



---

## **A Comparative Study of Child's Nourishment Methodology**

**Mary Day E. Florano<sup>1\*</sup>**

<sup>1</sup>*College of Nursing and Allied Health Sciences, University of Eastern Philippines University Town, Catarman Northern Samar, Philippines.*

### **Author's contribution**

*The sole author designed, analyzed, interpreted and prepared the manuscript.*

### **Article Information**

DOI: 10.9734/AJMAH/2021/v19i430318

Editor(s):

(1) Dr. Janvier Gasana, Kuwait University, Kuwait.

Reviewers:

(1) Dayanne da Costa Maynard, University of Brasilia, Brazil.

(2) Yared Lasebew Aseres, St. Paul's Hospital Millennium Medical College, Ethiopia.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/67097>

**Original Research Article**

**Received 22 February 2021**

**Accepted 01 May 2021**

**Published 10 May 2021**

---

### **ABSTRACT**

This research undertaking attempted to determine the Comparative Study of Child's, Nourishment Methodology in Calbayog City. Specifically, it tried to determine the demographic profile of lactating mothers in terms of their age, number of child, occupation, monthly income, marital status and educational attainment; to determine the status of child nourishment; to identify the attitudes of the lactating mothers towards three (3) feeding practices, namely: pure breastfeeding, bottle feeding and mixed feeding; to determine the breastfeeding practices of the lactating mothers; to identify common illness of children from 0 - 2 years old; to find out the significant difference in the child nourishment methodology when lactating mothers are group into pure, mixed and bottle fed; to determine significant relationship between the respondent's demographic profile and their nourishment attitude and practices. A total of 96 lactating mothers with children 0 – 2 years old served as respondents of this study. This study utilized the descriptive – correlation method of research using a set of questionnaire checklist made and validated by the researcher. The statistical tool used was the chi – square test to determine the significant difference and relationship between independent variables and the dependent variables. The independent variables included the demographic profile on age, marital status, occupation, monthly income and educational attainment. Also considered as independent variables were the feeding attitudes and practices of lactating mothers. The dependent variable on the other hand was the child's nourishment categorized as over nourished, normal, well– nourished and undernourished. Based on actual findings, a majority of the respondents belonged to the stage of young –

---

\*Corresponding author: E-mail: [marydayflorano@gmail.com](mailto:marydayflorano@gmail.com)

adulthood, with ages ranging from 26 – 29 years old. Most of them were plain housewives and college graduates. Their income ranged from P500 –2,399. Since most of them are practicing the family planning method, they were found to have only 1 – 2 children and only one (1) respondent had ten (10) children. Most of the respondents were married and some were single and separated. Concerning the breastfeeding attitudes and practices of lactating mothers, a majority of them were uncertain when asked about some of the attitudes in breastfeeding. Their answer pointed out that it causes sagging of the breast, affects mother's figure, and causes loss of weight for mothers and male infants when breastfed were more obedient and respectful. Most of them strongly agreed about an attitude that breastfeeding is economical and less expensive. A majority of the respondents disagreed that it increased the size of the other's breast. Most agreed that breastfeeding helped in preventing pregnancy. They also agreed that breastfeeding is done whenever the baby demanded for it. It helped prevent diarrhea; and it is practical to enhance bonding between the mother and the baby. Most were uncertain that breastfeeding is done to relieve soreness of breast. Some said it is not done when the mother is angry and the mother should not drink cold water since it stops the flow of breast milk. The common health problems that were identified were the respiratory or gastrointestinal problems which were commonly observed among bottle-fed infants, as well as those who practiced mixed feeding. A significant difference was seen among children when grouped according to feeding method. As to relationship, out of 8 independent variables, six (6) were found to be significantly related, these were the number of children, marital status, monthly income, occupation, attitudes and practices. However, two (2) independent variables such as age and educational attainment were found to be not significant.

*Keywords: Child's; nourishment; number of child; mothers interms of their age; educational attainment; income; marital status.*

## 1. INTRODUCTION

Good nutrition is essential to the rapid growth and development that occur during baby's first years. Providing babies with the right food will promote good health and give them the opportunity to enjoy new tastes and textures as they establish good eating habits [1-3]. It can also establish warm relationships with their parents and caregivers. Positive and supportive feeding techniques are essential in allowing babies to eat well and develop healthy attitudes towards themselves and others [4-6].

"Breastfeeding is still best for babies." This is always included even in advertisement of any infant – formulated milk. Breastfeeding is the preferred form of nutrition recommended by pediatricians and in public health experts for full – term babies [7,8]. It is the most economical form of feeding. However, it cannot be considered as free – carbohydrate diet. Breast milk is readily available at all times, is naturally free from contaminations, and eliminates the need to sterilize nipples and bottles [9,10]. Aside from promoting immunologic benefits to the infant, breastfeeding greatly reduces the risks of overfeeding and promotes a close – maternal child relationship [11,12].

Breast milk or human milk provides the ideal nutrition to support the optimal growth and

development of infants. Exclusive breastfeeding is ideal during the first six months of life. After this period, the introduction of supplementary food as well as continued breastfeeding is recommended until at least one year and preferably beyond [13-16].

Breast milk is nutritionally complete, supplying essential amino acid for growth and providing protective factors [17].

Breast feeding has a number of advantages which have been extensively documented. First and foremost, breast milk is known to boost the infant's mechanism. The "bioactive components" in breast milk which are not found in infant formula include lysozymes, immunoglobulin, hormones and growth factors. It has also immunity modulators, anti – inflammatory and cellular components that protect the infant from infection [18].

