational games as instructional tools in teaching College Algebra. For the inferential analyses, paired samples t-tests for mean differences of two variables between two groups (controlled and experimental) were used. Significance level was set at 0.05 for two-tailed test.

RESULTS AND DISCUSSION

Pre-test Performance of the Subjects between Experimental and Controlled Groups

Table 1 shows the pre-test performance of the subjects between experimental and controlled groups. Results revealed that pretest performance in the experimental group M (4.9333), SD (2.69013) while the pre-test performance in the controlled group was M (3.5667), SD 1.71572). This implies that the subjects before the intervention of educational mathematical games as instructional tools in the experimental group performed better than controlled group based on their pre-test results in College Algebra.

Table 1. Pre-test Performance of the Subjects between Experimental and Controlled Groups

	N	Mean	Std. Deviation	Variance
Pre-test (Experimental Group)	30	4.9333	2.69013	7.237
Pre-test (Controlled Group)	30	3.5667	1.71572	2.944

Post-test Performance of the Subjects between Experimental and Controlled Groups

Table 2 shows the post-test performance of the subjects between experimental and controlled groups. Results revealed that the post-test performance in the experimental group was M(27.6667),SD (2.42591) while the post-test performance in the controlled group was M(21.3333),SD (2.56412). This implies that the subjects after the intervention of educational games as instructional tools in the experimental group performed better than those subjects in the controlled group where there was no intervention of educational games in College Algebra.

Table 2. Post-test Performance of the Subjects between Experimental and Controlled Groups

	N	Mean	Std. Deviation	Variance
Post-test (Experimental Group)	30	27.6667	2.42591	5.885
Post-test (Controlled Group)	30	21.3333	2.56412	6.575

Difference between Pre-test Results/Performance of the Experimental and Controlled Groups

Table 3 shows the difference between pre-test results of the subjects in the experimental and controlled groups. Results revealed that there was a significant difference $t(2.177)$, sig. 2-tailed(0.038) between the groups. This implies that the subjects performed differently even before the intervention of educational games in the experimental group.

Table 3. Difference between Pre-test Results/Performance of the Experimental and Controlled Groups (Paired Samples Test)

	Paired Differences		Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	Interpretation
	Mean	Std. Deviation		Lower	Upper				
Pre-test (Experimental Group) - Pre-test (Controlled Group)	1.36667	3.43896	.62787	.08254	2.65079	2.177	29	.038	Significant

* $\alpha < 0.05$ level of significance

Difference between Post-test Results/Performance of the Experimental and Controlled Groups

Table 4 shows the difference between post-test results of the subjects in the experimental and controlled groups. Results revealed that there was a significant difference $t(10.033)$, sig. 2-tailed (0.000) between the two groups. This implies that the subjects in the experimental group after the intervention of educational games as tools have higher performance than the controlled group with no intervention of educational games in College Algebra.

Table 4. Difference between Post-test Results/Performance of the Experimental and Controlled Groups (Paired Samples Test)

	Paired Differences					t	df	Sig.(2-tailed)	Interpretation
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Post-test (Experimental Group) - Post-test (Controlled Group)	6.33333	3.45746	.63124	5.04230	7.62437	10.033	29	.000	Significant

* $\alpha < 0.05$ level of significance

Difference between Post-test and Pre-test Results/Performance of the Controlled Group

Table 5 shows the difference between post-test and pre-test performance of the controlled group with no intervention of educational games. Results revealed that there was a significant difference between pre-test and post-test results $t(39.800)$, sig. 2-tailed(0.000). This implies that the subjects improved their performance even without the intervention of educational games in College Algebra.

Table 5. Difference between Post-test and Pre-test Results/Performance of the Controlled Group (Paired Samples Test)

	Paired Differences					t	df	Sig. (2-tailed)	Interpretation
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Post-test (Controlled Group) - Pre-test (Controlled Group)	17.76667	2.44503	.44640	16.85368	18.67966	39.800	29	.000	Significant

* $\alpha < 0.05$ level of significance

Difference between Post-test and Pre-test Results/Performance of the Experimental Group

Table 6 shows the difference between post-test and pre-test performance of the experimental group with the intervention of educational games. Results revealed that there was a significant difference between pre-test and post-test results $t(49.451)$, sig. 2-tailed(0.000). This implies that the subjects really improved their performance with the intervention of educational games as tools in College Algebra.

Table 6. Difference between Post-test and Pre-test Results/Performance of the Experimental Group (Paired Samples Test)

	Paired Differences		Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	Interpretation Significant
	Mean	Std. Deviation		Lower	Upper				
Post-test (Experimental Group) - Pre-test (Experimental Group)	22.73333	2.51798	.45972	21.79310	23.67356	49.451	29	.000	

* $\alpha < 0.05$ level of significance

CONCLUSION

1. Based on the pre-test results, the subjects between experimental and controlled groups had different performance based on their mean scores. Experimental group performed better than controlled group.
2. Based on the post-test test results, the subjects between experimental and controlled groups had different performance based on their mean scores. Experimental group performed better than controlled group.
3. Based on the pre-test results, there was a significant difference before the intervention of educational games in the experimental group. Hence, H_0 was rejected.
4. Based on the post-test results, educational games as tools in teaching College Algebra really had a significant difference. Hence, H_0 was rejected.
5. Based on the pre-test and post-test results, there was a significant difference between pre-test and posttest results of the controlled group. Hence, H_0 was rejected.
6. Based on the pre-test and post-test results, educational games as tools in teaching College Algebra really had a significant difference. Hence, H_0 was rejected.

RECOMMENDATION

1. It is recommended that the college instructors must have to strengthen and utilize the use of educational mathematical games as tools in teaching Mathematics, not only College Algebra.
2. It is recommended that educational games must be part of every subject area in Mathematics since it has an important role to play in teaching and learning mathematical concepts.
3. It is recommended that instructors and professors must try educational games as tools in teaching Mathematics, especially concepts in College Algebra.
4. It is recommended that instructors and professors must include educational games in areas of Mathematics in order to strengthen their students' critical thinking skills while they have fun learning Mathematics.
5. It is recommended that instructors and professors must use these educational games as tools to improve students' performance and appreciation on the language and beauty of Mathematics.
6. It is recommended that educational games must also be used in other areas aside from teaching College Algebra. These can be used as an educational extension program to students who had difficulty to grasp in learning Mathematical concepts. These can help to unlock the wrong notion on Mathematics as the most difficult discipline.

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EMPLOYMENT STATUS OF THE BACHELOR IN HOTEL AND RESTAURANT MANAGEMENT GRADUATES OF GUIMARAS STATE COLLEGE AY 2012 –2015: A TRACER STUDY

**Ivony S. Asprilla,
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Margie Y. De la Cruz**

INTRODUCTION

Background of the Study

Employability is improved by a good academic record plus skills and attributes that enable you to adapt and manage the constantly changing work environment. The Colleges should have quality teachers and the students should imbibe something from them. Universities focused on theoretical study, in terms of mark system but industries are expecting the manpower in terms of good attitude, commitment, self- responsibility, quick learner and in short an smart or an intelligent guy. Education in its broadest sense is any act or experience that has a formative effect on the mind, character and physical ability of an individual. In its technical sense, education is the process by which society deliberately transmits its accumulated knowledge, skills and values from one generation to another. Higher education, also called tertiary, third stage or post secondary education is any education entered after successful completion of secondary education, which may include vocational post secondary education, leading to a certificate and higher education, leading to a degree. (Campbell &Rozsnyai, 2002)

The graduates' entry into a job is attributed to the outcome of a complex process involving the interaction of their personal characteristics, characteristics of the school where they obtained their education, and characteristics of firms where they might apply their acquired skills and knowledge.

According to macario (1983) and Nepomuceno (1995 in Cordada & tabasa, 2004), the hierarchy of the graduates occupational choices and the firms' hierarchy of methods in personal selection are also considered. Among the personal variables associated with employment prospects are the graduates age, gender, marital status, college performance, self-concept, award received, course, family background, occupational interest, job performance and satisfaction. (Macario (1983) and Nepomuceno (1995 in Cordada & Tabasa 2004).

The hospitality industry has been key in the economic life of every nation. With the hospitality industry increasing growth rate, the importance of finding good employees, especially youth workers, is a high priority (US Bureau of labor Statistics, 2006) Historically, the hospitality industry has drawn heavily from the youth labor pool to meet their workforce needs, but in recent years the industry has been left with an insufficient pipeline of new workers to satisfy demand. Faced with a shrinking pipeline of workers, the hospitality industry is increasing its recruitment efforts towards youth and developing targeted strategies for previously untapped labor force.

Thousands of schools in the country offer Hotel and Restaurant Management and related courses. One of these schools that offer such course is Guimaras State College. Hotel and Restaurant management curriculum prepares students to apply practical skills needed for supervisory and managerial positions in hotels, motels, inns, restaurants, institutions and clubs. The challenge of schools is to develop students in a manner that when they graduate they can respond to the urgent needs of the industry. In order to find out whether the Guimaras State College, College of Business and Management adheres to respond to this challenge, and considers the tracer study of Bachelor of Science in Hotel and Restaurant Management necessary. This study aimed to find out the employment status of their graduates.

Statement of the Study

This study was conducted to determine the employment status of the BSHRM graduates of GSC curricular program from 2012-2015. Specifically this study sought to answer the following questions:

1. What is the profile of the Bachelor of Science in hotel and Restaurant management graduates in terms of the following variables: year graduated, gender, and academic performance?
2. What is the employment status of Bachelor of Science in Hotel and Restaurant Management graduates in terms of the following variables: nature of employment, and job status?

METHODOLOGY

Research Design

Research design is a scheme or plan of action for meeting the objectives of the study. The descriptive method of research was used in this study to determine the employment status of the BSHRM graduates of GSC from A.Y. 2012-2015. Descriptive research was appropriate for this study, which aims to find out what prevails in the present conditions or relationships, held opinions and beliefs, processes and effects and developing trends.

The Respondents

The respondents of this study were the BSHRM graduates of Guimaras State College from A.Y. 2012 – 2015. The list of the respondents was taken from the records from the Registrar's Office. Total enumeration was used because the number of graduates is manageable.

Data Gathering Instrument

The data needed in the study was gathered using a researcher prepared questionnaire. The questionnaire was composed of 2 parts. Part I includes items on personal information of the respondents such as age, sex and marital status, course and year graduated. Part 2 includes items on the employment data of the respondents such as, present employment status, employer, nature of business, present position and job title.

Data Gathering Procedure

The questionnaire was distributed to the respondents. The addresses of the graduates were taken from the records of the school's registrars' office. Upon identification of the respondents, they were grouped per Municipality and Barangay for easy conduct of the study. The questionnaires for the graduates from the farthest barangay of the Province were distributed first for easy management of time during the conduct of the actual study. Respondents who are employed abroad were reached through the aid of social media such as, facebook, messenger and electronic mail.

Statistical Tools Used in the Study:

The data was collected, sorted and tabulated based on the requirement of the study. The data gathered was analyzed by getting the frequency, percentages and ranking.

RESULTS AND DISCUSSION

General Information of the Respondents

In order to establish the general information about the study, there is a need to know the personal profile of the respondents first. In terms of gender, results revealed that majority or 59 or 64.1% of the respondents were female. This indicates that out of 92 respondents, 59 are female and 33 were male. The respondents' age were grouped into two, 21-25 years old and 26 years old and above. Results showed that 67 or 72.8% belongs to 21-25 years old, and 25 or 27.2% belongs to 26 years old and above. This implied that majority of the respondents are still young and that they have greater chances of landing in a better and stable job.

Table 1. Profile of the Respondents

Particulars	Frequency	%
A. Gender		
Female	59	64.1
Male	33	35.9
TOTAL	92	100
B. Age		
21-25 years old	67	72.8
26 years old and Above	25	27.2
TOTAL	92	100

Educational Profile of the Respondents

The educational profile of the respondents, educational attainment, their choice of school and their Baccalaureate degree are indicators of how they value the importance of acquiring the best education.

In terms of educational attainment, results revealed that majority of the respondents (92 or 100 %) were graduate of Bachelor of Science in Hotel and Restaurant Management. As to the year graduated results revealed that 40 or 43.5% graduated last 2012-2013, 32 or 34.8% graduated last 2013-2014 and 20 or 21.7% graduated last 2014-2015. This implies that academic year 2012-2013 has a higher number of graduates.

Table 2. Educational Profile of the Respondents

Particulars	Frequency	%
BSHRM		
Year Graduated		
2012-2013	40	43.5
2013-2014	32	34.8
2014-2015	20	21.7
TOTAL	92	100

Status of Employment

Table 3 presents the employment status of the respondents. Results revealed that out of 92 respondents, 70 or 76.1% were presently employed, 22 or 25.0% were unemployed. At the time of the study was conducted result shows that 45 or 64.3% were able to land a job less than 6 months after graduating in college, 20 or 28.6% land a job 6 months to 1 year after graduation, 5 or 7.1% land a job 1-2 years after graduation. This implies that they had a wider avenue and greater opportunities to land a job after graduation for since the profession is considered in demand

Table 3. Employment Data

Particulars	Frequency	%
Status of Employment		
Employed	70	76.1
Unemployed	22	25.0
Total	92	100
Year to land first job		
Less than 6 months	45	64.3
6 months to 1 year	20	28.6
1 year to 2 years	5	7.1
Total	70	100

Place of Employment

Table 4 presents the type of employment of graduates. Results shows that 57 or 81.4 % are locally employed, 12 or 17.1% are employed in other countries and 1 or 1.4% is self-employed. This implies that most of the graduates are working locally which means that the hospitality industry is growing in our country that give many work opportunities to our graduates.

Table 4. Place of Employment

Particulars	Frequency	%
Type of Employment		
Local	57	81.4
Abroad	12	17.1
Self employed	1	1.4
Total	70	100

Reasons for Unemployment

To determine why some of the respondents were unemployed at the time when the study was conducted, they were asked to cite reasons as to why they were not employed. Table 5 revealed the reasons why some of them were unemployed. Results shows that 8 or 36.4 % have never been employed, 14 or 63.6 % resigned from their previous job. This implies that most of the graduates were unemployed due to resignation from their previous job.

These data were shown in Table 5

Table 5. Reasons for Unemployment

Particulars	Frequency	%
Never been employed	8	36.4
Resigned from previous job	14	63.6
Total	22	100

Nature of Work

In order to know the nature of work of the BSHRM graduates this study was conducted, the researchers provided categories in which they can choose. Results revealed in Table 6 that 60 or 85.7% of graduates' nature of work was service while manufacturing, commercial and agriculture answered 1 or 1.4%. This implies that most of the graduates work were related with their profession.

Table 6. Nature of Work

Particulars	Frequency	%
Service	60	85.7
Manufacturing	1	1.4
Commercial	1	1.4
Financial	2	2.9
Agriculture	1	1.4
Others	5	7.1
Total	70	100

Data in table 7 shows the recent position of the BSHRM graduates from the school year 2012-2015. Results revealed that 36 or 51.4% of graduates' recent position was rank and file which got the highest percentage, 4 or 5.7% choose managerial, 2 or 2.9% for supervisory and 28 or 40% answered others for they are under contract or contractual workers.

Basically, the result revealed that majority of the graduates were in their field of specialization as skilled worker being a service crew, bartender, room attendant, food and beverage attendant, receptionist and dining crew. Other respondents were employed in job related to the course/profession they graduate. This may imply that their present employment is basically on entry level. This may also imply that an entry level of employment will serve as an entry point of promoting them to supervisory and managerial positions. These data are shown in Table 7

Table 7. Recent Position

Particulars	Frequency	%
Rank and File	36	51.4
Supervisory	2	2.9
Managerial	4	5.7
Others	28	40.0
Total	70	100

CONCLUSIONS

1. The respondents were HRM Baccalaureate graduates majority of them were female and younger in the age bracket (21-25 years old) and single. This implies that respondents' possess job knowledge and skills. They still have greater chances of getting experiences for their job promotion other than entry level.
2. They had a wider avenue and greater opportunities to land a job after graduation since the profession is considered in demand and more hospitality establishments are rising locally and internationally. Being competitive graduates of Guimaras State College with skills and quality education in this growing and technologically community there is no reason for our graduates not no employ locally, They have all the skills and great opportunities to conquer. Graduates know where they are capable or in line to employed themselves using their skills and profession. Respondents were employed in job related to the course/profession they graduate in which they are on the entry level of employment that will serve as an entry point of promoting them to supervisory and managerial positions.

RECOMMENDATIONS

1. In order to attain an increase in the number of male enrollees in the School of HRM the institution should advertise HRM using print and broadcast media showing the different skills and talents of the HRM graduate's.
2. School of HRM must offer more trainings and seminars, and provide avenue to expose students in the actual field of specialization to especially in the managerial positions in order for them to acquire a higher position in the company. School of HRM must coordinate with the OJT partners so that they can help the graduates for employments. Encourage them to stay and love their work. The school should developed and strengthen job placement program for the graduates so they will not find difficulty for job hunting. The school should have seminars and orientation during their OJT years so that they would know the value of employment and the nature of their work in preparation for their job after graduation. The students must be given an opportunity to benchmark on the different workplace area so that they will be inspired to work hard during employment and aim for promotion.

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MALE PARTNER'S AWARENESS IN THE IMPLEMENTATION OF VIOLENCE AGAINST WOMEN IN GUIMARAS

**Jo Ann T. Gerada,
Violeta C. Efondo
Kert D. Pillora**

Abstract Violence Against Women (VAW) appears as one of the country's pervasive social problems. According to the 2008 National Demographic and Health Survey conducted by the National Statistics Office, one in five Filipino women age 15-48 had experienced physical violence since age 15. It is indeed alarming that despite efforts to address the concern, Violence Against Women (VAW) persists. This study was conducted to determine the level of awareness of male partners in the implementation of Anti Violence Against Women. A descriptive research design was employed in this study. Participants size is 350 male partners determined through stratified random sampling of the married and live-in partner in the province of Guimaras. A researcher made questionnaire was utilized in this study which consists of personal profile and awareness on the implementation of violence against women. The statistical tools used were frequency count, percentage and T-test. Respondents were mostly classified as young adult having ages 18-35 years old, majority were high school graduates. Majority was high school graduates, catholic, married and have permanent job. As a whole respondent has been very aware which implies that implementation of violence against women was widely disseminated throughout the five (5) municipalities of the Province of Guimaras. The level of awareness in the implementation of violence against women among the respondents were dependent in the civil status of the male partners, separated partners were noted to have highest mean which may indicate that violence against women could be the reason of separation.

Keywords: Male Partners, Level of Awareness, Violence Againsts Women, Guimaras

INTRODUCTION

Background/Rationale

The Section 2 of R.A.9262 specifically states that the State values the dignity of women and children and guarantees full respect for human rights. The State also recognizes the need to protect the family and its members particularly women and children, from violence and threats to their personal safety and security.

Violence Against Women (VAW) appears as one of the country's pervasive social problems. According to the 2008 National Demographic and Health Survey conducted by the National Statistics Office, one in five Filipino women age 15-48 had experienced physical violence since age 15. It is indeed alarming that despite efforts to address the concern, Violence Against Women (VAW) persists. Violence Against Women (VAW) is deemed to be closely linked with the unequal power relationship between women case and men otherwise known as "gender-based violence". Societal norms and traditions dictate people to think men are the leaders, pursuers, providers, and take on dominant roles in society while women are nurtures, men's companions and supporters, and take on subordinate roles in society. This perception leads to men in gaining more power over women.

At their homes, some women are accused of being "naggers" or neglectful of their duties as wives that is why they are beaten by their spouses. Rape sometimes attributed to a raped women's "flirtatious" ways. A woman filling for sexual harassment, in some instances is blame for being malicious by interpreting her employer's appreciation of her good looks. These are just some of the realities that contribute to the vulnerability of Filipino women to Violence against Women (VAW). An even greater problem is the lack of concrete information to show the extent of Violence against Woman (VAW) in the county as many cases of Violence against Women (VAW) often go unreported due to women victim's "culture of silence". Many of the victims are ashamed to relate their experiences while other tend to dismiss their ordeal as a result of their lack of faith in the country's Justice System caused by frustration over the lack of result in filling complaints.

Several Government mechanisms have already been put in place to address Violence Against Women (VAW). Non-government organizations also take part in this crusade. It is uncertain when this trend will totally diminish in the Philippines setting, but as long as current efforts to fight Violence Against Woman (VAW) are sustained, hope could be set high.

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Several Government mechanisms have already been put in place to address Violence Against Women (VAW). Non-government organizations also take part in this crusade. It is uncertain when this trend will totally diminish in the Philippines setting, but as long as current efforts to fight Violence Against Woman (VAW) are sustained, hope could be set high. More and more women in the Philippines are being abused and subjected to acts of violence, with one in five women aged 15 to 49 found to have experienced physical violence, while one in ten women have experienced sexual violence.

This finding, a result of the National Statistics Office's National Demographic and Health Survey (NDHS), was shared by WeDpro in the end-of-project conference for The Red AVP (Anti-Violence Project), short for Private and Public Faces of Violence Against Women: Addressing Domestic Violence and Trafficking In the Urban Poor Communities and Entertainment Centers of Angeles City and Olongapo City. Because of these alarming data, WeDpro, with the support of the European Union, embarked on The Red AVP, which are identified factors constraining the effective implementation of anti-trafficking and anti-violence against women and children (VAWC) laws in Angeles City and Olongapo City. The project also endeavored to build the capacities of stakeholders to address the identified factors hindering the protection and fulfillment of the right against trafficking and violence. WeDpro noted that cases of violence against women and children have risen over the years, despite the passage of Republic Act (R.A.) 9208 in 2003, which sought to eliminate and punish human trafficking and established the necessary institutional mechanisms for the protection and support of trafficked persons, as well as R.A. 9262, the Anti-Violence Against Women and Their Children Act of 2004, which granted the government the right to intervene in case of household violence or abuse against women and children. "The implementation gap in this country continues to remain particularly glaring," noted Lila Ramos Shahani, Assistant Secretary of the National Anti-Poverty Commission. "Violence against women and trafficking are overt manifestations of gender inequality in the Philippines and its prevalence in our patriarchal culture."

WeDpro's research report "Surviving Violence and Trafficking: Stories of Women & Youth of Angeles & Olongapo Cities", a result of The Red AVP, determined the factors that have hindered the implementation of anti-violence and trafficking laws. Among these are the lack of support mechanisms, both material and human resources, in Barangays and LGUs; the lack of fiscals in Family Courts and the ensuing inefficiency of the government's prosecution service; political constraints such as the change of leadership in LGUs and lack of women's organizations that sustain anti-VAWC programs; and beliefs and attitudes that perpetuate violence such as the community's view that abused and trafficked survivors are "willing" victims.

To hurdle these challenges, WeDpro determined that that barangays, local government units (LGUs), civil society groups, the media and the community must all work together to stop violence against women and children. Commission on Human Rights (CHR) Chairperson Loretta Ann "Etta" Rosales declared her support for WeDpro, saying, "My priorities include revitalizing the Philippine human rights infrastructure, nurturing a strong human rights culture, and building strong partnerships with the civil society and NGOs. These include further strengthening our centers on women and children. We should all work together to protect, respect and fulfill the human rights of every single Filipino"

Angeles Mayor Edgardo Pamintuan echoed the need for different stakeholders to cooperate and collaborate. "The problem is just too big, its roots too deep, for us to defeat alone. We need the support of civil society organizations, the national government, and the international community...Trafficking and violence against women and children are related to many other issues and social problems, especially poverty, lack of education, law enforcement, corruption and many others. In other words, only a holistic approach could contain it," he said (www.wedprophils.org/redavp-research-reports).

Statement of the problem

This study was conducted to determine the level of awareness of male partners in the implementation of R.A. 9262 Anti Violence Against Women and their Children Specifically, this study sought answer the following questions:

1. What is the profile of respondents according to variables such as age, educational attainment, religion, civil status and employment status?
2. What is the level of awareness of male partners in the implementation of Violence Against Women (VAW) in the province of Guimaras when grouped as to variables such as age, educational attainment, religion, civil status and employment status?
3. Is there a significant difference in the level of awareness among male partners in the implementation of RA 9262 taken as a whole, and categorized according to variable?

METHODOLOGY

Research Design

The descriptive method of research was employed in this study. It comprised and concerned with collecting and describing a set of data for the awareness of male partners on in the implementation of Violence Against Women. A survey was used to gather information of a field to correct practices, trends and norms to find out the evaluation on the Awareness of Male Partner's in the Implementation of Violence Againsts Women (VAW).

Locale of the study

The locale of the study will be conducted in the province of Guimaras.

Respondents of the Study

The respondent of the study are the Male Partners in the province of Guimaras. The respondent of the study was determined through stratified random sampling of the married and live-in partner in the province of Guimaras.

Data Gathering Instrument

The data needed in the study was gathered using the researchers prepared questionnaire. The questionnaire are composed of three (2) parts, part 1 is on the respondent's profile, and part 2 is on the awareness in the implementation of Violence Against Women (VAW).

Data Gathering Procedure

The researcher seeks approval from the office of the Research and Extension Services. Next, the researcher sends a transmittal letter to the office of the Punong Barangay of the selected locality asking permission and approval to conduct research.

The questionnaires was reproduced and personally administered to the respondents. Aside from written instruction, oral instruction was supplemented for the assistance and guidance of the respondents in answering the questionnaire. The raw data that was gathered tallied and collated.

Statistical tools used in the study

Frequency Count. The frequency count was used to determine the number of respondents for each variable and the number for each response in every item.

Mean. The mean of item was computed to determine the awareness of the respondents when they are taken as a whole group when classified according to categories of variable.

T-test was used to assess whether the means of the variable are statistically different from each other.

RESULT AND DISCUSSION

Profile of the respondents

The profile of the respondents shows that 38.9% were classified as young adult having ages 18-35 years old, 37.1% were classified adult having ages raging from 35-59 years old and 9.7% were senior those were 60years old and above. Majority or 36.3% were high school graduates, 27.1% were college graduates, 14% are high school level, 9.7% are high school level, 7.4% are elementary graduate, 4.6 % are elementary level, 0.6% gain vocational training and 1 or 0.3% were not educated. When group according to religion 306 or 87.4 % were catholic and 44 or 12.6% are non-catholic. As to the civil status of the respondents, 226 or 64.6% were married, 104 or 29.7% were single, 12 or 3.4% were separated and 8 or 2.3% are widower. When categorize according to employment status 136 or 38.9% have permanent job, 92 or 26.3% were casual, 78 or 22.3% does contractual job, 19 or 5.4% are students, and another 19 or 5.4% don't have a job, 3 or 0.9% were retired and another 3 serves as barangay official or by term as shown in

Table 1.

Table 1. Profile of the Respondents

Profile		Frequency	Percent
Age	Young adult (18-35 y/o)	136	38.9
	Adult (36-59 y/o)	130	37.1
	Senior (60 & above)	34	9.7
Educational Attainment	College Grad	95	27.1
	College level	34	9.7
	Vocational	2	.6
	High Sch Grad	127	36.3
	High Sch Level	49	14.0
	Elem Grad	26	7.4
	Elem Level	16	4.6
	none	1	.3
Religion	Catholic	306	87.4
	Non-Catholic	44	12.6
Civil Status	Single	104	29.7
	Married	226	64.6
	Separated	12	3.4
	Widow/er	8	2.3
Employment Status	By Term	3	.9
	Casual	92	26.3
	Contractual	78	22.3
	None	19	5.4
	Permanent	136	38.9
	Retired	3	.9
	Student	19	5.4

Level of Awareness

Table 2 shows the level of awareness of the male partners in the implementation of violence against woman. In terms of age, all respondents are very aware of the implementation of violence against women, respondents classified as senior has the highest mean value. In terms of location, all respondents were very aware and municipality of Buenavista has the highest mean value of 2.64. Both Catholic and non-Catholic respondents were very aware with mean result of 2.51. When categorized according to civil status, single, married and separated are very aware while widow were aware of the implementation. In terms of educational attainment elementary graduate shows that they are aware while the rest of the respondents are very aware. The respondents are very aware of the implementation of violence against women when categorized according to employment status, but respondents without education were aware of the implementation.

When taken as a whole respondent has a general weighted mean of 2.51 which interpreted as very aware. This data implies that the implementations of violence against women were widely disseminated throughout the five (5) municipalities of the Province of Guimaras.

Table 2. Level of Awareness of Male Partners in the Implementation of Violence Against Women

Profile		Total Mean	Interpretation
Age	Young adult (18-35 y/o)	2.47	very aware
	Adult (36-59 y/o)	2.50	very aware
	Senior (60 & above)	2.67	very aware
Address	Sibunag	2.53	very aware
	San Lorenzo	2.49	very aware
	Buнавista	2.64	very aware
	Jordan	2.39	very aware
	Nueva Valencia	2.51	very aware
Religion	Catholic	2.51	very aware
	Non-Catholic	2.51	very aware
Civil Status	Single	2.48	very aware
	Married	2.54	very aware
	Separated	2.64	very aware
	Widow/er	1.86	aware
Educational Attainment	None	2.50	very aware
	Elem level	2.58	very aware
	Elem grad	2.29	aware
	High School level	2.48	very aware
	High School grad	2.56	very aware
	College level	2.42	very aware
	College grad	2.56	very aware
	Vocational	2.70	very aware
Employment Status	By Term	2.65	very aware
	Casual	2.49	very aware
	Contractual	2.59	very aware
	None	2.19	aware
	Permanent	2.53	very aware
	Retired	2.50	very aware
	Student	2.65	very aware
Total		2.51	very aware

Legend: 1.0-1.67- Not Aware; 1.68-2.33- Aware; 2.34-3.00- Very Aware

Significant difference in the level of awareness and profile of male partners in the implementation of RA 9262

Table 3 illustrate the significant difference between the level of awareness and profile of male partners in the implementation of RA 9262. It was tested at .05 level of significance. The results showed that there was a significant difference between the civil status and level of awareness while profile such as age, address, educational attainment and employment status were not significant with the level of awareness.

This data implies that the level of awareness in the implementation of violence against women among the respondents were dependent in the civil status of the male partners which shows that those separated has a highest mean value which may indicate that violence against women could be the reason of separation.

Table 3. Significant Difference between the Level of Awareness in the Implementation of Violence Against Women and the Profile of the Respondents

Profile		Mean	tab-value	p-value	Interpretation
Age	Young adult (18-35 y/o)	2.47			
	Adult (36-59 y/o)	2.50	5.484	0.064	Not significant
	Senior (60 & above)	2.67			
Address	Sibunag	2.53			
	San Lorenzo	2.49	0.053	0.974	Not significant
	Buenavista	2.64			
	Jordan	2.39			
	Nueva Valencia	2.51			
Catholic	2.51	871.00			
Religion (z-value)	Non-Catholic		2.51		
Civil Status	Single	2.48	8.708	0.033	Significant
	Married	2.54			
	Separated	2.64			
	Widow/er	1.86			
Educational Attainment	None	2.50	8.733	0.272	Not significant
	Elem level	2.58			
	Elem grad	2.29			
	High School level	2.48			
	High School grad	2.56			
	College level	2.42			
	College grad	2.56			
Employment Status	Vocational	2.70	11.179	0.192	Not significant
	By Term	2.50			
	Casual	2.19			
	Contractual	1.85			
	None	1.24			
	Permanent	1.50			
	Retired	1.73			
Student	2.00				

* $p < 0.05$ level of significance

CONCLUSIONS

Based on the findings, the following conclusions are drawn.

1. Respondents were mostly classified as young adult having ages 18-35 years old, majority were high school graduates. Majorities were high school graduates, catholic, married and have permanent job.
2. As a whole respondent has were very aware. This data implies that the implementation of violence against women was widely disseminated throughout the five (5) municipalities of the Province of Guimaras.
3. The level of awareness in the implementation of violence against women among the respondents were dependent in the civil status of the male partners which shows that those separated has a highest mean value which may indicate that violence against women could be the reason of separation.

RECOMMENDATION

1. There must be a continuous program on the information campaign on the RA 9262 Violence Against Women and Their Children to achieve zero crime rate on Violence Against Women and Children.

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GROWTH AND SENSORY ANALYSIS OF BROILER AT DIFFERENT HERBAL WATER SUPPLEMENT

Julius T. Vergara
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ABSTRACT This study was conducted to determine the effect of different herbal extracts as water supplement on the growth and sensory performance of broilers. A Completely Randomized Design (CRD) was used with four (4) treatments and one (1) control and replicated three (3) times. The treatments that was used in the study was the following: Control- no herbal extract supplement; Treatment A-10% Lemon Grass (*Cymbopogon citrullus*); Treatment B-10% Gotu kola (*Centenella Asiatica*); Treatment C-10% Oregano (*Origanum vulgare*); and Treatment D- 10% Horseradish tree (*Moringa oleifera*). The analysis shows a significant difference between the final weight and weight gained of broiler at different treatments, wherein treatment E showed the most significant effect followed by treatment D and treatment C while treatment B and A shows the same treatment effect. The supplementation of malunggay extracts into the water will commensurate a better growth performance of broiler. Also, in terms of feed conversion efficiency treatment E shows a best feeding efficiency compare to other treatments while treatment A, B and C shows the least feeding efficiency and shows lower efficiency compare to treatment D. There is a significant effect of supplementing malunggay extract at 10% level of solution to the growth performance and feeding efficiency of broiler. As to the analysis means on the sensory evaluation water supplementation of malunggay extract showed the most desirable chicken odor effect in the meat of broiler, while there was no significant effect on the other sensory characteristics of broiler chickens.

Keywords: Growth Performance, Sensory Analysis, Broiler, and Herbal Extracts

INTRODUCTION

Background of the study

In meat production, poultry is the fastest producing livestock worldwide and chicken meat is the second most popular meat in the Philippines. Poultry production has a big contribution in agricultural sector and chicken meat has been increasing faster than the other meat (Hui-Shung, 2007).

Organic poultry producers must establish preventative livestock health management practices. In organic production, the use of growth hormones, antibiotics, genetic engineering, and animal cloning are prohibited, such as the feeding of slaughter byproducts. Hence, there is a need of discovering new scientific knowledge on how to improve organic poultry production and health management.

As of today, there had been no researches on herbal extracts as water supplement for poultry production; hence this research is strongly proposed to provide organic poultry producer's new knowledge on organic poultry health management.

Poultry is the most progressive animal enterprise today. It is one of the world's major and fastest producers of meat. While in the Philippines, it has been a significant contributor to the country's agricultural sector. In 2010, the chicken population in the Philippines was estimated 159 million, slightly higher (0.2 percent) than last year's level. Layer and native chicken inventory grow by 13 and 2 percent, respectively. Almost 50 percent of the total chicken population was accounted for native or village chicken raised in backyard farms while the remaining 32.8% (broilers) and 18% (layers) were taken up by commercial broilers.