The practice of breastfeeding has been shown to aid in gastrointestinal function of infants. With the use of breast milk, feeding related problems such as constipation, diarrhea and colic are minimized [19-21]. Breast feeding has also shown to be protective against several diseases. It reduces the prevalence and subsequent morbidity or respiratory illness and infection in infancy. It is also associated with a reduction in upper respiratory symptoms among premature infants

during their first year of life. Several studies show strong evidence that breastfeeding protects an infant from urinary tract infection, otitis media, bacteremia, bacterial meningitis, botulism and necrotizing enterocolitis. A lowered risk for sudden infant death syndrome (SID) and insulin – dependent diabetes mellitus (IDDM) was also reported among infants who were breastfed [22].

Breastfeeding also affords psychological benefits to both the mother and the infant. It facilitates maternal – infant bonding and improves long – term cognitive and motor abilities of infants especially with prolonged breastfeeding. Breastfeeding confers several other advantages and benefits to the mother. It promotes better postpartum uterine involution and provides emotional satisfaction from the maternal – infant bonding [23].

Exclusive breastfeeding (EBF) is recommended for the first six (6) months of age by the World Health Organization. Mother's good knowledge and positive attitude play key roles in the process of exclusive breastfeeding practices. In the study of Luo et.al. they reported on a systematic review of the literature that aimed to examine the status of mothers' knowledge, attitude, and practices related to breastfeeding in East Africa, so as to provide clues on what can be done to improve exclusive breastfeeding [24-26]. A systematic review of peer- reviewed literature was performed (Luo, 2020)

The 2013 update guidelines on management of severe acute malnutrition in infants and children recommends the support of exclusive breastfeeding. These guidelines are inconsistently applied in low and middle income countries due to barriers including unclear implementation guides, technical support and epidemiological factors (Chepkirui, 2020)

The importance of breastfeeding in low- income and middle- income countries is well recognised, but fewer consensus exist about its importance in high- income countries. In low- income and middle- income countries, only 37% of children younger than 6 months of age are exclusively breastfed. With few exceptions, breastfeeding duration is shorter in high- income countries than in those that are resource- poor (Barros, 2016)

The state of the world children in 2003 showed that in the Philippines, only 37% of children who were less than 6 months old were exclusively breastfed. In 1981 the world health organization

identified the Philippines as one having the lowest percentage of mothers initiating breastfeeding [27].

The available statistical data of Calbayog City Health Office indicates that for the year 2005 there were only 0.53% lactating mothers who breastfed their babies for 0 – 6 months postpartum. Available data confirm the importance of breastfeeding in all environments in preventing or significantly reducing measles, diarrhea, pneumonia, meningitis and sudden syndrome thereby lowering infant mortality due to infection.

It is in the light of the above realities that the researcher considered it wise to conduct a study on breastfeeding attitudes and practices of lactating mothers so that knowledge on infant nutrition can be enhanced and negative belief about breastfeeding maybe eliminated, if not minimized. This study was conducted to determine the effect of breastfeeding bottle or mixed feeding on child nourishment.

## 2. METHODOLOGY

This study was conducted in the City of Calbayog in 2007. Calbayog City, the first city in the province of Samar, began its existence through the City on October 16, 1948. It has a total land of 90, 300 hectares covering 4.2% of the Total area of the region, thus considered the biggest among the cities in this region. It is located at the south-western part of Samar. It is bounded in the North by the Municipality of Lope De Vega, Northern Samar, at the northwest by San Isidro, Northern Samar, in the Northeast by Silvino Lobos and Mondragon, at the southeast by Sta. Margarita, western Samar, in the east Gandara, western Samar, and at the southwest by Samar Sea, such that the south western part of the city is along the sea coast a greater portion of the area is mountainous with intervening strips of low land. It has 157 Barangays, nine of which are located along the eastern boundary called "Seven Hills", 42 of which are situated in the valley part of the area called "Happy Valley". The people are predominantly Roman Catholics, speaks *Waray*, *Tagalog* and *Cebuano*. Most of them rely on agricultural and fishing industry. Organizational set – up.

The City is divided into five health areas (District) namely: Tinambacan, Oquendo, Calbayog I, II and III. Each district has main health center and barangay health stations (Total of 17) situated in

strategic location for the delivery of vital health services to the grassroots. Each health center is manned by a medical officer, a Public Health Dentist, Public Health Nurse, Midwife, Medical Technologist, Sanitary Inspector, and laboratory / dental Aide. However, because of lack of manpower, Oquendo and Migara District have no medical officers. The main health center 111 (Migara) has no sanitary inspector and still needs midwives to be assigned in some of their barangay health station particularly in BHS La Paz, Jacinto and Olera. The total regular personnel complement of the City Health is 196.035 as indicated in the 2007 census in 93 barangays.

### 2.1 The Respondents

Elected lactating mothers in Calbayog City who are practicing breastfeeding, bottle feeding and mixed feeding were involve as respondents in this study. They were chosen regardless of their age, number of children, occupation, monthly income, marital status, and educational attainment as long as they are capable of answering questions regarding their attitudes and practices of breastfeeding.

### 2.2 Research Design

The method of research used in this study is the descriptive correlation design to determine the status of the child’s nourishment methodology in Calbayog City. In this type of research, survey questionnaire was utilized as instrument in gathering the needed data.