Medicinal plants have been identified and used throughout human history. Plants have the ability to synthesize a wide variety of chemical compounds that are used to perform important biological functions, and to defend against attack from predators such as insects, fungi and herbivorous mammals (plants.com, 2015).

Herbal medicine is use of plants for medicinal purposes, and the study of such use. Plants have been the basis for medical treatments through much of human history, and such traditional medicine is still widely practiced today. Modern medicine recognizes herbalism as a form of alternative medicine, as the practice of herbalism is not strictly based on evidence gathered using the scientific method. Modern medicine, does, however, make use of many plant-derived compounds as the basis for evidence-tested pharmaceutical drugs, and phytotherapy works to apply modern standards of effectiveness testing to herbs and medicines that are derived from natural sources.

Objectives

This study was conducted to determine the effect of different herbal extracts as water supplement on the growth and sensory performance of broilers. Specifically, this study aims to determine the following:

1. To determine the growth performance of broilers supplemented with different herbal extract in terms of Initial Weight, Final Weight, Feed conversion efficiency, Weight Gain, Water intake, and Feed Intake.
2. To determine the Sensory Characteristics in terms of: Odor, Texture, Appearance, Palatability, Tenderness, and General Acceptance.
3. To determine significant difference in growth performance of broiler supplemented with different herbal extract in terms of: Initial Weight, Final Weight, Feed conversion efficiency, Weight Gain, Water intake, and Feed Intake.
4. To determine significant difference in Sensory Characteristics of Broiler chicken in terms of Odor, Texture, Appearance, Palatability, Tenderness, and General Acceptance.

MATERIALS AND METHODS

Materials

The following are the materials needed in the conduct of study in gathering the data: Bowl jar, feeding through was used in feeding and watering the broilers. Bulb, switch, electrical wire, outlet and socket was used in lighting the chickens. Weighing scale, zip lock, containers, and butchering knife was used for slaughtering the broilers.

Methods

Experimental Design and lay-out

A Completely Randomized Design (CRD) was used in this study. The study will have four (4) treatments and one (1) control that was replicated three (3) times. The treatments that was used in the study was the following:

Control- no herbal extract supplement

Treatment A- Lemon Grass (*Cymbopogon citrullus*) (10% of the amount of water)

Treatment B- Gotu kola (*Centella asiatica*) (10% of the amount of water)

Treatment C- Oregano (*Origanum vulgare*) (10% of the amount of water)

Treatment D- Horseradish tree (*Moringa oleifera*) (10% of the amount of water)

A	Control	C
C	D	B
B	C	Control
D	B	A
Control	A	D

Randomization Treatments

All treatments was represented by letters and was distributed randomly through draw lots.

Site of the Experiment

The experiment was conducted at Brgy. San Miguel, Buenavista, Guimaras on September 2016.

Construction of the Poultry House and Cages

The poultry house was made up of light materials such as Nipa, Bamboo, and nails. The building measuring 18ft. by 10ft. was built on August 2016.

Booking and Selection of the Stocks

The experimental stocks were book from Commercial Hatchery. The Chicks was paid cash during the delivery at Php 35/ head. The chicks were selected to ensure healthy stocks. Select only healthy birds. This is important for two reasons:

- It increases the chances of winning the price since healthy birds will have good physical condition and bright appearance.
- It reduces the chances of spreading diseases to other birds present in the show.

Floor Space, Feeder Space and Waterer Space. The floor is covered with 5 to 10 cm deep layer of rice hull. During brooding period, the day old chicks were confined in a brooder cage measuring 3 meters by 1.5 meters. During the rearing period, the birds were fully confined in a cage. Each bird requires a floor space of 1sqared ft. The feeder and waterer space also varies depending on the environmental temperature and health condition of the birds.

Disinfection of the Area

The area was prepared and disinfected a week before the arrival of the stocks.

Transporting the Birds

Transporting the birds in a clean cage with straw or wood shavings as bedding material. Do not provide water since it will spill and spoil the bedding material. If the birds are to be transported to a long distance, water should be provided at intervals during transport.

Arrival of Stocks

One (1) hour before the arrival of the stocks the electric bulb inside the brooder was switched on to make the floor and wall heated and to have the desired brooding temperature. Bowl jars were filled with clean and potable drinking water. Upon the arrival, the chicks was placed inside the brooder, and will keep them undisturbed for more than four (4) hours.

The broiler chicks were provided with 5% sugar solution for drinking within three (3) hours of arrival. The purpose of adding sugar on their water is that it helps to replenish the depleted energy in the chicks due to long period of transportation. It may also stimulate the chicks to consume feed. Sweet water can also loosen up the impacted intestine and prepares the gut linings of chicks for the incoming feeds. Thereafter, they was given fresh feeds and water.

Brooding Management

Feeding

According to Flavio Henrique, specialist (Cobb-Vantress South America) The brooding period – the first 14 days of the broiler's life – is the most sensitive period because the bird is changing from an immature thermo regulation system to a mature one.

One common mistake is to think only of maintaining the proper temperature. We need to take care of other issues, too. A way to define these other issues is the 80-20 rule (Pareto's Law), which means that 80% of the consequences come from 20% of the causes. We should always think in our brooding about temperature, air quality, water and feed. Proper management of these areas was the key factor to uniformity, which results in good performance. We will assume that we receive good quality chicks from the hatchery, which means that the day-old chicks are active with bright eyes wide open, with strong and shiny shins, navels healed, without physical defects, no pathogens and with good maternal immunity.

The first week corresponds to 23% of the life of the 1.75g broiler, according to the latest Cobb Weight Supplement (April 2012). This first week represented 11% of the entire life in 1978 to achieve the same weight. So the proper commitment to a good start is very important for the broiler, and each good point achieved was rewarded in good performance. In many countries, some producers think that by the second week the birds are adults already and stop giving them external help to maintain good conditions. This could lead to one of the worst situations in the brooding period.

Linear feeding troughs were installed before the stocks were introduced in their respective treatment cages. A feeding space requirement of 65 cm/bird was followed in making the linear feeders (PNS, 2003). Organic commercial feeds were provided to the birds on ad libitum basis for the first week of brooding and were change to restricted feeding after a week until maturity.

For the first week of brooding, in addition to the feeding troughs, small amount of feeds was provided to assist the chicks to easily access the feeds. This helps the chicks find the feed more successfully in the first few days. The feeds and watering devices was placed close each other during the first week to ensure that the chicks eat and drink the feeds and water provided to them.

After initial brooding, feeds were placed away from the waterers to prevent wet feed and dirty water. Feeder height was adjusted regularly. After one week of brooding, the feeds was given on restricted basis. (Beutler, A., M.SC., 2007)

According to Chance Bryant, Technical Service Manager (Cobb-Vantress. Inc) water management is one of the most crucial components in a top-performing broiler flock. Broilers have advanced to grow faster, become larger with more breast meat, eat more feed at younger ages and be far more efficient than their predecessors, increasing their demand for water. All this has put more emphasis on the need for ample water supply and storage so birds can perform successfully. Here, we focus on water flow rates and water temperature - factors that sometimes get overlooked.

In high performing flocks, at around 21 °C, modern broilers on average will consume 1.8 to 2 times more water than

feed, in weight. Consumption is dependent on house temperature. In hot climates, flocks can consume up to 5 times in weight the amount of feed they intake.

Water consumption will vary depending on environmental temperature, feed quality and bird health:

- Water consumption increases by 6% for every increase in 1°C between 20-32°C.
- Water consumption increases by 5% for every increase in 1°C between 32-38°C.
- Feed consumption decreases by 1.23% for every increase in 1°C above 20°C

Any substantial change in water usage should be investigated as this may indicate a water leak, health challenge or feed issue. A drop in water consumption is often the first indicator of a flock problem. To evaluate flock performance properly we need to know how much water birds are consuming every day. More advanced water meters record not only 'daily' consumption attainable, but enable an understanding of consumption at critical times of the day and critical times during the flock -- both very relevant in assuring maintaining proper water intake. These critical times can include feed changes, turning birds out from the brood area to three quarters or full house, transitioning from power ventilation to tunnel, field vaccinations, etc. If you monitor consumption during these periods, you can better understand if flocks are being properly managed.

Light Management

Naheeda Portocarero (UK) light is an important management tool in broiler production. If used successfully it can influence aspects of growth, productivity and behavior, and is therefore the subject of intense research. From presentations at the 2010 PSA meeting in the USA, it became clear that proper lighting regimes will lead to good flock performance.

While we know that light intensity has an impact on behavior and physiology, there is debate surrounding the optimum level that should be used. A comparison of different light intensities; 1, 10, 20 and 40 lux carried out at the University of Saskatchewan showed that birds exposed to 1 lux rested more and showed reduced foraging, preening, dust-bathing, stretching and wing-flapping behaviors in comparison to birds exposed to brighter light intensities. These birds also had bigger and heavier eyes. While there was no effect of light intensity on skeletal health, deep ulcerative footpad lesions decreased linearly as light intensity was increased. And although diurnal rhythms of serum melatonin were unaffected, these results suggest that very low light intensities can compromise the welfare of birds.

Temperature

Litter temperature is the most important because day-old chicks are extremely dependent on floor contact to help regulate the changing temperatures. The ratio of body surface to body mass is large in the day-old chick and it decreases with age, so the young chick will therefore lose heat faster than an adult bird. The young chick's body is covered in down which has a poor insulating value, so if temperature is not controlled it will lose heat rapidly through radiation and conduction. We suggest having the litter preheated and stabilized 24 hours before placement which means preheating of 48 hours in many broods, depending on the season, region and outside temperature. A comfortable chick will breathe through its nostrils and lose 1-2g of moisture in the first 24 hours. The yolk contains this amount of moisture – they will lose weight but not become dehydrated. If the birds are exposed to cold temperature, they will try to save or make heat by huddling or by burning feed to keep warm, which affects feed conversion ratio and this, is the most expensive way.

If the ambient temperature is 26°C (78.8°F), the same moisture loss (1-2g) in the yolk will last the chick three days. This is why, in practical terms, when we see large yolks we can say that the bird was cooled in the first few days. In the opposite case, with temperature too high, the birds will try to remove heat or avoid producing heat, pant to lose heat (losing FCR) and stop eating. If chicks start panting they can lose 5-10g of moisture in the first 24 hours and then dehydration will occur. The correct temperature will also influence the bird health and immunity because immune system development and stress is costing energy and when the birds are not comfortable during this development they was more sensitive to infections and less immune competent. The chick's internal temperature (cloaca measurement) should be maintained between 40.4-40.6°C (104.7-105.1°F); below 40°C (104.0°F) is cold and above 41°C (105.8°F) will lead to panting.

According to Muchacka and Herbut (2007), reduced and elevated air temperature during the first period of rearing reduced the rate of growth, with clear differences observed in the group of birds reared at lower temperature. Baarendse, et al. (2006) reported that rearing chicks during the first five days of life at 28°C (82.5°F) has a long term negative effect on further growth and development. Ideal would be 32°C (89.6°F) with 30-50% relative humidity (RH) in the litter at placement.

For the first two weeks the chicken house should feel too warm for the caretaker – if not, the temperature is likely to be too low for the chicks. We suggest the air temperature in the brooding area at placement, with 30-50% RH, begin at 33°C (91.4°F); at seven days, with 40-60% RH, 30°C (86°F); and at 14 days, same RH, 27°C (80.6°F). If the humidity is less than above, increase the temperature by 0.5-1.0°C (1°F). If relative humidity is greater than above, reduce the house temperature by 0.5-1.0°C (1°F). Always use bird behavior and effective temperature as the ultimate

guide to determine the correct temperature for the birds. Chicks from smaller eggs (younger breeder flocks) require higher brooding temperatures because they produce less heat (about 1°C) for the first seven days. According to the seasonal climate it is very important to have tools to heat and cool the air, and options to provide correct air flow and distribution. Do not forget that the broilers in a brooding phase do not need air velocity more than 0.3m/s at floor level.

Pre- Conditioning

Pre- Conditioning was done 14 days after the arrival of the birds. It will help the birds to adapt to changes in environment, temperature and climate.

Distribution of Stocks in Different Cages

The distribution of the stocks was done after pre-conditioning period. There were five (5) birds per cages.

Disease Prevention

Farmers have a documented pest control program to reduce the risk of diseases being carried on to the farm by rodents. Strict records are kept by the farmer of the chickens' health, growth and behavior, so that any emerging disease problem is rapidly identified and acted upon.

Disease prevention is an essential strategy for poultry producers. It is much more beneficial to the birds and to the commercial poultry producer to prevent disease from occurring rather than to rely on treatment. The agents which sound bio security practices attempt to prevent include bacteria, viruses, protozoa, fungi, parasites, and any other agents capable of introducing an infectious disease into a poultry flock.

Preparation of Herbal Extract

1. Prepare a clean jar for the storage and a blender to get the extract.
2. Collect the desired amount of fresh leaves.
3. Wash and chop the leaves finely and place them inside the blender.
4. Pour 20% of water into the blender.
5. Blend the leaves.
6. After blending, the extract was strained through a piece of cloth and poured into a clean jar.
7. The desired volume of extract can be used for desired purposes.

Routing Care of the Birds

Waterers were regularly cleaned to ensure that the birds are provided with clean drinking water. Water was given ad libitum. Fecal droppings and rice hull was removed from feeding and drinking troughs before feeds was served.

Experimental chicks

A total number of 75 commercial broiler day old (Arbor Acre) chicks was bought from Iloilo City and was cared in the experimental shed in San Miguel, Buenavista, Guimaras.

Sensory Evaluation

Sensory evaluation was conducted after slaughtering. The meat was evaluated by its taste, color, tenderness, texture, odor, and general acceptability to determine the effects of horseradish, lemongrass, gotu kola and oregano extracts to the meat. Fifteen (15) meat samples (breast parts) was taken and tested, following the ratings below. The meat was roasted using an oven after testing the texture of the fresh meat.

Tenderness

Fifteen samples will represent each treatment combinations after dressing, and whole breast parts were taken. The meat was roasted inside the oven for fifty minutes with 250°C. The number of chews before swallowing was used to determine its tenderness. The lesser the number of chews, the more tender is the meat.

Rating	Description	Chew count
4.21-5.00	Very tender	1-5
3.41-4.20	Tender	6-10
2.61-3.40	Just Tender	11-15
1.81-2.60	Tough	16-20
1.00-1.80	Very Tough	21-25

Odor

The roasted breast was placed on coded plates for evaluation of the odor. The samples was smelled by the testing panelists. The evaluation was based on the following scale:

Rating	Description
4.21-5.00	Extremely desirable chicken odor
3.41-4.20	Moderately desirable chicken odor
2.61-3.40	Just normal chicken odor
1.81-2.60	Slightly undesirable chicken odor
1.00-1.80	Extremely undesirable chicken odor

Texture (Fresh)

After dressing, fresh meat samples was evaluated as to the texture based from the scale below:

Rating	Description
4.21-5.00	Extremely rigid
3.41-4.20	Moderate rigid
2.61-3.40	Rigid
1.81-2.60	Loose
1.00-1.80	Extremely loose

Texture (Cooked)

The quantification of the texture of the roasted meat was evaluated based from the scale below.

Rating	Description
4.21-5.00	Extremely rigid
3.41-4.20	Moderately rigid
2.61-3.40	Rigid
1.81-2.60	Loose
1.00-1.80	Extremely loose

Taste

The panelist for the taste was non-smokers, non-drinkers or liquor and has no false teeth. They did not take any sweet or salty foods two (2) hours before the evaluation. The taste was rated using the following scale:

Rating	Description
4.21-5.00	Extremely desirable chicken taste
3.41-4.20	Moderately desirable chicken taste
2.61-3.40	Just normal chicken taste
1.81-2.60	Slightly undesirable chicken taste
1.00-1.80	Extremely undesirable chicken taste

Composition of Testing Panelist

The testing panelist for sensory evaluation of meat was composed of five students, five professionals, and five farmers. Before the evaluation, there was a short briefing for them to be informed about the rating of the samples.

Statistical Analysis

Data collected was analyzed using One Way Analysis of Co-variance (ANCOVA) at 1% and 5% level of significance. Significant mean was compared using Duncan's Multiple Range Test (DMRT).

RESULTS AND DISCUSSIONS

The Growth Performance of Broiler

The table 1 below shows the Growth Performance of Broiler supplemented with different Herbal Extract. As to the initial weight, treatment A (control-no herbal supplementation) gained 238.3g, while treatment B (lemongrass extract) gained 246.0g, treatment C (gotu kola extract) gained 255.0g, treatment D (oregano extract) gained 270.0g, and treatment E (horseradish extract) gained 290.0g.

In terms of final weight, treatment E gained 1227.0g, treatment D gained 1143.0g, treatment C gained 1071.0g, treatment B gained 1024.0g, and treatment A gained 1009.0g. The analysis showed a significant difference between the final weight of broiler at different treatments, wherein treatment E showed the most significant effect followed by treatment D and treatment C while treatment B and A shows the same treatment effect. The result implies that the supplementation of malunggay extract into the water will commensurate a better growth performance of broiler.

When it comes to weight gained, treatment E gained 936.66g, treatment D gained 873.33g, treatment C gained 815.33g, treatment B gained 778.33g, and treatment A gained 770.33g. The analysis showed a significant difference between the weight gained of broiler at different treatments, wherein treatment E showed the most significant effect followed by treatment D and treatment C while treatment B and A shows the same treatment effect. The result implies that the supplementation of malunggay extract into the water will commensurate a better growth performance of broiler in terms of weight gained.

Looking at the daily water intake in which the analysis showed a no significant differences wherein the treatment A consumed 1070ml, treatment B 1083ml, treatment C 1101ml, treatment D 1081ml and treatment E 1120ml.

As observed in the daily feed intake of the broiler the analysis showed a no significant differences between the feed consumption of the experimental animals, wherein treatment A consumed 381.7g, treatment B 407.1g, treatment C 411.3g, treatment D 390.4g, and treatment E 374.6g.

The analysis showed a significant difference between the feed conversion efficiency of broilers at different treatments wherein, treatment E with FCE value of 0.39 shows the most efficient followed by treatment D with 0.44, treatment C with 0.49, treatment B 0.52 and treatment A with 0.49. The result implies that treatment E shows a best feeding efficiency compare to other treatments while treatment A, B and C shows the least feeding efficiency and shows lower efficiency compare to treatment D.

The result of this study was supported by some of the related findings such that, *Moringaoleifera* tree contains high crude protein (CP) in the leaves (251 g/kg DM) and negligible content of tannins and other anti-nutritive compounds and offers an alternative source of protein to ruminants (Nouala et al., 2006) and non-ruminants. The seeds contain high amount of CP, followed by flowers and leaves, suggesting that *M. oleifera* can be used as a protein source for both livestock and humans. The fact that the seeds contain higher CP content than other parts suggests that suggesting that they can be used as a valuable source of protein. Ojukwu (2012) stated that *Moringa* leaves are periodically harvested to make a sauce, locally known as "mboum" or can be used to feed poultry, pigs and cattle.

Malunggay (*Moringaoleifera*) is one of the herbs containing bioceutical agents that could substitute synthetic growth enhancers and supplements in broiler and other livestock production. Some of the published studies pertaining to its potential involved the study of Lannaon (2007). He reported that performance of Starbro broilers given with Malunggay (*M. oleifera*) leaf decoction, revealed the improvement of feed consumption, daily weight gain, final weight and profit compared to the control group.

Furthermore, Du et al. (2007) evaluated the effects of dietary supplementation of *Moringaoleifera* on growth performance, blood characteristics and immune response of Arbor acres strain broilers. It was found out that increasing supplementation of *Moringaoleifera* decreases contents of uric acids, triglycerides and albumin/globulin ratio in the serum of broilers. Hence, immune response of broilers increases significantly.

Table 1. The Growth Performance of Broiler supplemented with different Herbal Extract

Treatment	Initial Weight (g)	Final Weight (g)	Weight Gained (g)	Daily Water Intake (ml)	Daily Intake (g)	Feed FCE
A	238.3	1009D	770.33D	1070	381.7	0.49C
B	246.0	1024D	778.33D	1083	407.1	0.52C
C	255.0	1071C	815.53C	1101	411.3	0.49C
D	270.0	1143B	873.33B	1081	390.4	0.44B
E	290.0	1227A	936.66A	1120	374.6	0.39A
F-Test		**	**	ns	ns	**
CV%		2.96	3.87	3.53	5.54	6.78

The Sensory Characteristics of Broiler

Table 2 shows the sensory characteristics of broiler supplemented with different herbal extract. As to the odor, the evaluation shows a significant difference of broiler at different treatments, wherein treatment E with an average of 4.7, treatment D with 4.26 and treatment B with 4.23 shows the most desirable chicken odor effect followed by treatment C with 3.29 and treatment A with 3.82 shows the same effect.

As observed the evaluation showed no significant difference in the tenderness of the meat, wherein treatment A with an average of 11.95, treatment B with 13.19, treatment C with 11.64, treatment D with 11.9 and treatment E with 11.53. All treatments were tender.

When it comes to the taste in which the evaluation shows no significant difference wherein, treatment A with an average of 3.86, treatment B with 3.88, treatment C with 4.46, treatment D with 4.04, and treatment E with 4.04.

Looking at the texture (fresh) the analysis shows a no significant difference wherein, treatment A with an average of 3.68, treatment B with 3.55, treatment C with 3.79, treatment D with 3.75 and treatment E with 3.76. All treatments were moderate.

In terms of texture (cooked) in which the analysis showed a no significant difference wherein, treatment A with an average of 3.62, treatment B with 3.57, treatment C with 3.93, treatment D with 3.68 and treatment E with 3.66. All treatments were moderate. While the general acceptability in which the result shows a no significant difference wherein, treatment A with an average of 4.19, treatment B with 4.19, treatment C with 4.33, treatment D with 4.19 and treatment E with 4.42.

Table 2. The Sensory Characteristics of Broiler supplemented with different Herbal Extract

Sensory	Treatment	Mean	Interpretation
Odor (Desirability as Chicken odor)	A	3.82B	Moderate
	B	4.23A	Extreme
	C	3.93B	Moderate
	D	4.26A	Extreme
	E	4.7A	Extreme
	f-test	**	
	CV%	2.79	
Tenderness (Chew counts)	A	11.95	Tender
	B	13.19	Tender
	C	11.64	Tender
	D	11.9	Tender
	E	11.53	Tender
	f-test	ns	
	CV%	12.94	
Taste (Desirability as Chicken taste)	A	3.86	Moderate
	B	3.88	Moderate
	C	4.46	Extreme
	D	4.04	Moderate
	E	4.04	Moderate
	f-test	ns	
	CV%	3.31	
Texture-fresh (rigidness)	A	3.68	Moderate
	B	3.55	Moderate
	C	3.79	Moderate
	D	3.75	Moderate
	E	3.76	Moderate
	f-test	ns	
	CV%	5.33	
Texture-cooked (rigidness)	A	3.62	Moderate
	B	3.57	Moderate
	C	3.93	Moderate
	D	3.68	Moderate
	E	3.66	Moderate
	f-test	ns	
	CV%	4.99	
General Acceptability	A	4.19	High
	B	4.19	High
	C	4.33	Very High
	D	4.19	High
	E	4.42	Very High
	f-test	ns	
	CV%	3.4	

CONCLUSIONS

As observed in the study, the researcher concluded the following:

1. There is a significant effect of supplementing malunggay extract at 10% level of solution to the growth performance and feeding efficiency of broiler.
2. As to the analysis means on the sensory evaluation water supplementation of malunggay extract showed the most desirable chicken odor effect in the meat of broiler.

RECOMMENDATIONS

Based on the study conducted, the researcher recommended the following:

1. Water supplementation of 10% malunggay extract to enhance the growth performance and feeding efficiency of broiler.
2. Water supplementation of 10% malunggay, and lemongrass extract to enhance the desirable chicken of broiler.
3. The same study can be conducted increasing the levels of malunggay extract as water supplement in order to evaluate the maximum level of effectiveness of the extract in the growth performance of broilers.

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EVOLUTION AND CONTRIBUTIONS OF FESTIVALS IN GUIMARAS

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ABSTRACT This study was conducted to determine the different festivals in Guimaras and identify the significant contributions of the festivals in the Island of Guimaras using a qualitative research design. This study used the qualitative research design. The data were gathered from the people in the tourism industry in the province of Guimaras and in five municipalities in the province for the past five years. Result of the study showed that there were two provincial festivals, five festivals represent each of the municipalities and fifteen festivals represents different barangays in the province. Festivals in the Island of Guimaras contributed to the visitors' Arrival in the Province. The tremendous increase in the number of Local excursionists which ranked first is noted for the past five years. Local tourists ranked second. Foreign excursionist ranked third and foreign tourists ranked fourth. When monthly arrivals are taken into consideration, the month of May ranked first, March ranked second and April ranked third. Another contribution of festivals in the province was evident in its notably increasing Agri-trade and Tourism Fair Sales for the past six years.

Keywords: festivals, evolution, excursionists, tourists

INTRODUCTION

Background of the Study

A festival is known to most people as a day of celebration or festivities. There are many festivals celebrated throughout the world and the Philippines is no exception. Often, a province, town, or municipality celebrates a festival in the Philippines. A festival is viewed by the researchers as a means of sharing the history, identity, and values of the place and people to others and the younger generations. A festival is also a way to attract visitors to come to the province, town or municipality, therefore, a festival has an impact on the hosting place. The impact may be good or bad but none the less a festival has an impact. Since festivals are celebrated throughout the world it is very important to learn, understand, and measure its impacts on the hosting community. Falassi (1987) defines a festival as an event, a social phenomenon, encountered in virtually all human cultures. The colorful variety and dramatic intensity of its dynamic choreographic and aesthetic aspects, the signs of deep meaning underlying them, its historical roots and the involvement of the "natives" have always attracted the attention of casual visitors, have consumed travelers and men of letters alike.

Furthermore, Falassi explained that festivals in the social sciences are simply taken from common language, where the term covers a constellation of very different events, sacred and profane, private and public, sanctioning tradition and introducing innovation, proposing nostalgic revivals, providing the expressive means for the survival of the most archaic folk customs, and celebrating the highly speculative and experimental avant-gardes of the elite fine arts. Etymologically the term festival derives ultimately from the Latin festum. But originally Latin had two terms for festive events: festum, for "public joy, merriment, revelry." And feria, meaning "abstinence from work in honor of the gods. Both terms were used in the plural form, festa, and feriae, which indicates that at that time festivals lasted for many days and included many events. In classical Latin, the two terms tended to become synonyms, as the two types of events tended to merge (Luna, 2015).

Guimaras is considered one of the exotic islands in the Philippines. The original name was Himal-us but was changed to Guimaras after the folktale of the ill-fated lovers named Princess Guima and the slave Aras, who defied tradition for their romance. The island was once a sub-province of Iloilo but by virtue of R.A. 7160, it was proclaimed a regular province on May 22, 1992.

The province is basically agricultural, with palay, coconut, mango, vegetables, livestock, poultry, and fishing as major products. Likewise, the major industries in the island are tourism, fruit processing, coconut processing, handicrafts making, mining, and lime production (<http://www.tourism.gov.ph/SitePages/InteractiveSitesPage.aspx?siteID=36>, retrieved August 2016).

Guimaras is also known for many of its festivals which were celebrated by the people in the community. These festivals portray religion, practices, norms and even attitudes of the people in the province. There are many sources of the idea of celebrating the festivals. Some focus on food associated with harvest which is blended with the festivals.

Festivals create more opportunity for people to earn a living for it can be a source of fund or income generating projects of the province. These celebrations offer a sense of belongingness for religion, social, and many more.

The researchers as witnesses of how valuable are festivals for people were inspired to conduct this study in order to determine the effects of festivals on the economic way of life of the people in Guimaras. Thus, this study was conducted.

Objectives of the Study

This study conducted to determine the evolution festivals in Guimaras. Specifically this study aimed to:

1. determine the different festivals in Guimaras; and
2. identify the significant contributions of the festivals in the Island of Guimaras.

METHODOLOGY

This study used the qualitative research design utilizing the data that were taken as a result of focus group discussion with tourism officers in the tourism industry in addition to the secondary data obtained from the tourism office of the province of Guimaras and five municipalities in the province. The respondents of the study were the tourism officers in the tourism industry in the province of Guimaras and the other tourism offices of the five municipalities of the province.

The researchers used the focus group discussion to gather the data from the respondents. Secondary data were also taken from the Visitors Expenditures Survey of the Province, and Visitors' Arrival and Tourism Receipt which were obtained from Jordan, Buenavista Guest Assistance Center, RORO and Tumanda Wharves.

The researchers personally conducted a focus group discussion with the people and officers in the tourism industry in the province of Guimaras and the five municipalities of the province. Frequency count and ranking were used to interpret the gathered data.

RESULTS AND DISCUSSIONS

Different Festivals in Guimaras

The following were the recorded festivals in the province of Guimaras:

1. Manggahan Festival. Relish from the ambiance of rural life in the "Mango country" during its Manggahan festivals. Manggahan sa Guimaras Festivals involves various activities depicting the cultural heritage of Guimaras while giving emphasis on the promotion of Guimaras Mango. It's a 2-month long festival that starts with Manggahan sa Kabanwahanan at the Municipalities every weekend of April. The highlights happen on May 11-22 at the Provincial Capitol Proper, San Miguel, Jordan, Guimaras.

2. Pagtaltal sa Bala-an Bukid. It is a passion play enacted during the Lenten season in the island and is one of the most spectacular religious festivals in the country. Aside from this major festival, each town has its own identity festival that showcased their historical, natural heritage and livelihood activities.

Municipal Festivals

1. Palayag Festival in the Municipality of Buenavista held every 3rd week of January. Celebrated every 3rd Sunday of January by the Municipality of Buenavista in honor of the town's Patron Saint Sr. Sto. Nino. This cultural festival that was first celebrated in 2007 made maximum use of the rich cultural tradition of the oldest municipality of the Province of Guimaras. The presentation of songs, dances and musical tableau depicts the various influences Buenavista has been subjected to. "Palayag" marked a new footprint during the 2008 Buenavista Centennial Celebration. "Palayag" is defined as boat sailing with the use of "Layag" which is an old form or "Kinaradto" way of sea travel. Swift "Paraos," connected Iloilo and Guimaras. In 1850's, Iloilo Port was opened by Sir James Bowring, British Governor of Hongkong as an international port. Negros Island then has no harbor that could cater for bigger ships so they used Guimaras Island as a transship point to Iloilo and Panay Island. This is the reason why Jordan Wharf has the sugar bulk. While Jordan wharf was prospering, Buenavista was still enjoying with its sandy shore. Dr. Jose P. Rizal stated in his diary written in August 4, 1896, "Opposite Iloilo there is an island where the families go for picnics.... there are various vessels with foreign flag..." The land being referred to is surely Guimaras and the picnic place is the white sand, the "pasil of baybay". "Baybay"(which is presently called Sto. Rosario), was the beach where sailboats from Guimaras Island daily bring in cargoes of fruits, fish,

and vegetables to Iloilo City. The same beach had been a subject for painting by an artist Miguel Zaragoza (1849-1923) and being exclaimed "Buena Vista" by the Iloilo Spanish Gobernadorcillo. The present day wharf was just constructed during World War II, the time of Gen. Douglas MacArthur. The beauty of this place as coupled by the craft of the people in miniature boat making was not just a culture by accident, but a culture rooted in the past. The natural beauty of the place and the economy of the town is dramatically boosted up by the swift and gaily "layag"-using sea vessel. Thus, PALAYAG is a festival of the beauty of the town and the hospitality of the Buenavistahanons which can only be experienced by other people if they will travel, trek and tour the places (<http://buenavistaguimaras.gov.ph/palayag-festival/>, retrieved on December 28, 2017.)

2. Sadsaran Festival in the Municipality of Nueva Valencia held every last week of January. Sadsaran festival is derived from the term "sadsad" which is a common term for dancing used by the Nuevalencianons, especially by the elders. Sadsaran Festival is a cavalcade or kaleidoscope of dance meant to showcase the evolution of dances from the old days to the present depicting the custom and traditions of the different barangays in Nueva Valencia, taking into account the influence of Americans, Spaniards, and Japanese colonizers. Sadsaran is not only a showcase of the evolution of dances but also of cultural heritage and livelihood of the community, as showcased by the Barangay Festivals. Other activities to highlight the festival are the Kansyon sa Sadsaran, a musical show, "hinampang sa sadsaran" or larong lahi, the coronation of the fiesta/ festival queen, exhibits, food fair, and fireworks display. Inasmuch as dancing as sadsad is an expression of happiness, thanksgiving or a way to tell a story and majority loves to dance. Hence, came about "Sadsaran sa Nueva Valencia" Festival (<http://www.traveltothephilippines.info/2017/09/23/sadsaran-festival-is-a-festival-of-cultural-dances-and-more/>, retrieved on November 22, 2017).

3. Balsahan Festival in the Municipality of Sibunag held every February 19-20 of the year. The Balsahan Festival coincides with the foundation day of the Municipality of Sibunag every February 20. Legend says that a son of a deity and a mortal was stolen when he was only a baby. He was named Sibunag and was raised and cared for by a fairy. His amazing quests and romance stories have been one with the waters ever since. The Balsahan Festival is the town's way of immortalizing the mystical river. "Balsa" refers to the bamboo water raft. The people of Sibunag and all over Guimaras celebrate the festival with fun activities such as balsa racing, a motorized banca race, and a paraw regatta. Sibunag is one of the two youngest municipalities of the island-province of Guimaras. Established in 1995, it was named after its main river, the town's main geographical feature that makes its way through most of the barangays. The river is the setting of many spellbinding folktales and legends. A visit to Sibunag is sure to unravel the town's secrets and make your journey much more colorful (<http://www.choosephilippines.com/do/festivals/1138/balsahan-festival>, retrieved on November 22, 2017).