### 2.3 Research Instruments

A researcher made questionnaire was used as the main instrument in data collection. It has three (3) parts. The first part contains the profile of respondents in terms of their age, number of children, occupation, monthly income, marital status and educational attainment. The second

part is a checklist on breastfeeding attitudes and practices of lactating mothers. The third part contains the tool to assess the nutritional status of a child.

Thirteen (13) statement was used to evaluate the respondents’ attitudes and practices. Evaluation scale as follows: 1 – strongly Agree (SA) ; 2 – Agree ( A ) 3 – Uncertain ( U ) ; 4 – Disagree ( D ) ; and 5 – strongly Disagree ( SG ).

The questionnaire was accompanied by a letter to the respondents requesting for their help and cooperation.

### 2.4 Scoring and Interpretation of Data

The descriptive value and its corresponding interpretation in part 11 of the Instrument regarding breastfeeding attitude and practices are as follows:

Numerical	Interpretation
1	Strongly Disagree (SD)
2	Disagree (D)
3	Uncertain (U)
4	Agree (A)
5	Strongly Agree (SA)

To interpret the score, a numerical scale is being formulated as a basis for interpreting the items in 5 categories. The weighted frequency of an item was divided by the total number of respondents and obtained quotient represented the weigh mean of an item.

In part 11 of appendix B instrument regarding the respondents or child’s physical status, an anthropometric measurement are commonly used to assess the growth and nutritional status of children. These include weight in kilograms (kgs) height in centimetres (cms), and its corresponding percentile based on the growth chart are shown / presented as follows:

Percentile	Interpretation
+ 3 SD	Overnourished
96%	Normal value (weighted & height) for age
90%	
75%	
50%	
25%	
10%	Severely / undernourished
5%	
-3SD	

To interpret the score, a growth chart was used to classify the result of weight and height for age in percentile. The percentile lines appearing in the chart represent the positional values of a given child compared to reference population. The lower cut – off points for normal values were the 5<sup>th</sup> percentile value while the upper cut – off point is the 95% percentile value. Value between 5<sup>th</sup> & 95 percentile were considered normal values. The 25<sup>th</sup> percentile was considered as the cut – off point for marginally underweight, while minus 3 SD is the suggested cut – off for severely underweight and underweight.

## 2.5 Population and Sampling

The purposive sampling technique was employed in the selection of Respondents because they were deliberately chosen from among the lactating mothers in Calbayog City. Mothers who breastfed mixed and bottle - feeding their infants from 0 – 2 years old were made to act as respondents of the study.

## 2.6 Validation of Research Instrument

This study used the standardized method in measuring child’s nourishment.

## 2.7 Data Gathering Procedure

The researcher first conducts a preliminary survey to identify the lactating mothers in Calbayog City. After obtaining the selected mother consent to participate as respondents, personal interviews were scheduled during the free time of both researchers and the respondents. The questionnaire was translated into *Waray – waray* to ensure better understanding by the respondents.

Data Gathered from the questionnaire were properly tabulated and arranged for statistical analysis. The findings were presented in tables, interpreted and discussed to meet the purpose of the study.

## 2.8 Statistical Treatment of the Data

The following statistical tools were used in the analysis of data:

1. Frequency Distribution (F) and percentage (P) will be employed to find out the profile of respondents in terms of selected variables using the formula below:

$$P = \frac{F}{N} \times 100$$

Where:

- P = Percentage
- F = Frequency
- N = Number

2. To Determine the breastfeeding attitudes and practices of lactating mothers, the weighted mean (x) was used and computed as follows;

$$\bar{X} = \frac{3X}{n}$$

Where:

- $\bar{X}$  = weighted mean
- 3X = summation of occurrences
- N = number of cases

3. To test the null hypothesis that there was no significant difference in the child nourishment when lactating mother are grouped into pure mixed and bottle feed, the chi – square test for homogeneity was used.
4. To find out the relationship between the profile and the breastfeeding attitudes and practices of respondents. The chi – square test for independence was used.

The formula:

$$X^2 = \frac{\sum (O - E)^2}{E}$$

Where:

- X<sup>2</sup> = chi square test
- O = observed frequencies
- E = expected frequencies

## 3. RESULTS

### 3.1 The Demographic Profile of the Lactating Mothers in Calbayog City

This section includes the background and profile of the lactating mothers as to age, number of

children, marital status, educational attainment, occupation and monthly income.

## 4. DISCUSSIONS

### 4.1 The Demographic profile of the Lactating Mothers in Calbayog City

**Age:** Table 1 show the frequency and percentage distribution of the respondents' age. It is reflected in the table that out of 96 respondents who were the lactating mothers, 27.1% were between the ages 26 – 29 years old; 19.8% of the respondents belonged to ages 34 – 38; 18.7% were identified to be from 18- 25 years old; and 15 or 15.6% belonged to ages 30 – 33 years old.

This indicates that most of the respondents were not so young and not so old. It can be inferred that they are responsible enough to decide on what is the best feeding method for their children

**Number of Children:** Table 2 shows frequency and percentage distribution of the respondent's number of children. Fifty - six or 58.3 percent of the respondents had 1 – 2 children only, 28 or 29.2 % belonged to lactating mothers who had 3 – 4 children; 11 or 11.5% had 5 – 5 children; but only 1 or 1.0 percent has 7 – 10 children.

This indicates that the majority of the respondents are lactating mothers who must probably be utilizing family planning, which can later on become a factor that could affect the nutritional status of every child in the family. The lesser the number of children in the family, more attention and proper care and nutrition can be accorded to them.