4. Bulantihan Festival in Jordan. It is celebrated every last Friday of January by the municipality of Jordan. The three major sources of income of the people of Jordan are farming, fishing, and mango production. The products are brought in the market for "bulante" (trade). It is primarily a celebration of the economic endeavor that made Jordan what it is today (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

5. Asinan Festival in San Lorenzo. It is Celebrated every 19th day of February by the municipality of San Lorenzo. Marvel at how the ordinary salt has gravitated the people of the community in an annual gathering with all the delicious trimmings specialty products. Not everything in the Asinan Festival is salty though, as there are the spicy seafood, the juicy citrus, and crispy nuts. With the proper blend of the unique hospitality and the natural smiles of the people and one will hunger for more of the Asinan spectacle ((<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017

Barangay Festivals

1. Pamalandong sa Tamborong in Tamborong, San Lorenzo, Guimaras held in a week before Good Friday.

2. Banigan Festival in Sapal, San Lorenzo, Guimaras held every April 15. Banigan Festival focuses on the use of 'banig' or dried pandan leaves as mats and various handicrafts. Banigan Festival is the identity festival of Barangay Sapal, San Lorenzo with "banig" mat as the most notable product of the village. To promote the products of the village weavers, the Banigan Festival was conceptualized and new products like hats, bags, and slippers are creatively designed by the locals to sustain the preservation of its cultural heritage. In promoting the products during festivals, Banigan tribe danced with the costume made by Banig and portrayed steps on mat weaving. Props and other accessories of the tribe members were also made of Banig. Indeed, Sapal which was once considered a depressed remote barangay has now drawn attraction among local and even international tourist through its Banigan Festival. Banigan Festival is celebrated

every 15th day of April (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

3. Saranggola Festival in San Roque, Buenavista, Guimaras held every March. Kite flying festival which is participated by Barangay folks and neighboring barangays and municipalities of Guimaras. It manifests the ingenuity and creativity in designing kites, maneuvering the same as it swiftly and smoothly fly in the air. The events promote the preservation of traditional leisure of the Filipinos and creativity in re-using and recycling materials in making and designing kites. It is celebrated every last week of March (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

4. Layagan Festival in Hoskyn, Jordan, Guimaras held every May 8.

5. Mini Paraw Festival in Rizal, Buenavista, Guimaras held every 3rd week of June

6. Binagtong Festival in Cabalagnan, Nueva Valencia, Guimaras held every 3rd week of April

7. Harvest Festival in Suclaran, San Lorenzo, Guimaras held every 2nd Sunday of October

8. Pangasi Festival in Lanipe, Nueva Valencia, Guimaras. Pangasi, a traditional farming ritual whose function is to offer, relate, befriend or communicate with the environmental spirits for a bountiful harvest, whether benevolent or malevolent, who are unseen but live together with the mortals. And is still performed by most farmers in the barangay. The three day celebration on the last day of January, has several activities which include traditional games like palosebo. "lagsanay manok", "Palumbadakupidik", Pinaka contest for vegetable growers, pinipig contest, ibos making contest, puso making contest, bag-id contest which been participated by Lanipe's Indigenous people, and a cultural presentation which really shows what is pangasi all about(<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

9. Sibiran Festival in Guisi, Dolores, Nueva Valencia, Guimaras. Sibiran Festival is an annual celebration of SitioGuisi, Dolores, Nueva Valencia. The word "sibid-sibiran" or simply called "sibiran" is artificial fish bait made of selected fowl feather and is attached to a hook and line being used to catch fishes. Celebrated every 3rd Saturday of February as part of the over-all activities. The festival showcases presentations. Games, beach sports and regatta with food festival in the shoreline. Sibiran Festival aimed to develop unity and cooperation to promote awareness in the protection, conservation and rehabilitation of coastal resources for the maintenance of ecological balance and enhance the promotion of eco-tourism (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

10. Ambolong Festival in Salvacion, Buenavista, Guimaras. "Ambolong" comes from the word "bulong" which means medicine or treatment for once upon a time there was anHerbolaryo who could heal various ailments of the locals which named the place "AngBulong" and later was changed to Ambolong, noewSalvacion. The Barangay is popularly known for its history and expertise of the locals in the field of music and arts. It is home of an Orphanage-the Good Shepherds Fold Academy (GSFA) where orphans are trained in playing violins and other musical instruments. Celebrated every 3rd Saturday of February (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

11. Bayuhan Festival in Salvacion, Nueva Valencia, Guimaras. Bayuhan is an Ilonggo term which describes the procedure of traditional way of rice milling or food processing using "lusong" and "hal-o" wherein the products are placed in lusong and pounded by hal-o, a hard wooden pole rounded at both ends with a grip-size middle that serves as the handle. This traditional way of pounding rice has been made popular in the barangay even in the introduction of modern technology. This annual activity preserved the skills, cooperation and develops unity as well as the observed customs and traditions in the people of Barangay Salvacion and so Bayuhan Festival was conceptualized. It is celebrated every 2nd Friday of March (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

12. Niyogyogan Festival in Oracon, Nueva Valencia, Guimaras. Niyogyogan Festival conceptualizes livelihood and production processes of coconut as the main source of income the community. The annual celebration presents a cultural showcase through dance drama and interpretation of their lifestyle and culture; their artistry and creativity in designing and crafting local crafts and skills in food processing, utilizing the parts of the Coconut- the Tree of Life. It is celebrated every March 20 (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

13. Karosahan Festival in Napandong, Nueva Valencia, Guimaras. The Karosa is an invention that helped shaped the agri-based economy of the barangay. Made mostly of a bamboo and pulled by carabaos, the karosa has transported farm inputs from the farm to the market. Karosa- a carabao- the drawn sledge is a traditional means of transportation as part of their lives, being preserved and celebrated with the culture of the old folks in street dancing and cultural showcase. It is celebrated every 14th of April (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

14. Manokan Festival in Concordia, Nueva Valencia, Guimaras. "Manokan" comes from the word Manok which means chicken. A street dancing, array of products display and food festival or chicken-based menus await guests to experience the festive activities. This festival promotes the preservation of Poultry raising as the main source of income of the community to sustain production of highly breed and good quality chicken, the major livelihood of the village as one of the suppliers of native chicken in some big restaurants in Iloilo City. It is celebrated every 30th of October ((<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

15. Kadagatan Festival in San Roque, Nueva Valencia, Guimaras. Kadagatan Festival depicts the bounties of the sea of Barangay San Roque. Locals' livelihood is fishing and they are very much dependent on the richness of marine resources for their home consumption and sustain their family needs. "Kadagatan Festival" advocates community awareness as one of the potential assets for tourism and involvements in protecting their marine resources to sustain life. It also displays the traditional way of catching fish that has been observed by the old folks which are handed down from generation to generation. Celebrated every 27th of December (<http://guimaras.forumotion.net/t8-festivals>, retrieved on December 28, 2017).

Significant Contributions of the Festivals in the Island of Guimaras

Visitors' Arrival in the Province. Table 1 shows the visitors arrival in the province of Guimaras for the past five years. It was shown here clearly that higher number of visitors' arrivals represented the local excursionists or those visitors coming outside Guimaras and within the Philippines and have stayed in less than 24 hours in the destination; tremendous increase in the number of local excursionists is also noted for the past five years. Local tourists ranked second in terms of arrival in the province; records showed that there was a notable increase of arrivals of local tourists from 2014 to 2016. Foreign excursionist ranked third in terms of arrival in the province; tremendous increase in arrival is also noted from 2012 to 2016. Foreign tourists ranked 4th in terms of the number of arrivals; an increase of arrival is also noted in 2016.



Figure 1. Visitors' Arrival for the past five years.

Visitor's Arrival in 2016 per month. Table 2 shows the visitor's arrival in 2016 per month. It was shown here that in terms of monthly monitoring of the arrival of visitors, the month of May ranked first, March ranked second and April ranked third while in terms of the number of festivals, the month of April ranked first, January and February ranked second and March ranked third. Hence, it was shown in this table that the number of festivals does not contribute to the number of visitor's arrival in the province.

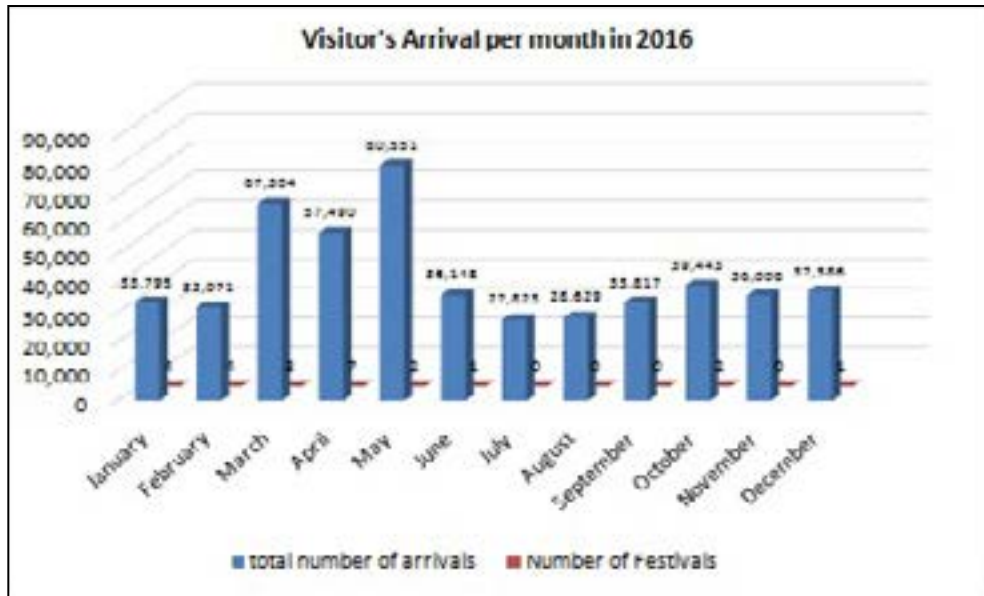


Figure 2. Visitor's Arrival in 2016 per Month

Agri-Trade and Tourism Fair Sales

Table 3 presents the Agri-trade and Tourism Fair Sales of the province of Guimaras for the past six years. Based on the gathered data, it was shown that there was a notable increase of sales from 2014 to 2017.



Figure 3. Agri-trade and tourism fair sales

CONCLUSIONS

1. The province is rich in festivals that showcase the culture of the people in Guimaras.
2. The festivals in the province of Guimaras contributed to the visitors' arrival when taken as a whole but the visitors' arrival is not dependent on the number of festivals when monthly monitoring is considered. In addition, festivals contributed to the increase in agri-trade and tourism fair sales for the past five years.

RECOMMENDATIONS

1. In order to maintain the momentum of the celebration of festivities in the province, there is a need to review the schedule of activities of these festivals so that the months of July, August, September, and November will also be counted as festive months.
2. Recognizing the contributions of festivals in the visitors' arrival in the province, it is recommended that careful planning of the events may be done to invite more visitors to come and witness the festivities in the province.
3. It is recommended that each of the municipalities in the province will maintain a well-documented data to show the significant contributions of the municipal and barangay festivals in the economic aspects.

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REPUBLIC ACT 9003: ITS IMPLEMENTATION IMPACT TO THE COMMUNITY

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ABSTRACT This study aimed to determine the impact of implementation to the community of Republic Act 9003. An experimental research design was utilized using the 24 barangay officials as subjects where the total population was taken. A researcher-made questionnaire was used in gathering the data needed. It was found out that the residents had a low level of practice of RA 9003 as to source reduction, to a high level as to segregation and to a moderate level as to processing before the conduct of the study.; after the conduct of the study, the residents had improved level of practice of RA 9003 whereas to source reduction and processing, were to high level and for segregation to a very high level; before the conduct of the study, the impact of the implementation of RA 9003 on processing was to a great extent; the impact of the implementation of RA 9003 on processing after the conduct of the study was to a very great extent; there is a significant difference in the level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before and after the conduct of the study; and there is a significant difference in the extent of the implementation of RA 9003 on processing before and after the conduct of the study.

Keywords: Republic Act 9003, impact, Guimaras

INTRODUCTION

Background of the Study

Guimaras, a province known to be “the island that fits your taste” is a lone district which is composed of five municipalities namely: Buenavista, Jordan, Nueva Valencia, San Lorenzo, and Sibunag where Jordan serves as the capital town. It is located southeast of Panay and northwest of Negros Island in Western Visayas, Philippines. The island is separated from Panay by the 1.5 nautical mile long strait and acts as a natural breakwater for Iloilo. The 6 nautical mile Guimaras strait likewise separates the province from Negros.

Anchored on agriculture for its economy, Guimarasnons derive their livelihood from the bounties of the land and its surrounding seas. Farm of agri-tourism destination is being set by the province of Guimaras for its definitive tourism image in Western Visayas by diversifying its agriculture and introducing tourism-related activities supplementary or enhancing agricultural areas.

Guimaras is known for its mango plantations, clean beaches, and scenic landscape and its identity festival, Manggahan sa Guimaras where for the past 3 years the number of visitors arrivals reached to 333, 243 in 2013 with 4% increased 347, 148 in 2014 with 4.17% increased and 402, 185 in 2015 with 16% increased. (Provincial Tourism Office, Guimaras).

The study of Sollano and Gabion (2014) on the Extent and Effectiveness of Solid Waste Management Program in Buenavista revealed that out of 36 barangays in Buenavista the program is implemented only in 12 barangays considered as pilot barangays. In the 24 non-pilot there are historical sceneries located.

A place is attractive if its surroundings are clean which can be noted through the proper implementation of RA 9003 on the Ecological Solid Waste Management. Thus, the tourism industry would improve. For this, the study will be conducted.

Objectives:

This study aimed to determine the impact of implementation to the community of Republic Act 9003. Specifically to determine the:

1. level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before the conduct of the study.
2. level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing after the conduct of the study.
3. extent of impact of the implementation of RA 9003 on processing before the conduct of the study.
4. extent of impact of the implementation of RA 9003 on processing after the conduct of the study.
5. difference in the level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before and after the conduct of the study difference in the extent of impact of the implementation of RA 9003 on processing before and after the conduct of the study.

METHODOLOGY

Materials:

Old Sacks
Old Corrugated Tin Sheets
Bamboo Slots
Vegetable Seeds
Biodegradable Materials
Materials

Procedure:

1. Identify the subjects of the study through coordination with the barangay captain for the experimental group.
2. Determine the level of practice as to RA 9003 for source reduction, segregation, and processing of the subjects of the study using the survey questionnaire.
3. Determine the extent of impact of the implementation of RA 9003 on processing using the survey questionnaire.
4. Implementation of RA 9003 as to source reduction, segregation and processing to the experimental barangay for one (1) year.
5. Monitor the implementation of RA 9003 on the practice of source reduction, segregation and processing once every two weeks for one (1) year.
6. Assess the level of practice of the subjects of the study using the survey questionnaire.
7. Evaluate the extent of impact of the implementation of RA 9003 on processing using the survey questionnaire.

This study utilized the experimental research design, according to Kerlinger experimental research is a design in which an "investigator manipulates and controls one or more independent variables and observes the dependent variable or variables". The subjects of the study were the 24 barangay officials where the total population was taken.

Table 1. Distribution of the Subjects

Barangay Officials	N	Percent (%)
Barangay Captain	1	4.17
Barangay Secretary	1	4.17
Barangay Treasurer	1	4.16
Barangay Kagawad	7	29.17
Barangay Health Worker	7	29.17
Barangay Tanod	7	29.16
TOTAL	24	100

The statistical tools used in this study were mean, percent, standard deviation, and T-test.

RESULTS AND DISCUSSIONS

Level of Practice of the Residents in the Barangay of RA 9003 on Source Reduction, Segregation, and Processing Before the Conduct of the Study

Data in Table 2 reveal that the residents in the barangay had low level of practice for source reduction with mean of 2.49) and SD .90 before the conduct of the study. Furthermore they had moderate level on practicing recycling, reusing and reducing of wastes (M=3.08), buying products with simpler and less packaging (M=2.71) and reusing back pages of used papers (M=2.67, while for segregation, with mean 3.85 and SD .75, was to a high level. They had high level of practices on following the rules and policies about solid waste management to help in proper waste disposal. Moreover, in terms of processing, they had moderate level of practice of RA 9003 in the barangay with a mean of 3.12 and SD of .36. They have a very high level of practices on item that states "Do not throw non-biodegradable wastes like plastics and styro foam into canals and rivers.

Table 2. Level of practice of the residents in the barangay of RA 9003 on source reduction, segregation, and processing before the conduct of the study

	N	Mean	SD	Remarks
Source Reduction				
Buying Products with simpler and less packaging.	24	2.71	1.16	To a moderate level
Making Decorative items out of used papers, plastics, and other waste materials.	24	2.13	1.39	To a low level
Repairing old clothes and selling them to earn additional income.	24	1.88	1.19	To a low level
Practicing recycling, reusing, and reducing of wastes.	24	3.08	1.02	To a moderate level
Reusing back pages of used papers.	24	2.67	1.27	To a moderate level
Total	24	2.49	.90	To a low level
Segregation				
Segregating garbage from source as to biodegradable, non-biodegradable and recyclable.	24	3.08	.88	To a moderate level
Following rules and policies about solid waste management to help in proper waste disposal.	24	3.50	1.10	To a high level
Participating in the clean and green program of the Barangay/ municipality.	24	4.17	.92	To a low level
Value the importance of clean surrounding and protection of health.	24	4.50	.93	To a high level
Do not throw non-biodegradable wastes in the sanitary landfill.	24	4.00	1.38	To a high level
Total	24	3.85	.75	To a high level
Processing				
Recovering recyclable materials from the Materials Recovery Facility	24	2.33	.87	To a low level
Bringing sorted waste materials to second hand buyers.	24	2.79	.78	To a moderate level
Do not dump all waste materials (biodegradable and non-biodegradable) in one compost pit.	24	2.29	.91	To a low level
Practicing composting.	24	3.29	1.04	To a moderate level
Do not throw non-biodegradable wastes like plastics and styro foam into canals and rivers.	24	4.88	.45	To a very high level
Total	24	3.12	.36	To a moderate level

Scale: 4.20-5.00 (very high level) 3.40-4.19 (high level) 2.60-3.39 (moderate level) 1.80-2.59 (low level) 1.00-1.79 (very low level)

Level of Practice of the Residents in the Barangay of RA 9003 on Source Reduction, Segregation, and Processing After the Conduct of the Study

Table 3 shows the data which reveal that practice in the barangay after the conduct of the study on source reduction with mean 3.93 and SD .37 is to a high level. The result on practicing recycling, reusing and reducing of wastes got higher from moderate level to a very high level. As to segregation, they had a very high level of practices with mean of 4.27 and SD of .42. As to processing, the overall results was high level of practices with mean=4.03 and S= .54. This implies that the conduct of the study of RA 9003 was successfully implemented.

Table 3. Level of practice of the residents in the barangay of RA 9003 on source reduction, segregation and processing after the conduct of the study.

	N	Mean	SD	Remarks
Source Reduction				
Buying Products with simpler and less packaging.	24	3.88	.54	To a high level
Making Decorative items out of used papers, plastics, and other waste materials.	24	4.08	.83	To a high level
Repairing old clothes and selling them to earn additional income.	24	3.17	1.01	To a moderate level
Practicing recycling, reusing, and reducing of wastes.	24	4.38	.71	To a very high level
Reusing back pages of used papers.	24	4.13	.68	To a high level
Total	24	3.93	.37	To a high level
Segregation				
Segregating garbage from source as to biodegradable, non-biodegradable and recyclable.	24	4.29	.62	To a very high level
Following rules and policies about solid waste management to help in proper waste disposal.	24	4.42	.65	To a very high level
Participating in the clean and green program of the Barangay/ municipality.	24	4.38	.65	To a very high level
Value the importance of clean surrounding and protection of health.	24	4.33	.92	To a very high level
Do not throw non-biodegradable wastes in the sanitary landfill.	24	3.92	1.14	To a high level
Total	24	4.27	.49	To a very high level
Processing				
Recovering recyclable materials from the Materials Recovery Facility	24	4.17	.87	To a high level
Bringing sorted waste materials to second hand buyers.	24	3.38	1.25	To a high level
Do not dump all waste materials (biodegradable and non-biodegradable) in one compost pit.	24	3.92	1.14	To a high level
Practicing composting.	24	3.88	1.03	To a high level
Do not throw non-biodegradable wastes like plastics and styro foam into canals and rivers.	24	4.79	.41	To a very high level
Total	24	4.03	.54	To a high level

Legend:	Scale	Descriptive
	4.20-5.00	To a very high level
	3.40-4.19	To a high level
	2.60-3.39	To a moderate level
	1.80-2.59	To a low level
	1.00-1.79	To a very low level

Extent of Impact of the Implementation of RA 9003 on Processing before the Conduct of the Study

Data in Table 4 show that the economic impact with a mean of 2.63 and SD .71 is to a moderate extent. The use, produce and compost to fertilize their plants and earning income from the plants fertilized by compost has a great impact of the implementation of RA 9003. Furthermore, as to values impact with a mean of 3.73 and SD .39 describes as to a great extent. Moreover, majority of the respondents implement RA 9003 as they regularly clean their surroundings and understand that proper waste management was their responsibility which describes as to very great extent.

Table 4. Extent of impact of the implementation of RA 9003 on processing before the conduct of the study

	N	Mean	SD	Remarks
Economic Impact				
sell recyclable waste to junkshops	24	3.21	1.10	To a moderate extent
produce decorative items out of recyclable materials	24	1.71	1.04	To a very low extent
use recyclable materials in beautifying our barangay	24	1.79	1.06	To a very low extent
sell produced organic fertilizer from compost	24	2.04	1.20	To a low extent
use produced compost to fertilize our plants	24	3.50	1.18	To a great extent
earn income from the plants fertilized by compost	24	3.50	1.50	To a great extent
Total	24	2.63	.71	To a moderate extent
Values Impact				
spend time in recovering recyclable materials from the Materials Recovery Facility	24	2.63	.71	To a moderate extent
are one in support with our waste management	24	3.92	.77	To a moderate extent
regularly clean our surroundings	24	4.50	.51	To a very great extent
religiously follow environmental laws by ourselves	24	3.46	.78	To a great extent
segregate wastes as to biodegradable and non-biodegradable	24	3.17	.76	To a moderate extent
Understand and that proper waste management is everyone's responsibility.	24	4.71	.91	To a very great extent
Total	24	3.73	.90	To a great extent

Legend: 4.20-5.00 (To a very great extent), 3.40-4.19 (To a great extent), 2.60-3.39 (To a moderate extent), 1.80-2.59 (To a low extent), 1.00-1.79 (To a very low extent)

Extent of Impact of the Implementation of RA 9003 on Processing after the Conduct of the Study

Table 5 shows data which reveal that the economic impact on processing after the conduct of the study with mean 4.16 and SD .46 is to a great extent. They have a very great extent on selling recyclable waste to junkshops, producing decorative items out of recyclable materials, using recyclable materials in beautifying their barangay and using produce compost to fertilize their plants. In terms of values impact, with mean=4.24 and S=0.80 which describes as a very great extent. This implies that implementing RA 9003 gives benefits to both respondents and environment. The extent of impact of the implementation of RA 9003 after the conduct of the study on the items that state "are one in support with our waste management", "regularly clean our surroundings", "religiously follow environmental laws by themselves", segregate wastes as to biodegradable and non-biodegradable" and "understand that proper waste management is everyone's responsibility". This implies that RA 9003 should be implemented continuously for the benefits of the environment and its people.

Table 5. Extent of impact of the implementation of RA 9003 on processing after the conduct of the study

	N	Mean	SD	Remarks
Economic Impact				
sell recyclable waste to junkshops	24	4.50	.59	To a very great extent
produce decorative items out of recyclable materials	24	4.54	.51	To a very great extent
use recyclable materials in beautifying our barangay	24	4.42	.78	To a very great extent
sell produced organic fertilizer from compost	24	3.63	1.44	To a great extent
use produced compost to fertilize our plants	24	4.33	.96	To a very great extent
earn income from the plants fertilized by compost	24	3.54	1.44	To a great extent
Total	24	4.16	.46	To a great extent
Values Impact				
spend time in recovering recyclable materials from the Materials Recovery Facility	24	4.08	.78	To a great extent
are one in support with our waste management	24	4.33	.82	To a very great extent
regularly clean our surroundings	24	4.21	1.02	To a very great extent
religiously follow environmental laws by ourselves	24	4.25	.90	To a very great extent
segregate wastes as to biodegradable and non-biodegradable	24	4.38	.82	To a very great extent
Understand and that proper waste management is everyone's responsibility.	24	4.21	1.06	To a very great extent
Total	24	4.24	.80	To a great extent

Legend: 4.20-5.00 (To a very great extent), 3.40-4.19 (To a great extent), 2.60-3.39 (To a moderate extent), 1.80-2.59 (To a low extent), 1.00-1.79 (To a very low extent)

Difference in the Level of Practice of the Residents in the Barangay of RA 9003 on Source Reduction, Segregation and Processing Before and After the Conduct of the Study

Table 6 shows a significant difference in the level of practice of the residents before and after the implementation of the study for sources reduction with p-value .000, for segregation p= .020 and for processing with p-value .000. All the p values are less than .05, thus significant.

Table 6. Difference in the level of practice of the residents in the barangay before and after the implementation of RA 9003 on source reduction, segregation, and processing

	Mean	SD	df	t ratio	p value	Interpretation
Source Reduction (after) - Source Reduction (before)	1.43	.91	23	7.756	.000	Significant
Segregation (after) - Segregation (before)	.45	.89	23	2.501	.020	Significant
Processing (after) - Processing (before)	.76	.68	23	5.481	.000	Significant

α<0.05 level of significance

Difference in the Extent of Impact of the Implementation of RA 9003 on Processing Before and After the Conduct of the Study

Data in table 7 show a significant difference in both economic and values impact of the implementation of RA 9003 on processing before and after the conduct of the study where p-value for economic impact is .000 and that for values impact p=.010 where both p values are less than .05, thus significant.

Table 7. Difference in the extent of impact of the implementation of RA 9003 on processing before and after the conduct of the study

	Mean	SD	df	t ratio	p value	Interpretation
Economic Impact (after) - Economic Impact (before)	1.49	.94	23	7.754	.000	Significant
Values Impact (after) - Values Impact (before)	.51	.90	23	2.799	.010	Significant

α<0.05 level of significance

CONCLUSIONS

1. The findings of the study imply, that before the conduct of the study, the residents in the barangay had their way of practicing RA 9003 as to source reduction, segregation, and processing, however not to the highest level yet.
2. The conduct of the study in the barangay has improved the level of practice of the residents on RA 9003 as to source reduction, segregation, and processing.
3. The implementation of RA 9003 on processing has already impacted the residents before the conduct of the study but not to the greatest extent.
4. The conduct of the study has improved the impact of the implementation of RA 9003 on processing to the residents in the barangay, reaching the greatest extent.

Contribution of the Study

This study has extended green technology “RA 9003-Comprehensive Solid Waste Management Program” on source reduction, segregation and processing that has improved the level of practice of the residents in the Barangay San Miguel, Buenavista, Guimaras as to the implementation of the said Act. Further, it has improved the impact of the implementation as to processing to the residents.

- provided scientific data to the Local Government leaders as to how their residents practice RA 9003 being a mandate to them.
- provided opportunity to the Guimaras State College to transfer green technology to the barangay as initiative in the realization of its vision to be a “center of green technology generation”.
- developed the researchers of this study to be instruments in the preservation of the Mother Earth through research.
- provided literature as a reference for other Local Government Units to assess the level of practice of their residents and the impact of the implementation of RA 9003 and for other researchers to conduct environmental research.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are given:

The barangay officials to impose local ordinances for the implementation and sustainability of RA 9003 practices in the whole barangay, Guimaras State College through its extension program to conduct regular monitoring and evaluation of the practices of the residents for sustainability of segregation and further improvement on source reduction and processing to achieve the highest level. Guimaras State College to transfer green technology to the community for best outcomes of its vision as the "center of green technology generation". For the barangay officials to strengthen linkages with different local, national, and international sectors/organization for support in its RA 9003 program sustainability. Conduct of this study in other non-pilot barangays in the Municipality of Buenavista or even in the island of Guimaras.

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SCHOOL CRISIS MANAGEMENT OF CRIMINOLOGY STUDENTS AT GUIMARAS STATE COLLEGE

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ABSTRACT This study was conducted to determine the level of school crisis management among criminology students. The subject-respondents of the study were the criminology students of Guimaras State College in terms of age, sex, year level, family monthly income, boarding status, scholarship, and religion. Likewise, the relationship between the extent of school crisis and the crisis management of the criminology students were determined. The CCJE students of Guimaras State College was experiencing a moderate level of school crisis in both environmental and organizational sources while a low to moderate school crisis level for personal school crisis has been experienced but the disagreement of the majority has been identified for mean school crisis level values of organizational and personal sources while their positive agreement was observed in environmental school crisis. A no significant difference was found for every the profile variable sub-group. Crisis management was a strategy of the individual in order to cope-up or relieve from the experienced school crisis from different sources. The CCJE students were directly stated the agreement if sublimation mechanism as applicable for the three sources as their response was agreed but noticeably it could be applicable for experiencing organizational school crisis. For the introjection crisis management, the overall response of CCJE students was undecided to apply this type of coping in the three identified sources but still considerable as their crisis management as it was positively agreed by the majority. Regression, projection and displacement crisis management was disagreed by the respondents for its applicability to cope up school crisis from the identified sources. As the level of organizational stress experienced by the respondent increases the more they engage in introjection, projection, regression, and displacement coping mechanism and as the level of personal stress increases the more the respondents will engage to projection and introjection.

Keywords: School Crisis, Management, Criminology Students.

INTRODUCTION

Background of the Study

Crisis in the workplace is a worldwide issue. A report on Education by World Bank (1999) revealed that the education systems the world over have been ineffective and has failed to address the matter of student's crisis and burnout in schools. This failure, however, has stifled natural efforts towards building a stronger human resource base which is invaluable for development in all its spheres in schools (Yamboet.al., 2012).

In spite of the studies conducted in determining factors of the crisis in some foreign countries, there is no concrete basis to conclude that crisis-related problem at work with students in school is the same experience in the Philippines. There should have a study locally that would prove its sources and its eventual effects to school supervision. Thus, this study was conducted.

Considering the heavy study load in the school of the students are experiencing today, determining the extent of crisis of criminology students is therefore indispensable. Likewise, this study would help determine the consequent crisis management of the Criminology students' specifically at Guimaras State College which will be the basis for the improvement of human resource program of the Department of Criminal Justice Education. Its significance will not only for the professional enhancement but its relevance will benefit the students as well as the institution by refining its human resource program.

Statement of the problem

This study was conducted to determine the level of crisis management among criminology students and its impact to school supervision. Specifically, this study would answer the following questions:

1. What is the socio-demographic profile of criminology students in Guimaras state college when grouped according to age, sex, year level, boarding status, scholarship?

2. What is the extent of crisis among the criminology students in Guimaras State College when grouped according to profile and taken as a whole in terms of Environmental, Organizational, and Personal?
3. What is the crisis management among the criminology students in Guimaras State College when grouped according to profile and taken as whole in terms of sublimation, regression, projection, introjection, and displacement?
4. Is there a significant difference between extent of crisis among the criminology students in Guimaras State College when grouped according to profile terms of Environmental, Organizational, and Personal?
5. Is there a significant difference between the crisis management among the criminology students in Guimaras State College when grouped according to profile terms of sublimation, regression, projection, introjection, and displacement?
6. Is there a significant relationship between the extent of crisis and crisis management among the criminology students in Guimaras State College?

METHODOLOGY

This study adopted the Descriptive Method of Research (Survey Research Design). This was used to describe the crisis management of the selected criminology students of Guimaras State College AY 2016-2017. According to Librero (1996), a survey research design allows to study "naturally occurring phenomena." Furthermore, a researcher collects data from a part of the population to assess the interrelationship of the variables in his/her study. Survey research is the most efficient method for gathering data that will be used to describe a very large population (Babbie, 1986).

The stratified random sampling will be used to identify actual respondents of the study. From the total population of 220 criminology students, the 144 will be the significant samples computed using Sloven's formula at 0.05 margin of error. The researcher modified the data gathering instruments from the Usdaw Health and Safety Stress Questionnaire (2013) and partly from the study of Cañete, et.al. (2007), using Survey Questionnaire as the most effective and common method in conducting survey approach. The questionnaire composed of three parts namely: Part I: seeks information about the socio-demographic profile of the respondents. Part II: determines the stress level among criminology students. Part III: aims to find out the crisis management adopted by criminology students. To establish validity of the research instrument or the questionnaire a jury composed of five panels of evaluators, who are experts in this field or who are knowledgeable in research. Using the evaluation instrument formulated by Good and Scates, the panels will provide ratings for the validity of the instrument. The mean rating of 4.36 established the validity of the instrument. To establish the reliability of the instrument used to gather data in this study, the same shall be subjected to a dry run method. The instrument will be administered once, to a group of pupils which are not belonging to the study. The dry run respondents were the randomly selected 30 non-criminology students of Guimaras State. The data will be collected, tabulated and computed using the Cronbach's Alpha Reliability Test and the result of 0.93 established the reliability of the instrument.

After the instrument passes both validity and reliability tests, researchers will write a letter addressed to the Administrator of the school – A, asking permission and approval allowing the researcher to conduct a study and administer the questionnaire. After the permission and approval were granted, sufficient copies of the questionnaire were reproduced for administration to the respondents and a schedule for the administration of the instrument shall be arranged with the different section to assure the time devotion of the respondents to participate in the study.

The researchers were personally administered the instrument to the respondents. The researchers facilitate the answering of questions that respondents may have as well as to ensure the 100% retrieval of the accomplished questionnaires. Statements in the instrument were discussed so that respondents may directly understand what is being asked to them. Collected data was subjected to data analysis.

Statistical used were frequency, mean, percentage, Mann Whitney U, Kruskal Wallis set at 0.05 alpha level and Spearman Rho Correlation at 0.05 alpha level.

RESULTS AND DISCUSSIONS

Profile of the Respondents

Presented in table 1 below was the profile of the respondents. Out of the total 140 students responded in the survey, there were 44.3% with an age of 17 to 19 years old, 40.0% 20 to 22 years old, and 15.7% at above 22 years old. In terms of sex, 65% were males, and 35% were females, wherein, 42.9% stay in the boarding houses and 57.1% does not have a boarding house. As to scholarship grants, 45% were public scholarship beneficiaries while 55% were private or family scholarship grantees. The result implies that majority of the respondents were at 17-22 years of age, mostly were males, does not have a boarding house, and private scholarship grantees.

Table 1. The profile of CCJE students

Profile		f	%
Age	17-19	62	44.3
	20-22	56	40.0
	Above 22	22	15.7
Sex	Male	91	65.0
	Female	48	34.3
Boarding status	Boarding	60	42.9
	Non-boarding	80	57.1
Scholarship	Public	63	45.0
	Private	77	55.0
Total		140	100.0

Crisis Experienced by CCJE Students

The descriptive analysis for the level of crisis experienced by CCJE students in terms of three identified source of the crisis was presented in the table below. Mean was used to describe the overall description of the crisis level per profile group.