**Marital Status:** Table 3 shows the frequency and percentage distribution of the respondent's marital status. About 3 or 3.1% out of 96 or 100% were Separated; 77 or 80.2 percent were married; 10 or 10.4 percent were single and 6 or 6.3 percent were on live – in status. This shows that a majority of the respondents are married.

This indicates that among Filipino families marriage is considered as part of the tradition that is customarily observed as society's standard and acceptability.

**Educational Attainment:** Table 4 shows the frequency and percentage distribution of the respondents' educational attainment. About 26 or

27% of the Lactating mothers were college graduates; 9 or 9.4 % were elementary and high school graduates; 23 or 24 percent of them reached college level and 216 or 18.8% were in high school level; and 11 or 11.4% or 11 were classified under Elementary level.

In the study of Maheswari Ekambaram, et al., on the “Knowledge and Practice of Breastfeeding among Postnatal Mothers”, it was indicated in the result that better scores correlated significantly with high maternal age, better education, higher socio-economic status having received antenatal care from tertiary care centers and private practitioners. It further revealed that there is still a need for programmes, which support and encourage breast-feeding particularly at a primary care level, focusing more on younger, less- well educated women and those from lower socio- economic status.

**Occupation:** Table 5 shows the frequency and percentage distribution of the respondents' educational occupation. It shows that a majority of the respondents were plain housewives. Totalling to 72.9% or 70 of them. About 9 or 9.4% were identified as teachers and 4 or 4. 2% were full time mothers, focusing their time, caring and nurturing their infants. About 3 or 3.1% were identified as cashiers in working in the deferent establishments; 2 or 2.1 percent were nurses, working as clinical instructors in the college of nursing. Two or 2.1 percent were identified as businesswoman; and 1 or 1.0 percent was a government employee, private employee, sales lady, students respectively.

The finding shows that a majority of the respondents are plain housewives. It can be inferred that the lactating mothers have all the time to attend to the needs of their children.

Financially stability becomes a factor that affects the nutritional status of an infant, as well as the time that a mother spent to their children especially infants. The method that will be adapted by the mothers would depend on the time spent by mothers to their children.

In the study of Martinez and Ryan, in American Academy of Pediatrics, entitled, Breast-feeding and the Working Mother: A Profile, it entails the comparison between the incidence and duration of breastfeeding among mothers who were employed full-time outside the home with those not employed. Results indicated that only 10% of full- time employed mothers breast-fed their

infants at 6 months of age compared 24% of those not employed.

**Monthly Income:** Table 6 shows the frequency and percentage distribution of the respondents' monthly income. It shows that about 41 or 42.7% had a monthly income between 500–2,399; 31.2% had an income ranging from 2,400 – 4, 299. About 12 or 12.6% belonged to a bracket with earnings between P8,000 – 9,899 per month and 3 or 3.1% had an income of P6, 300 – 8, 099; 10 or 10.4 Percent were identified to receive an income ranging from P4, 300-6, 199. This indicates that a majority of the respondent

had low income. This means that the mothers may not be in the position to provide all the needs of the family and the children but this made sufficient because majority of them have only two children.

The aforementioned monthly income of the respondents would include the husbands support / income given to the family. It is somehow or very much linked to the occupation of the respondents whose income depend solely from her occupation, and that educational attainment is taken into account in determining the respondents monthly income and occupation.

**Table 1. (Age) frequency distribution of demographic profile of lactating mothers**

Age	Frequency	Percentage
34 – 38	19	19.8
30 – 33	15	15.6
26 – 29	26	27.1
22 – 25	18	18.7
18 – 21	18	18.8
<b>Total</b>	<b>96</b>	<b>100.0</b>

**Table 2. Frequency and percentage distribution of the respondents number of children**

Number of Children	Frequency	Percentage
7 – 10	1	1.0
5 – 6	11	11.5
3 – 4	28	29.2
1 - 2	56	58.3
<b>Total</b>	<b>96</b>	<b>100.0</b>

**Table 3. frequency and percentage distribution of the respondents marital status**

Marital Status	Frequency	Percentage
Single	10	10.4
Married	77	80.2
Live – in	6	6.3
Separated	3	3.1
<b>Total</b>	<b>96</b>	<b>100.0</b>

**Table 4. Frequency and percentage distribution of the respondents educational attainment**

Educational Attainment	Frequency	Percentage
Elementary Level	11	11.4
Elementary Graduate	9	9.3
High School Level	18	18.8
High School Graduate	9	9.4
College level	23	24
College Graduate	26	27.1
<b>Total</b>	<b>96</b>	<b>100.0</b>

**Table 5. Frequency and percentage distribution of the respondents occupation**

Occupation	Frequency	Percentage
Housewife/full time mother	74	72.9
Teacher	9	9.4
Businesswoman	2	2.1
Nurse	2	2.1
Government Employee	1	1.0
Private employee	1	1.0
Cashier	1	1.0
Teller	2	2.1
Students	1	1.0
<b>Total</b>	<b>96</b>	<b>100.0</b>

**Table 6. Frequency and percentage distribution of the respondents monthly income**

Monthly Income	Frequency	Percentage
8,100 – 9,899	12	12.6
6,200 – 8,099	3	3.1
4,300 – 4,299	10	10.4
2,400 – 4,299	30	31.2
500 – 2,399	41	42.7
<b>Total</b>	<b>96</b>	<b>100.0</b>

**4.2 The Breastfeeding Attitudes of Lactating Mothers**

This section includes the attitude of lactating mothers towards breastfeeding, which is composed of seven (7) parameters. The corresponding scores and their interpretations are presented below:

5	-	SA	(Strongly Agree)
4	-	A	(Agree)
3	-	U	(Uncertain)
2	-	D	(disagree)
1	-	SD	(Strongly Disagree)

**4.2.1 Breastfeeding causes sagging of the breast**

Item 1 in Table 2 shows the frequency and percentage distribution of the respondents' attitude towards breastfeeding. It shows that 30 or 31.3 percent disagreed that breastfeeding causes sagging of the breast; 12 or 12.5% strongly disagree on this statement and 13 or 13.5% strongly agree with the item 1 statement. It has a total of 2 with a mean of 2.9 which is interpreted as an uncertain answer that breastfeeding causes sagging of the breast.