The respondents' profile was normally a significant factor to study psychological dimensions of each individual towards perception, in which this study utilizing perception of identifying individual crisis level. Overall, respondents were showing their response to identify the crisis level they have experienced in school based on the three factors as the source of crisis; environmental, organizational and personal factors. A consistent moderate level of crisis has been experienced in both environmental and organizational factors of the different group of profile variables while a variation of crisis level has been experienced on the personal factor. The respondents with above 22 years of age, non-boarding and a public scholarship beneficiary noted a low level of crisis as to personal factor, and other profile variable groups experienced moderate crisis level.

On the organizational factor level of crisis experienced by the respondents as categorized in different profile variable sub-groups, majority of male respondents aging 17-19 years old, non-boarding, not considering the type of scholarship they belong shows their disagreement in the computed mean value of moderate crisis level; which implies they have experienced lower level of crisis than moderate in the organizational structure of their school while majority of those above 22 years old female /male respondents, boarding in status, noted their positive agreement on the mean computed value of experiencing moderate crisis level and justifying a higher level than moderate. Considering the variation of crisis-level experienced from low to moderate in terms of personal factor as describe in the table above, based on the mean value, the disagreement of the majority of the respondents in every profile variable sub-groups was consistently noted except those in public scholarship grantees in which they have noted a positive agreement and justify the low level of crisis experienced. The result implies that in terms of personal sources of crisis, the majority of the respondents experiencing a crisis level of moderate and lower and for those in public scholarship grant which majority of them may be experiencing a crisis level higher than low. Overall, the majority of respondents shows disagreement in the mean value of experiencing the moderate level of crisis from personal factor.

Table 2. The level of crisis experienced by CCJE students in terms of three identified source of crisis and grouped according to profile.

PROFILE		Source of crisis					
		Environmental		Organizational		Personal	
		Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Age	17-19	2.85	Moderate	2.78	Moderate	2.78	Moderate
	20-22	2.98	Moderate	2.8	Moderate	2.58	Moderate
	Above 22	3.11	Moderate	2.98	Moderate	2.25	Moderate
Sex	Male	3.1	Moderate	2.84	Moderate	2.62	Moderate
	Female	2.88	Moderate	2.78	Moderate	2.62	Moderate
Boarding status	Boarding	2.9	Moderate	2.73	Moderate	2.63	Moderate
	Non-boarding	3.14	Moderate	3.14	Moderate	2.57	Moderate
Scholarship	Public	2.91	Moderate	2.8	Moderate	2.44	Moderate
	Private	2.96	Moderate	2.81	Moderate	2.69	Moderate
Total		2.94	Moderate	2.81	Moderate	2.62	Moderate

Crisis Management of the Respondents

Crisis level identification was not being completed without determining some of the coping strategies used by the respondents to cope-up the crisis they have experienced. Presented in table 2, is the Crisis Management of CCJE students based on the identified sources of crisis.

Crisis Management is the strategy of the individual in order cope-up of relieve from the experienced crisis from different sources. One of the Crisis Management used in this was sublimation. Based on the collected information of utilizing sublimation to cope-up from environmental, organizational and personal factors of crisis from the respondents, in which they were categorized according to different profile variable as shown in table 2. In the environmental factor of crisis, the group of respondents showing their agreement of utilizing sublimation to cope-up the crisis caused by the environmental factor was those 20-22 years old non-boarding and a public scholarship grantee. While the other profile variable group were undecided or not sure of using sublimation in environmental crisis factor. In organizational crisis factor, the 20-22 years old, non-boarding, and public scholarship grantee CCJE students was agree of using sublimation Crisis Management when experiencing organizational crisis while those under groups in Sex, length of service, 17-19 and above 22 years of age, boarding, and in private scholarship were undecided of their utilization if experiencing organizational crisis. The sublimation Crisis Management has been used as a strategy of above 22 years old female non-boarding, and public scholar CCJE students. Overall respondents were still undecided or Not Sure of using sublimation type of Crisis Management for environmental, organizational and personal crisis factors.

Looking at for those profile variable groups having undecided for utilization of sublimation as Crisis Management for experiencing a crisis from three crisis factors was further analyzed to understand the individual response agreement. Based on the value of skewness, those with positive result justify the positive agreement and may implies that majority were still using the sublimation, and it was group of boarding and a private scholar CCJE students a male and female non-boarding above 22 years old private CCJE students for have also their positive agreement of utilizing sublimation for organizational factor crisis while the majority of the male college degree holder private CCJE students shows positive agreement for using same Crisis Management for personal crisis related experienced. The overall majority of the CCJE students have the positive agreement of using sublimation for organizational factor crisis related.

Table 3. The Sublimation Crisis Management of CCJE students based on their identified source of crisis and grouped according to profile variable.

PROFILE		Source of crisis					
		Environmental		Organizational		Personal	
		Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Age	17-19	3.17	Not sure	3.19	Not sure	3.08	Not sure
	20-22	3.44	Agree	3.45	Agree	3.55	Agree
	Above 22	3.00	Not sure	3.08	Not sure	3.53	Agree
Sex	Male	3.33	Not sure	3.30	Not sure	3.35	Not sure
	Female	3.31	Not sure	3.36	Not sure	3.40	Agree
Boarding status	Boarding	3.29	Not sure	3.31	Not sure	3.37	Not sure
	Non-boarding	3.45	Agree	3.48	Agree	3.45	Agree
Scholarship	Public	3.74	Agree	3.60	Agree	3.61	Agree
	Private	3.15	Not sure	3.25	Not sure	3.29	Not sure
Total		3.32	Not sure	3.34	Not sure	3.39	Not sure

For the utilization of regression type of Crisis Management, it was shown that based on the mean values for each of the respondents profile group and overall responses that this type of Crisis Management was not a strategy to cope-up from crisis of the CCJE students at entire profile variable groups, hence their response was disagree to strongly disagree for every crisis related factors. The overall disagreement response of the respondents for the regression Crisis Management was not a conclusion for respondents' regression strategy to cope up crisis. There were still frequent numbers of respondents from different profile group utilizing regression Crisis Management in order to relieve or to cope-up from the crisis from the stated crisis related factors.

Table 3. The regression Crisis Management of CCJE students based on their identified source of crisis and grouped according to profile variable.

PROFILE		Source of crisis					
		Environmental		Organizational		Personal	
		Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Age	17-19	2.44	Disagree	2.33	Disagree	2.40	Disagree
	20-22	2.23	Disagree	2.11	Disagree	2.15	Disagree
	above 22	2.09	Disagree	1.93	Disagree	2.00	Disagree
Sex	Male	2.49	Disagree	2.28	Disagree	2.34	Disagree
	Female	2.21	Disagree	2.14	Disagree	2.18	Disagree
Boarding status	Boarding	2.34	Disagree	2.20	Disagree	2.27	Disagree
	Non-Boarding	2.09	Disagree	2.11	Disagree	2.06	Disagree
Scholarship	Public	2.24	Disagree	2.35	Disagree	2.42	Disagree
	Private	2.32	Disagree	2.11	Disagree	2.16	Disagree
Total		2.29	Disagree	2.18	Disagree	2.23	Disagree

The respondents' response for projection type of Crisis Management was shown in the above table. Based on the mean values for each of the respondents' profile group and overall responses this type of Crisis Management was not a strategy to cope-up from a crisis of the CCJE students at entire profile variable groups, hence their response was at the level of disagree to strongly disagree for every crisis related factors. The overall disagreement response of the respondents for the projection Crisis Management was almost the same with regression coping results presented in the previous table above. Projection strategy to cope up crisis received a lower negative agreement response from the respondents as the skewness was negative for almost profile variable groups. The result implies that CCJE students did not consider projection to be a Crisis Management to relieve from the crisis in which the respondents experienced.

Table 4. The projection Crisis Management of CCJE students based on the identified source of crisis and grouped according to profile variable.

PROFILE		Source of crisis					
		Environmental		Organizational		Personal	
		Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Age	17-19	1.92	Disagree	1.99	Disagree	1.89	Disagree
	20-22	2.08	Disagree	2.06	Disagree	2.14	Disagree
	Above 22	1.29	Disagree	1.67	Disagree	1.65	Disagree
Sex	Male	2.09	Disagree	2.11	Disagree	2.01	Disagree
	Female	1.94	Disagree	1.96	Disagree	2.03	Disagree
Boarding status	Boarding	2.04	Disagree	2.07	Disagree	2.1	Disagree
	Non-boarding	1.75	Disagree	1.75	Disagree	1.72	Disagree
Scholarship	Public	1.92	Disagree	1.92	Disagree	1.99	Disagree
	Private	2.01	Disagree	2.04	Disagree	2.04	Disagree
Total		1.98	Disagree	2.01	Disagree	2.03	Disagree

Crisis Management as presented above shows almost consistent responses when the respondents were categorized or grouped into different profile variables sub-group. The computed mean values of the responses from the respondents were interpreted for each variable group, and it was found that CCJE students were undecided for determining the introjection as Crisis Management relieved crisis from the environmental, organizational and personal crisis factor for almost the entire profile groups Even though the overall response of the respondents in every profile variable groups was in the middle point level of agreement, still it could be described that there were frequent numbers of respondents used introjection to relieve crisis based on the positive value of skewness in some of the profile variable groups; specifically the 17-19 years old female private CCJE students either boarding and non-boarding.

Table 5. The introjection Crisis Management of CCJE students based on the identified source of crisis and grouped according to profile variable.

PROFILE		Source of crisis					
		Environmental		Organizational		Personal	
		Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Age	17-19	2.75	Not Sure	2.68	Not Sure	2.67	Not Sure
	20-22	2.92	Not Sure	2.96	Not Sure	2.95	Not Sure
	Above 22	3.29	Not Sure	3	Not Sure	3.29	Not Sure
Sex	Male	3.11	Not Sure	3.04	Not Sure	3.08	Not Sure
	Female	2.77	Not Sure	2.8	Not Sure	2.77	Not Sure
Boarding status	Boarding	2.87	Not Sure	2.85	Not Sure	2.84	Not Sure
	Non-boarding	2.91	Not Sure	2.97	Not Sure	2.98	Not Sure
Scholarship	Public	2.97	Not Sure	2.95	Not Sure	2.96	Not Sure
	Private	2.84	Not Sure	2.84	Not Sure	2.83	Not Sure
Total		2.88	Not Sure	2.87	Not Sure	2.87	Not Sure

Note: SDA-strongly disagree, DA-disagree, NOT SURE-either agree or disagree, A-agree, SA-strongly agree.

The level of agreement responses of the respondents as to the introjection type of Crisis Management

For the displacement Crisis Management it was shown that based on the mean values for each of the respondents profile group and overall responses this type of Crisis Management was not a strategy to cope-up from crisis of the CCJE students at entire profile variable groups, hence their response was disagree to strongly disagree for every crisis related factors. The overall disagreement response of the respondents for the displacement Crisis Management was not a conclusion for respondents' coping strategy to cope up crisis. There were still frequent numbers of respondents from different profile group utilizing displacement Crisis Management in order to relieve or to cope-up from the crisis from the stated crisis related factors.

Table 6. The displacement Crisis Management of CCJE students based on the identified source of crisis and grouped according to profile variable.

PROFILE		Source of crisis					
		Environmental		Organizational		Personal	
		Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Age	17-19	2.11	Disagree	2.11	Disagree	2.11	Disagree
	20-22	2.12	Disagree	2.3	Disagree	2.21	Disagree
	Above 22	2.17	Disagree	2	Disagree	2	Disagree
Sex	Male	2.15	Disagree	2.17	Disagree	2.24	Disagree
	Female	2.1	Disagree	2.23	Disagree	2.13	Disagree
Boarding status	Boarding	2.15	Disagree	2.19	Disagree	2.2	Disagree
	Non-boarding	2	Disagree	2.28	Disagree	2	Disagree
Scholarship	Public	2.14	Disagree	2.27	Disagree	2.12	Disagree
	Private	2.11	Disagree	2.18	Disagree	2.18	Disagree
Total		2.12	Disagree	2.21	Disagree	2.16	Disagree

Note: SDA-strongly disagree, DA-disagree, NOT SURE-either agree or disagree, A-agree, SA-strongly agree

The table 7 presents the results of the significant difference on the crisis level experienced by CCJE students from the given source of crisis using appropriate statistical analysis in terms of different profile variable groupings. The test was employed to further describe the homogeneity of the respondent responses.

The results of analysis using Mann Whitney U for comparing to independent groups having a scaled data and Kruskal Wallis test for more two independent groups both was tested at 0.05 alpha level. In terms of male and female, boarding and non-boarding, public and private schools, comparison of crisis-level experienced by the stated profile of administrator using the Mann Whitney U test at 0.05 alpha. The result has a computed significant value of greater than 0.05 which resulted to the interpretation of no significant difference on the crisis level of the tested independent two groups for every source of the crisis that come up with the decision of accepting the null hypothesis. Therefore it is concluded that in terms of Sex, civil status and type of school of the respondents was homogeneous in the level of crisis experienced based on the different source of crisis.

The result of no significant difference was also obtained in comparing more two independent groups of age, length of service and highest educational attainment. The result implies the homogeneity of the responses as to the crisis level experienced by the different profile variable sub-group.

Table 7. The significant difference test on the level of crisis experienced by CCJE students as grouped according to profile.

Variables	Environmental			Organizational			Personal		
	Tabular	p-value	interpretation	Tabular	p-value	interpretation	Tabular	p-value	Interpretation
Sex	-1.250	0.210	Not significant	-0.720	0.470	Not significant	-0.260	0.800	Not significant
Boarding Status	-0.670	0.500	Not significant	-1.530	0.130	Not significant	-0.020	0.990	Not significant
Scholarship	-0.770	0.440	Not significant	-0.040	0.970	Not significant	-0.960	0.340	Not significant
Age	0.220	0.900	Not significant	0.020	0.990	Not significant	3.130	0.210	Not significant

The results of analysis using Mann Whitney U for comparing to independent groups having a scaled data and Kruskal Wallis test for more two independent groups both was tested at 0.05 alpha level. In terms of boarding and non-boarding, public and private schools, comparison of Crisis Management from crisis level experienced by CCJE students in terms of the stated profile of using the Mann Whitney U test at 0.05 alpha. The result has a computed significant value of greater than 0.05 which resulted to the interpretation of no significant difference between the Crisis Management used based crisis level experienced of the tested independent two groups, therefore, come up with the decision of accepting the null hypothesis. Therefore it is concluded that in terms of civil status and type of school of the respondents was homogeneous on their responses towards Crisis Management based on the level of crisis experienced. While on the Sex comparison, it was found a significant difference result on the sublimation Crisis Management, with an alpha value less than 0.05, an indication that male and female agreement on sublimation was different in each other. The result of no significant difference was also obtained in comparing more two independent groups of age and highest educational attainment. The result implies the homogeneity of the responses as to the Crisis Management of the respondents based on the crisis level experienced by the different profile variable sub-group but significant difference was found in the agreement of respondents in terms of length of service as to the introjection Crisis Management. This implies a heterogeneous response of the respondent length of service.

Table 8. The significant difference test on the Crisis Management by CCJE students as grouped according to profile.

Crisis Management	Sex			Boarding Status			Scholarship			Age		
	Tabular	p-value	i	Tabular	p-value	i	Tabular	p-value	i	Tabular	p-value	i
Sublimation	-2.05	0.04	Sig	-0.97	0.33	NS	-0.33	0.74	NS	2.87	0.24	NS
Regression	-1.25	0.21	NS	-0.2	0.84	NS	-1.3	0.19	NS	0.86	0.65	NS
Projection	-0.37	0.71	NS	-1.28	0.2	NS	-0.57	0.57	NS	4.91	0.09	NS
Introjection	-0.3	0.76	NS	-0.23	0.82	NS	-1.31	0.19	NS	0.15	0.93	NS
Displacement	-0.29	0.77	NS	-0.31	0.75	NS	-0.39	0.7	NS	1.05	0.59	NS

The relationship between crisis level and Crisis Management

Table 9 shows the results of the correlational analysis between the crisis level and the Crisis Management of the CCJE students. Based on the result of the correlational analysis employed between the level of crisis experienced and the Crisis Management of CCJE students in district five, it shows that no significant relationship between the level of environmental crisis and the five Crisis Management stated. On the organizational crisis, introjection Crisis Management was highly significant correlated at 0.439 as alpha value was less than 0.01, while the correlation of projection at 0.364, regression (0.317) and displacement (0.314) was significant at alpha less than 0.05 but greater than 0.01. The positive significant correlation results imply that as the level of organizational crisis experienced by the respondents increases the more they engage in introjection, projection, regression and displacement Crisis Management. On the personal crisis, the projection and introjection Crisis Management was positively correlated at 0.362 and 0.318 as alpha value was less than 0.05. The positive correlation results between the two variables implies that as the level of personal crisis increases the more the respondents will engage to projection and introjection Crisis Management.

Table 9. The relationship between Crisis level and Crisis Management

		Sublimation	Regression	Projection	Introjection	Displacement
1. Environmental factor	r-value	.128	-.087	.157	.270	-.019
	p-value	.426	.589	.326	.088	.907
	result	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig
2. Organizational Factors	r-value	.225	.317*	.364*	.439**	.314*
	p-value	.157	.043	.019	.004	.045
	result	Not Sig	Sig	Sig	H-Sig	Sig
3. Personal Factors	r-value	.148	.075	.362*	.318*	.222
	p-value	.355	.640	.020	.043	.162
	result	Not Sig	Not Sig	Sig	Sig	Not Sig

CONCLUSION

From the derived results and findings of the study, the following conclusion has been formulated.