**4.2.2 Breastfeeding can affect mother's physical figure**

Table 2, shows the frequency and Percentage distribution of the number 2 statement. It shows

that about 27 or 28.1% agreed on the idea that breastfeeding Can affect the mothers' physical figure about 9 or 9.4% strongly Disagreed; 24 or 25 percent disagreed and 12 or 12.5 % strongly disagreed on the statement. While 17 or 17.7 percent were uncertain of their answers. For as long as the lactating mothers' follows healthy lifestyle, breastfeeding will not affect mother's figure. It shows that most of the respondents were uncertain about the statement in item 2.

**4.2.3 Breastfeeding causes loss of weight for mothers**

Item 3 of Table 2, shows the frequency and percentage distribution of the respondents' attitude on the item 3 of Table 2 shows the frequency and percentage distribution of the respondents' attitude on item 3 statement. About 35 or 36.5% agreed that breastfeeding causes loss of weight for mothers; and 21 or 32.3% were uncertain about it, 8 or 8.3% strongly Disagree while 16 or 16.7% disagreed but 16 or 16.7% agreed on the idea. Therefore, most of them were uncertain that breast feeding causes loss of weight for mothers.

**4.2.4 Breastfeeding male infants grows to be more respectful and obedient**

As Shown in items of Table 2, 32, or 33.3 percent of the respondents agreed that breastfeeding can increase the size of mother's breast; 1 or 1.0% strongly disagreed; 10 or 10.4% strongly agreed and 21 or 21.9% were



uncertain it had a total weighted average result of 179, and a mean average of 1.9 which means that majority of them disagreed on this idea.

#### **4.2.5 Breastfeeding is economical and less expensive**

Reflected in item 5 of Table 2 are the frequency distributions of attitude. It appears that 86 or 89.6% of the total respondents strongly disagreed on the statement. About 9 or 9.4% agreed on the idea that breastfeeding is economical and less expensive. No one answered on uncertain and disagree columns. The table has an overall weighted average of 467 and mean average of 4.9 which falls under the category of strongly agreed, that breastfeeding is economical and less expensive. No one answered on the uncertain and disagree columns. The table has an overall weighted average of 467 and mean average of 4.9 which falls under the category of strongly agreed, that breastfeeding is economical and less expensive.

#### **4.2.6 Breastfeeding helps in preventing pregnancy**

Item 7 in Table 2 shows the attitude of mothers in relation to its frequency and percentages. About 47 or 48.9 percent of the respondents agreed on the statement; 8 or 8.3% were Uncertain; 10 or 10.4% strongly disagree that breastfeeding helps in preventing Pregnancy; 8 or 8.3% were uncertain on this item. The total weighted average is 467 and the mean is 3.5 which means that majority of the respondents agree that breastfeeding helps in preventing pregnancies. Lactation amenorrhea method (LAM) is one of the mutual family methods that mothers usually find practical. Through pure breastfeeding, oxytocin hormone is continuously being released by stimulation of nipple which is responsible in uttering contraction that makes implantation not possible inside the mother's womb.

Mothers need to be given support, confidence and encouragement to successful breastfeeding. The importance of breastfeeding support has been addressed in numerous studies. However, reviews to explore strategies to support breastfeeding are sparse [28].

#### **4.2.7 The breastfeeding practices of lactating mothers**

This section includes the practices of lactating mother towards breastfeeding. It has six (6)

parameters and the respondents were made to answer from 1-5 as the numerical value with corresponding interpretation as 1-strongly disagree; 2-disagree; 3-uncertain; 4-agree; 5-strongly agree.

Table 3 shows that majority of lactating mothers or 47 out of 96 of them agreed that breastfeeding is done whenever the baby demanded for it. About 6 or 6.3 percent strongly disagree; 17 or 17.7% opted to answer uncertain and 23 or 23.9 percent strongly agreed that breastfeeding was done whenever the baby demanded for it. It had a total weighted mean of 3.7 which indicates that most lactating mothers agreed that breastfeeding is done whenever the baby demanded for it.

Table 3 also shows that about 58 or 60.4 percent of lactating mothers agrees that breastfeeding helped in preventing diarrhea, colds and other diseases among infants. About 26 or 27.1 percent strongly agreed on it. Only 6 or 6.3 percent disagreed and strongly disagreed about it respectively. The total weighted mean showed a result of 3.9 which means that majority agreed that breastfeeding helps in preventing diarrhea, cold and other diseases among infants. Breast milk contains antibodies which help against invasion of infections thereby protecting the infants from sickness. It has a weighted mean of 3.9 which indicates that most of the mothers agreed on the statement.

About 36 or 36.5 percent of the lactating mothers agreed that breastfeeding is done to relieve soreness of breast; 9 or 9.4 percent strongly disagreed and 17 or 17.7% disagreed about the idea. However, 19 or 19.8 were uncertain about it and 15 or 15.6% strongly agreed that breastfeeding can relieve soreness of breast. The total weighted that breastfeeding could relieve soreness of breast.

Table 3 shows that majority of the respondents, about 56 or 58.3 percent of them strongly agreed that breastfeeding is practical to enhance bonding between the mother and the baby. However, 9 or 9.4 percent strongly disagreed on this idea; 21 or 21.9 % agreed while 14 or 14.6% disagreed that breastfeeding enhances bonding between the mother and the baby. It had an overall weighted mean of 4.2 which means that most of the lactating mothers agreed that breastfeeding can promote bonding between the mother and the baby. Through breastfeeding, lactating mothers can provide warmth by simply cuddling and holding the baby. In effect, bonding is also developed [29].

Table 3 shows that 39 or 40.6 percent of the respondents agreed that drinking cold water would stop the flow of breast milk; only 3 or 3.31 percent strongly disagreed on it; 25 or 26 percent were uncertain on the idea. It had a total weighted mean of 3.3 which showed that the respondents were uncertain on the idea that drinking cold water stops the flow of breast milk. Though it has scientific explanation, the possibility is present for the reason that cold promotes vasoconstriction which stops the flow of blood supply to the area making a part of the body less functional due to poor circulation [29].

The table also shows that 28 or 29.2 percent of the respondents agreed that when the mother is angry breastfeeding is not good. On the other hand, 23 or 23.9 percent disagreed on it; and 16 or 16.7% were uncertain about the idea. The computed total is 299, and has a weighted mean of 3.1 which indicates most of the lactating mothers were uncertain that it is not good to breastfeed the baby when the mother is angry. Since it promotes emotional bonding, attitude of mother can somehow affect how she will care for the baby.

#### **4.2.8 The common health problems of children 0 – 2 Years Old**

This section includes the most common health problems of children from 0 – 2 years old.

Table 4 shows that most of the infants' aging 0–2 years of age had no common health problems. Seventy-one or 74 percent of them were identified among infants. About 17 or 17.7 percent belonged to those with respiratory problems which include common cough and cold, asthma and flu. It shows that 7 or 7.3 percent had intestinal problems like diarrhea, abdominal colic and constipation. Only 1 or 1.0 percent has a heart problem.

Breastfeeding has many health benefits both in the short term and the long term, to infants and their mothers. There is an increasing number of studies that report on associations of between breastfeeding and long- term protection against chronic disease [30] (Del Mundo, et al. 2000).

#### **4.3 Test of Difference**

To test the Null hypothesis that there is no significant difference among infants and children when grouped according to feeding methods in

terms of nutritional status, the chi – square test was used. With the computed  $X^2$  value of 12.30 which is greater than the  $X^2$  tabular value of 5.991 at .05 level of significance and with 2 degrees of freedom, the null hypothesis is rejected which means that there is a significant difference among the children when grouped according to feeding. This implies that pure breastfeeding has more normal children / infants. However, more infants / children under bottle fed scheme were either overweight or underweight. Under the mixed feeding method more than fifty percent were found to be normal.

Table 5 shows the difference between the child's nourishment methodology when lactating mothers are grouped into pure, mixed and bottle – feeding.

#### **4.4 Test of Relationships**

Significant Relationships Between and Among the Characteristics of the Lactating Mothers Table 6 shows the summary result in the chi – square test showing the relationships between the nutritional status and among the different demographic characteristic of lactating mothers.

To test the null hypothesis that there is no significant relationship between Nutritional status and the different demographic characteristics of lactating mothers, the chi – square test was used. The computed  $x^2$  value of 0.95 appeared to be less than the  $X^2$  tabular value of 3.841 at 05 level significance with 1 degree of freedom. Hence, the null hypothesis was accepted which means that there is no significant difference between the age of the mother and the nutritional status of infants / children. To test the null hypothesis that there is no significant relationship between the numbers of lactating mothers, the chi – square test was used.

The  $X^2$  computed value of 433.82 came out to be greater than the tabular values of 3.841 at 05 level of significance with 1 degree of freedom; so, the null hypothesis was rejected, he means that there is a significant difference between the educational attainment and child's nourishment. In testing the null hypothesis that there is no significant difference between the respondent's marital status and child's nourishment, the chi – square test was used. The computed value of 45.49 appeared to be greater than the tabular value of 3.841 at .05 level of significance with 1 degree of freedom, so, the null hypothesis was rejected, which means that there are some

significant relationships between the respondents marital status and child nourishment.

To test the null hypothesis that there is no significant relationships between the educational attainment of the mother and child's nourishment, it came out in chi - square test that the  $X^2$  computed value of 2.58 was less than the tabular value of 5.991 at .05 level of significance with 2 degrees of freedom, so, the null hypothesis was accepted, which means that there is no significant relationship between the educational attainment and the child's nourishment. In testing the null hypothesis that there is no significant relationship between the respondent's monthly income and the nutritional status of infant / children.

To test the null hypothesis that there is no significant relationships between Breastfeeding attitudes of lactating mothers to child nourishment status, the chi -square test was used. It resulted to  $X^2$  computed value of 13.66 which was greater than the tabular value of 3.481 at .05 level of significance with 1 degree of freedom. So, the null hypothesis was rejected. This means that there is a significant Relationship between the respondent's attitude and child's nourishment. To test The null hypothesis that there is no significant relationship between lactating mother's practices and child's nourishment, the chi – square test was also used. It had an  $X^2$  computed value at .05 level of significance with 1 degree of freedom. So, null hypothesis was rejected, which means that there is significant relationship between the respondents' feeding practices and the child's nourishment.