The CCJE students of Guimaras State College was experiencing a moderate level of stress in both environmental and organizational stressors while a low to moderate stress level for personal stressor has been experienced but the disagreement of the majority has been identified for mean stress level values of organizational and personal stressors while their positive agreement was observed in environmental stressor. A no significant difference was found for every the profile variable sub-group. Coping mechanisms were strategies of the individual in order to cope-up or relieve from the experienced stress from different sources. The administrator was not directly stated the agreement if sublimation mechanism as applicable for the three stressors as their response was undecided but noticeably it could be applicable for experiencing organizational stress. For the introjection coping mechanism, the overall response of administrators was undecided to apply this type of coping in the three identified stressors but still considerable as their coping mechanism as it was positively agreed by the majority. Regression, projection, and displacement coping mechanisms were disagreed by the respondents for its applicability to cope up stress from the identified stressors. A significant difference result on the sublimation coping mechanism was found for male and female, and significant difference in introjection in terms of length of service.

RECOMMENDATIONS

Based on the formulated conclusions of the study, the following were recommended:

1. Commission on Higher Education should provide valuable information on the relevance of school crisis, therefore policy initiatives of the Higher Education must be delivered. Crisis in study place as a worldwide issue, the department could have a relevant information on how to address the problem and eventually improve the ineffective education systems in order to address the matter of administrators' stress and burnout in secondary schools.
2. The Educational Planners would be more aware of their roles in formulating policies for the enhancement of school supervision programs. This will be a gauge for local and national planners for education in realizing the necessity of restructuring policies and guidelines in school management and planning for the benefit of students. They should improve their formulated programs presently implemented in the department. This could be vital to the planners not to be confined only to their functions but to constantly re-invent their roles either by doing something new or venturing into areas that are not traditionally done by them.
3. The Dean should understand how the school crisis affects the overall performance of students while in school and a necessary and appropriate intervention can be forwarded in lessen the crisis that causes the burden of the students. Initiatives can also be formulated that would help enhance the crisis management styles of the students in dealing with school related pressures.
4. Hence the respondents are the most important element of the study, therefore they should assess themselves after knowing how crisis and crisis management they adopt affects their performance in managing their respective school's responsibility. With this study, they will be able to evaluate their personal relationship with their environment and with the organization as well. This study would develop their capacities by knowing their potential on how to cope with threatening situations at work and at home.
5. The Classroom Teachers. This study is significant to the teachers who are closely working with their school administrators. Through this study, they will be able to determine how stress affects their teaching profession. Furthermore, the study will guide them on how to deal with job-related problems they encounter every day. The information derived from this study will prepare them to take the challenge of being future administrators.
6. Further study can be conducted using some other factors or crisis that the students may be experiencing in school and other crisis management can be applied.

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Investigating High School Principals' Crisis in Relation to their Job Experience in School in Southern Nyanza Region of Kenya

FACTORS CONTRIBUTING TO TEENAGE PREGNANCY IN BUENAVISTA, GUIMARAS

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ABSTRACT This study was conducted to determine the factors contributing to teenage pregnancy. Descriptive research design was used in this study. The thirty identified teenagers that engaged in the teenage pregnancy willing to participate from selected barangay in Buenavista, Guimaras were the respondents. The data needed were gathered using the researcher-made questionnaires undergone validity and reliability of value of 0.83. The statistical tools used were frequency count, degrees of freedom and chi-square. Results revealed that majority of the respondents have age ranging from 18-21 years old, single, attained high school level, and have a monthly income of 5,000 below. Most of the respondents got pregnant at the age of 17-18 years old. Further study revealed that the respondents were not significantly influenced by factors contributes to teenage pregnancy when group according to current age, age got pregnant, civil status, education and monthly income.

Keywords: Teenage, Pregnancy, factors

INTRODUCTION

Background of the Study

Teenage pregnancy is the condition of being pregnant of adolescence aged 10 to 19. Those who are affected are the girl herself up to the national society. The victims of teenage pregnancy are the girl herself, her child, her parents and relatives and the national society as a whole. It will also probably make her economically vulnerable. The Millennium Development Goals are eight international development goals that the UN member states have agreed to achieve by the year 2015. It includes eradicating extreme poverty and attaining universal primary education. In fact, among the six ASEAN major economies, the Philippines ranked the highest rate in teenage pregnancy. Over the past few decades, teenage pregnancy has become a public concern which has generated a great deal of attention in the locality. Increasing awareness of the social and economic consequences of teenage pregnancy has led to a consensus opinion among policymakers and the public that teenage pregnancy and childbearing is a significant social problem. It has been linked to the group of other social issues, such as welfare dependency, child health, and well-being, out of wedlock births, fatherhood responsibility, child abuse and neglect, school drop-out and workforce development. Teenagers are prone to pregnancy. Almost every year there is a rapid increase in the number of pregnant youths. Parents either the father or mother of the youths chose to leave their children behind because of the fact that they cannot handle anymore their obligation as parents.

This study was anchored on the Erik Erikson's Theory of Psychosocial Development that every person has his or her own unique identity. This identity is composed of the different personality traits that can be considered positive or negative. These personality traits can also be innate or acquired, and they vary from one person to another based on the degree of influence that the environment has on the individual. The bottom line is that as human beings, we possess many characteristics that are honed in many different aspects that eventually define who we are.

According to Erikson's theory, we all encounter a certain crisis that contributes to our psychosocial growth at each of the eight stages of psychosocial development. Whenever we experience such crisis, we are left with no choice but to face it and think of ways to resolve it. Failure to overcome such crisis may lead to significant impact on our psychosocial development.

This study was conducted to determine the Factors Contributing to Teenage Pregnancy. Contributing Factors will be the determinant on how extent teenage pregnancy.

Statement of the Problem

This study aimed to determine the Factors Contributing to teenage pregnancy in Buenavista, Guimaras and the rate of teenagers that engaged in teenage pregnancy. Specifically, it will aim to answer the following question:

1. What is the demographic profile of the respondents in terms of age (age of the time got pregnant), educational attainment, civil status, type of school attended and Monthly Income of the parents?
2. What are the contributing factors of teenage Pregnancy, when group according to Age, Educational attainment, Civil Status and monthly Income of the parents?
3. What is the significant difference between the profile of the respondents when group according to the current age, age at the time of pregnant, civil status, education, and monthly income?

METHODOLOGY

Descriptive research design was used in this study to determine the factors that contribute the teenage pregnancy in the selected Barangay of Buenavista, Guimaras. The respondents of this study were the identified teenagers that were engaged in teenage pregnancy willing to participate in the research from the selected Barangay of Buenavista, Guimaras. The data needed in the study was gathered using the answer the researcher-made questionnaires undergone validity and reliability of value of 0.83. The questionnaires administer personally by the researchers. A letter was sent addresses to each Barangay Captain for approval to gather data for the research.

The various data gathered were subjected to statistical treatment to present the profile and the extent of influence of the identified factors, problems encountered and possible solutions. The following formula was used. For problem 1: The Frequency Count. The frequency count was used to determine the number of respondents who answered on a particular statement in determining the Factors Contributing of teenage pregnancy in Buenavista, Guimaras. For problem 2: Degrees of Freedom. Is the number of values in the final calculation of a statistic that are free to vary was used in determining the Factors Contributing to Teenage Pregnancy when group according to profile and taken as a whole. For problem 3: Chi-square goodness of fit test. Was used in order to determine the significant difference between the Factors Contributing to Teenage Pregnancy and respondents when categorized according to their age, educational attainment, civil status, type of school attended and monthly income of parents.

The data collected were tallied and tabulated. Statistical tools used were frequency count, mean and percentage using the Statistical Package for Social Sciences Program.

RESULTS AND DISCUSSIONS

Profile of the Respondents

Table 1 presents the profile of the respondents. Results revealed that out of 30 respondents, there were 25 Or 83.3% belonging to age bracket 18-21 years old and 5 Or 16.7% belonging to age bracket 22 & above years old. As to age got pregnant there were 7 or 23.3% belonging to age 15-16 years old and 23 or 76.7 belonging to age 17-18 years old. As to civil status, there were 20 or 66.7% were single and 10 or 33.3% were married. With regards to education there was 1 or 3.3% elementary level, 1 or 3.3% elementary graduate, 13 Or 43.3% high school level, 7 or 23.3% high school graduate, 7 or 23.3% college level, and 1 Or 3.3% college graduate. In terms of monthly income, there were 20 or 66.7% Php. 5,000, 9 or 30.0% below Php.5,001-10,000, and 1 or 3.3% Php.10,001-15,000.

Table 1. Profile of the Respondents

	Profile	Frequency	Percent
Current Age	18-21 y/o	25	83.3
	22 & above y/o	5	16.7
Age at the time got Pregnant	15-16 y/o	7	23.3
	17-18 y/o	23	76.7
Civil Status	Single	20	66.7
	Married	10	33.3
Education	Elementary Level	1	3.3
	Elementary Graduate	1	3.3
	High School Level	13	43.3
	High School Graduate	7	23.3
	College Level	7	23.3
Monthly Income	College Graduate	1	3.3
	Below Php. 5,000	20	66.7
	Php. 5,001 – 10,000	9	30.0
	Php. 10,001 – 15,000	1	3.3
Total		30	100.0

A. Sexual Education

The overall mean for the items in this category was 3.36 described as, "Disagree". On the individual item in the questionnaire, "Exposed to sex education" (M=3.70), described as "Agree"; the rest categorized to Curious about sex education" (3.37); "Interested to experience sexual intercourse" (3.20); and "Experimenting about the affectivity of sex" (3.17) described as "Disagree".

Sexual Education was in disagreement as factors that contribute in teenage pregnancy. This implies that the respondents perceived that sexual education does not contribute in teenage pregnancy.

Table 2. Sexual Education

Item	Mean	Interpretation
1. An exposed to sex education.	3.70	Agree
2. Curious about sex	3.37	Disagree
3. Interested to experience sexual intercourse	3.20	Disagree
4. Experimenting about the affectivity of sex	3.17	Disagree
Over-all Mean	3.36	Disagree

Scale: Strongly Agree(4.20-5.00); Agree(3.40-4.19); Neutral (2.60-3.39); Strongly Disagree (1.80-2.59); and Undecided(1.00-1.79)

B. Media

The overall mean for the items in this category was 3.25 described as, "Disagree". On the individual item in the questionnaire, "Watching pornographic video on cell phone and internet"(M=3.27); "Reading pornographic magazine" (M=3.30); "Listening on radio which usually arouses sexual activity"(M=3.37); and "Trying what I saw on tv, internet etc" (M=3.07) were described as "Disagree".

Media was in disagreement as factors that contribute in teenage pregnancy. This implies that the respondents perceived that media does not contribute in teenage pregnancy.

Table 3. Contributing Factors to Teenage as to Media

Item	Mean	Interpretation
1. Watching pornographic video on cell phone and internet	3.27	Neutral
2. Reading pornographic magazine	3.30	Neutral
3. Listening on radio which usually arouses sexual activity	3.37	Neutral
4. Trying what I saw on tv, internet etc.	3.07	Neutral
Over-all Mean	3.45	Neutral

Scale: Strongly Agree(4.20-5.00); Agree(3.40-4.19); Neutral (2.60-3.39); Strongly Disagree (1.80-2.59); and Undecided(1.00-1.79)

C. Peer Pressure

The overall mean for the items in this category was 3.45 described as, "Agree". On the individual item in the questionnaire, "Am always influenced by my peer" (M=3.27); "Pressure to use alcoholics drinks with my peers" (M=3.50); "Visit unauthorized places which usually engage in sexy shows" (M=3.07); and "Believe that peer advice is good for me" were described as "Agree" were described as "Agree".

Peer Pressure was agreed as the factor that contributes to teenage pregnancy. This implies that the respondents that peer pressure contributes in teenage pregnancy as to influence by peers, pressure to use alcoholic drunk and believed in peer advise in good except in disagreed in terms of visitation in unauthorized places which usually engage in sexy shows.

Table 4. Contributing Factors to Teenage as to Peer Pressure

Item	Mean	Interpretation
1. Am always influenced by my peer	3.27	Agree
2. Pressure to use alcoholics drinks with my peers	3.50	Agree
3. Visit unauthorized places which usually engage in sexy shows	3.07	Disagree
4. Believe that peer advice is good for me	3.47	Agree
Over-all Mean	3.45	Agree

Scale: Strongly Agree(4.20-5.00); Agree(3.40-4.19); Neutral (2.60-3.39); Strongly Disagree (1.80-2.59); and Undecided(1.00-1.79)

D. Usage of Contraceptives

The overall mean for the items in this category was 3.22 described as, "Disagree". On the individual item in the questionnaire, "Not afraid of using contraceptives" (M=3.47); and "Practice pre-marital sex without the aid of contraceptive" (M=3.43) were described as "Agree" while "My partner doesn't like to use contraceptives" (M=3.03); and "Using pills or condom during sexual intercourse" (M=2.93) were described "Disagree".

Usage of contraceptives, in general, was in disagreement as for the factor that contributes in teenage pregnancy. This implies that the respondents perceived usage of contraceptives does not contribute in teenage pregnancy, when categorized to partner doesn't like to use contraceptives and using of pills and condom during sexual intercourse but agreed in the practice of pre-marital sex without did of contraceptives were afraid to used contraceptives.

Table 5. Contributing Factors to Teenage as to Usage of Contraceptives

Item	Mean	Interpretation
1. Not afraid of using contraceptives	3.47	Agree
2. Practice pre-marital sex without the aid of contraceptive	3.43	Agree
3. My partner doesn't like to use contraceptives	3.03	Disagree
4. Using pills or condom during sexual intercourse	2.93	Disagree
Over-all Mean	3.22	Disagree

Scale: Strongly Agree(4.20-5.00); Agree(3.40-4.19); Neutral (2.60-3.39); Strongly Disagree (1.80-2.59); and Undecided(1.00-1.79)

E. Parents Influence

The overall mean for the items in this category was 3.43 described as, "Agree". On the individual item in the questionnaire, "Not allowed to have a boyfriend" (M=3.53); "Not allowed to go on a date"(M=3.40); "Facing a curfew at home" (M=3.73); and "Never listen to others suggestions and advice" (M=3.43).

Parental Influence was in agreement as the factor that contributes to teenage pregnancy. This implies that the respondents perceived that contribute in teenage pregnancy prescription of rules of parents as describe not to have a boyfriend, not allowed to date, curfew at home at not listening to other suggestions and advice by the parents and also implies that the respondents to violate parents implied rules.

Table 6. Contributing Factors to Teenage as to Parents Influence

Item	Mean	Interpretation
1 .Not allowed to have boyfriend	3.53	Agree
2. Not allowed to go on a date	3.40	Agree
3. Facing a curfew at home	3.73	Agree
4. Never listen to others suggestions and advices	3.43	Agree
Over-all Mean	3.53	Agree

Scale: Strongly Agree(4.20-5.00); Agree(3.40-4.19); Neutral (2.60-3.39); Strongly Disagree (1.80-2.59); and Undecided(1.00-1.79)

3. Significant Differences between the profile of the respondents when group according to the current age, age at the time of pregnant, civil status, education, and monthly income

Table 7 presents that there was no significant difference between the profile of the respondents when grouped according to the current age, age got pregnant, civil status, education, and monthly income. With regards to current age, the result was --1.299 as computed and 1.253 as p-value. With regards to age got pregnant the result was -1.365 as computed and 0.657 as p-value. As to civil status, the result was -1.655 as computed and 0.876 as p-value. As to education, the result was 5.665 as computed and 0.876 as p-value. As to monthly income the result was 5.980 as computed and as 0.055 p-value.

The results imply that the current age, age got pregnant, civil status, education, and monthly income cannot influence the teenage pregnancy.

Table 7. Significant Differences between the profile of the respondents when group according to age, educational attainment, civil status and monthly income of the parents

Variables	Computed	P-value	Interpretation
Current age	-1.299	1.253	Not Significant
Age got pregnant	-1.365	0.657	Not Significant
Civil status	-1.655	0.876	Not Significant
Education	5.665	0.876	Not Significant
Monthly income	5.980	0.055	Not Significant

CONCLUSIONS

Based on the findings of the study, the researchers drew the following conclusions:

1. That the majority of the respondents belong to age bracket 18-21 years old and the majority of them were single, non-high school graduate, and have a monthly income of below Php.5,000.
2. That the respondents were agree that the contributing factors to teenage pregnancy are sexual education at school, media, peer pressure, usage of contraceptives and parental guidance. This implies that the contributing factors must be given attention to reduce the number of teenage pregnancy in the Municipality of Buenavista.
3. That the respondents were not significantly influenced by factors contributes to teenage pregnancy when grouped according to the current age, age got pregnant, civil status, education, and monthly income. This implies that the profile of the respondent has nothing to do on teenage pregnancy among the respondents in the study.

RECOMMENDATIONS

Based on the foregoing findings and conclusions, the researchers made the following recommendations:

1. School should educate children about sex education so that they will not be curious about it and they will be aware of the consequences if they will engage in pre-marital sex. Parents and teachers should work collaboratively in teaching and educating students how vital education is in their lives and not engage themselves in pre-marital sex.
2. Parents should give much attention to their teenage children and give advice to them on things they must need to do. Parents should also check the sites being visited or watched by their children and also check the mobile phone on things being downloaded.
3. The Department of Health and Department of Social Welfare and Development should provide action together with government to provide incentives and make a program that addresses this concern to prevent the increasing status of teenage pregnancy in this Municipality.

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