This showed that the respondent's demographic profile in terms of number of children, marital status, monthly income, and occupation were found significant in relation to child's nutritional status. However, age and educational attainment were not found significant in relation to child's nourishment. On the other hand the attitudes and practice of lactating mothers in terms of feeding were found to be significant in relation to child's nourishment status.

A related study that would confirm these findings is the work of Cuevas, et. Al on her book "infant feeding Practices of Mothers between Lowland and Upland Areas in Cavite", wherein she was able to find out that the three (3) feeding practices were utilized both in lowland and upland areas in Cavite. Among these practices,

breastfeeding is the most commonly used, but working mothers prefer bottle in nourishing children. According to G.D Dickavon, in pros and Cons of breastfeeding, it must be complemented by the mother's right attitude, beliefs, and related feeding practices. Hence, the desire to breastfeed depends on what would please the woman most and what makes her comfortable. Lactating mothers must have the right attitudes, beliefs and practices of infant nutrition making them aware of the disadvantages of breastfeeding over bottle and mixed feeding.

## 5. CONCLUSION AND RECOMMENDATIONS

As a general convention, issues are discussed when people start questioning the traditions being followed for long, or show an increased interest in it. The same has happened with the idea of breastfeeding as discussed in the previous chapters of this study. As a rule, mothers breastfeed their infants for a year, sometimes longer, till birth of the second child. But these days, due to paucity of time and as a matter of convenience some mothers choose to shift to powdered, bottle milk and a substitute for breast milk. The crux of the matter here is to popularize breast milk simply because there is no substitute that can be available for it.

When selecting an alternative feeding method, it should be enhance the development of breastfeeding skills. No method is without potential risks (including the bottle) or potential benefit.

This study carries the main goal to determine the result of the comparative study of child's nourishment methodology used by lactating mothers to their children from 0 -2 years old.

Specifically, it tries to determine the demographic profile of lactating mothers in terms of their age , number of children, occupation, monthly income, marital status and educational attainment; to identify the attitudes of the Lactating mothers towards three (3) feeding practices namely; pure breastfeeding, bottle and mixed feeding; to determine the breastfeeding practices of the lactating mothers; to identify common illness of children from 0-2 years old; to find out the significant differences in the child nourishment methodology when lactating mothers are grouped into pure, mixed and bottle fed; to determines significant relationship between the

respondents demographic profile and their nourishment attitude and practices.

A collection of data through interview was conducted in the different households in Calbayog City. A questionnaire checklist and other paraphernalia were also utilized in measuring anthropometric data of the respondents.

The method of research used in this study was the descriptive correlation design to determine the status of child's nourishment methodology in Calbayog City.

Selected Lactating mothers in Calbayog City who practiced breastfeeding, bottle – feeding and mixed feeding their babies' ages 0 – 2 years old were involve as respondent of the study.

The statistical treatment that was applied in this study was the chi – square Test to determine the differences and relationship of data collected from the respondents.

## 5.1 Conclusions

1. Majority of the respondents are young adult. It implies that the respondents can decide as to what is best for these children in terms of nutrition.
2. Majority of them has 1 – 2 numbers of children, which implies that most of them were utilizing or practicing family planning method.
3. Most of them were married which implies that both of them has their own Source of income to answer the needs of the family.
4. Majority of the respondents are plain housewife which implies that most Of them were focused on caring and nurturing their children. Most of them have low monthly income, but having two (2) children only. This Implies that their earnings are just enough to fill – in the basic needs of the Family.
5. Majority were college graduates, which implies that most of them were educated and has a high level of cognitive skills which later on become one of the factors which affect the ability to understand the importance of proper nutrition.
6. The most common health problem that was identified among children 0 - 2 years old are respiratory problems, which implies majority of them are Developing symptoms related to allergic reaction which probably being caused by the intake of foods or fluid and the environment. However, Majority had no common health problems identified among infants.
7. Based on the findings of this study, majority were uncertain about the Ideas that breastfeeding causes sagging of the breast; it can affect mother's physical figure; can cause loss of weight; and male infants grows to be more obedient and respectful when breastfed. This implies that mothers had high level of cognitive ability because they believed in scientific based findings rather than hearsays.
8. Majority of them strongly agreed that breastfeeding is economical and less Expensive and most agreed that it helps in preventing pregnancy. This Implies that breastfeeding was proven to be effective both to mother and the baby. However, most of them disagree that it increases the size of the mother's breast, which implies that it has no scientific and factual evidences.
9. Majority of the respondents agreed that breastfeeding is done whenever the baby demanded for it; breast feeding helps in preventing diarrhea, cold and others diseases among infants; and it is practical to enhance bonding between the mother and the baby. This implies that they already have the basis to support these ideas.
10. There was a significant differences among children when grouped according to feeding have more normal children / infant than bottled and mixed feeding infants.
11. There was no significant relationship in the respondent's demographic profile in terms of age and educational attainment. This implies that it cannot affect feeding practices of mothers towards child's nourishment.
12. The number of children, marital status, monthly income, occupation, attitude and practices. This implies that these can greatly affect child's nourishment status. These were found to be significant.

## SUMMARY OF FINDINGS

The summary of this study showed that lactating mothers had children from 0 -2 years old. Majority of the respondents belonged to young adulthood which according to Erick Erickson's the stage of youth and development that is between the range of 26 -29 years old. Most of them were married with 1-2 children and working as plain housewives but were college graduates. Their monthly income ranged from P500 – 2,399. Just enough to answer the basic needs of the family.

In terms of the attitudes of nourishing mothers towards breastfeeding, a majority of them were uncertain about the ideas that breastfeeding causes sagging of the breast; that it can affect mother's physical figure, cause loss of weight for mothers and that male infants who are breastfed grows more obedient and respectful. They strongly agreed that breast feeding is economical and less expensive. Most of the mothers agreed that it helps in preventing pregnancy using LAM method, but they disagreed that breastfeeding increases the size of mother's breast.

Findings with breastfeeding practices in this study showed that majority agreed that breastfeeding is done whenever the baby demanded for it; it helped in preventing diarrhea, colds and other diseases among infants and it is practical to enhance bonding between the mother and the baby. Most of them were uncertain that breast milk stops when the mother drinks cold water.

In the test of difference, the finding showed that there is a significant difference among children when grouped according to feeding method. This implies that pure breastfeeding have more normal children or infants. However, bottle-fed infants/children were either overweight or underweight. Under the mixed feeding method more than fifty percent were normal.

In the test of relationship, out of eight (8) independent variables, six (6) were found to be significant. These are the number of children, marital status, monthly income, occupation, attitude and practices. The age and educational attainment, are two (2) independent variables that were found not significant in this study.

The common illness or health problems of children identified are respiratory problems which

are commonly seen among bottle fed infants/children. Only few have gastrointestinal problems. However, majority of infants had no identified common problems.

## CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

## ETHICAL APPROVAL

It is not applicable.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

## REFERENCES

1. Galtky, Azjen I, Madden TJ.. Prediction of Goal – Directed Behavior: Attitudes, Intentions, and Perceived Behavioral Control. *Journal of Experimental Social Psychology*. 1986;22:453 – 474.
2. Goldfarr VM. *Principles of Prenatal and Post natal Care*, New York: Mc Millan Book Co; 2000.
3. Lacerña, Emily D. *Problems of Infant Feeding in Developing Countries*, New York: Random House Inc; 2001.
4. Lancet, Gregory C, *Breastfeeding*, New Jersey: Prentice Hall, Inc; 1992.
5. Mendoza, Elaine D, *Maternal Nursing*, (Quezon City: Kalayaan Press Marketing Ent; 1992.
6. Orem DE. *Nursing Concepts of Practice*. 6<sup>th</sup> edition. St. Louis, Mosby; 2001.
7. Del Mundo, Clara D, et al. *Role of Breast Milk in Baby's Health*, Manila: National Bokstore, Inc; 2000.
8. Dickavon GD, et al. *Pros and Cons of Breast feeding*, New York: Amacom Press; 2001
9. Dondey, Yelise C. *Maternal and Child Care*. London: Houghton and Mifflin; 1998.
10. Ducket, et al. *Theory of Plannned Behavior*. 2<sup>nd</sup> edition. St. Louis. Mosby; 1998.
11. Pilliteri, Adelle *Mother and Child Health Nursing*, 2<sup>nd</sup> edition, Philadelphia; 2002.
12. Punsalan G. Twila, *Statistics: A Simplified Approach*, Manila: Res Book Store; 2000.

13. Kelton, Jane S. What to do after Giving Birth. The Parents Magazine, New Zealand; 2002.
14. Pilletere James Y. Benefits of Breastfeeding. The Parents Magazine, New Zealand; 2003.
15. Webster Pocket Dictionary, Parents Magazines, New Zealand; 2002.
16. California: Webster Publication; 1977.
17. Pines Claire D. The Concept of Infant Feeding, New Jersey: Prentice – Hall, Inc; 2004.
18. Loucks, Shane D. Composition of Human Milk, New York: John Wiley an Sons, Inc; 2004.
19. AS Ryan, GA Martinez. Breast-feeding and the Working Mother: A Profile. American Academy of Pediatrics; 1989.
20. Aurora SC. McJunkin et al. Major Factors Influencing Breastfeeding Rates: An Application of Father's attitude and milk supply, pediatrics. 2000;106(5):e67.
21. Blyth RDK. Creedy. et al. Effect of Maternal Confidence on Breastfeeding Duration: An Application of Breastfeeding Self – efficacy Theory. Birth: Issues in Prenatal Care. 2002;29(4):278–284 .
22. World Health Organization, Care and Management of New Born Babies; 1995.
23. Yarrow D V. Advantages of Breastfeeding The Readers Digest; 1998.
24. Sanchez, Custodiosa A, Fe B. Agpaoa, Contemporary Social Issues and Problems, Mnaila: National Book Store, inc; 1997.
25. Stevenson, Faye S. Overcoming Discomfort of Breast Engorgement. New York: MC Graw – Hill Book, Inc; 1998.
26. Zulieta, Delia B, Importance of Breastfeeding. Manila: St. Mary's Publication; 1992.
27. World Health Organization, Care and Maternal Health; 1994.
28. Demirtas, Basak, Strategies to support breastfeeding: A Review. International Nursing Review; 2012.
29. Pilliteri, Adelle Mother and Child Health Nursing, 10<sup>th</sup> edition, Philadelphia; 2020.
30. Binns, Collins, et.al. The long- term public health benefits of breastfeeding. (Asia Pacific Journal of Public Health); 2016.

© 2021 Florano; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:  
<http://www.sdiarticle4.com/review-history/67097>*