

# **MILK FEEDING PRACTICES AND KNOWLEDGE ON BREASTFEEDING AMONG NURSING EMPLOYEES IN SELECTED GOVERNMENT OFFICES IN BAGUIO CITY & LA TRINIDAD, BENGUET**

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## **ABSTRACT**

This research was conducted to determine the milk feeding practices and knowledge level of the mother respondents on breastfeeding. A cross sectional survey was done among 87 nursing mothers in nine regional offices in the Cordillera Administrative Region. The dominant milk feeding practice is mix feeding which is, a combination of breast and bottle feeding while few mothers practiced exclusive breastfeeding. The primary factor considered in selecting the feeding method was the child's health. Breastfeeding was initiated few hours after birth while bottle and mix feeding were initiated at varied times implying initial practice of breastfeeding. Cessation of milk feeding varied from a few months after birth to as long as 24 months or even beyond. Most nursing mothers are very knowledgeable on many aspects of breastfeeding. Breastfeeding during work hours is usually not achieved due to heavy workload and distance from home among breastfeeding mothers. Conversely, bottle and mix feeding are challenged by the expensive cost of infant formulas and painful breast due to engorgement arising from incomplete emptying of breasts. Hence, most breastfeeding mothers enjoy extended and compensable break time. One of the identified problems for complete breastfeeding among nursing mothers is that few workplaces have the comfort of lactation rooms or child care center. Most nursing mothers who practice bottle feeding felt that they do not enjoy the benefits of being a mother at all. Common perceived needs range from extended maternity leave, breastfeeding periods during work hours, and provision of lactation rooms. The enhancement of breastfeeding campaigns and implementation of all the provisions of the Expanded Breastfeeding Act of 2009 (RA 10028) by all stakeholders may encourage more mothers to breastfeed.

## **INTRODUCTION**

The first two years is the most critical period in the life of a child (NNC, 2011). This is a critical window for the promotion of optimal growth, health and development, thus the global recommendation of exclusive breastfeeding for the first six months of life to achieve optimal growth, development and health (WHO, 2006). Continued breastfeeding beyond six months, accompanied by the consumption of nutritionally adequate, safe and appropriate complementary foods will help meet the nutritional requirements of infants when breastmilk is important but is no longer sufficient.

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. Thus, it is the core task of the Global Strategy by the WHO and UNICEF in 2002 to revitalize world attention to the impact of feeding practices on the nutritional status, growth, development, health and survival of infants and young children (WHO, 2006). To achieve this, current recommendations emphasize exclusive breastfeeding for the first six months of life and continuation of breastfeeding until at least two years of age (WHO, 2006). In this way, both the immediate and long term benefits of breastfeeding for the baby and mother, as well as the social and economic benefits for the family and country are experienced or derived.

The Philippine Government's contribution to breastfeeding advocacies is manifested in various laws such as RA 7600 or the Rooming-In and Breastfeeding Act (1992), E.O. 51 or the Philippine Code of Marketing Breastmilk Substitutes and the Expanded Breastfeeding Promotion Act of 2009 (RA 10028). Programs such as the Mother and Baby Friendly Initiative, nutrition education as well as maternal and child care services have been implemented with breastfeeding as an integral component. In 2008, the government adopted breastfeeding as a strategy to reduce underweight prevalence among 0-5 years old with the promotion of desirable infant and young child feeding. It has also been the theme of three nutrition month celebrations in the past decade.

However, even with the above mentioned programs, the proportion of mothers who practice exclusive breastfeeding is still low. It remains a fact that many children are not fed based on the recommended method (WHO, 2006). Currently, many mothers, who initiate breastfeeding satisfactorily often start complementary feeds or stop breastfeeding within a few weeks after delivery.

The latest National Nutrition Survey (NNS) conducted by the Food & Nutrition Research Institute (2008) revealed a low 36% prevalence of exclusive breastfeeding among 0-5 month's old children and a mean duration of 2.3 months only. About the same proportion of children were breastfed at the same time given complementary foods. Among 0-23 month's old children, exclusive breastfeeding was practiced by few mothers only (8.6%) while 29.9% were both breastfed and given complementary foods.

In a study of 199 mothers with 6 months to 2 years old children in a selected barangay in Bulacan, Bilano et al. (2011) reported that 34.7% were currently breastfeeding while 51% reported to have previously breastfed. A very high proportion of those breastfeeding had elementary education while a high proportion of those who did not breastfeed were found in mothers who had higher levels of education.

Studies on breastfeeding among nursing mothers are few. At the provincial level, the only data available is the proportion of post partum women who initiated breastfeeding reported at 54% in 2011 and 51% in 2010

(PHO).

Thus there is no data on the duration of breastfeeding after initiation. The only study on breastfeeding done among working nursing mothers in La Trinidad, Benguet was conducted by Garambas (2008) who reported that pure breastfeeding prevalence was very low at 7.5%. while 12.5% of nursing mothers practiced bottle feeding. Generally, mixed feeding was the most practiced infant feeding method (80%) regardless of age, income level, nature of work and number of children. Work was found to be the primary factor considered in choosing infant feeding practice. In descending order, the other factors considered were time, mother's health, money, child's health, parental advice, doctor's advice and distance of workplace from residence.

The promulgation of RDC Res. No. CAR-82, s. 2011 is enjoining all regional line agencies, local government units (LGUs), state universities and colleges (SUCs) and all private and public stakeholders in the Cordillera Administrative Region to implement RA 10028, it is expected that these stakeholders would take the lead in ensuring that breastfeeding would be universally practiced by their employees.

Milk feeding practice maybe affected by a myriad of factors, one of which is level of knowledge. Kruger and Gerda (2001) in their study of mothers with 0-36 month's old children in South Africa, concluded that mothers were not fully informed of the advantages of breastfeeding. Such inadequacy in knowledge can relate to unsatisfactory breastfeeding practices. Nutrition knowledge about infant feeding should be enhanced as a first step to implementing improved breastfeeding practices.

In 2010, Singh reported that among 200 mothers, that most mothers know the importance of breast milk. All mothers said that it is nutritious for the baby, 97% said it is healthier, 80% cited its protective benefits, 99% quoted that it improves bonding and 81% said that breastfeeding is relatively cheaper. As to the benefits of breastfeeding as a contraceptive means, 38% disagreed, which implies the need for enhanced education efforts. about the benefits of breastfeeding. The sources of knowledge on breastfeeding, in descending order, are relatives (98%), journal, magazines and newspapers (93%), TV/radio (89%) and health workers (75%).

In the latest study by Bilano *et al.* (2011) in Tarcán, Baliuag, Bulacan, only 52.1% knew that breastfeeding was beneficial in reducing post partum bleeding and slightly more than half 56.3% knew breastfeeding could help prevent weight gain among mothers. A large majority (96.8%) had incorrect knowledge on the recommended duration of breastfeeding. With the meager data on breastfeeding, this study was conducted to determine the milk feeding practices among female employees in various government agencies, including their knowledge of breastfeeding while providing feedback on the extent of implementation of RA 10028.

### **Objectives of the Study**

This study determined the milk feeding practices and level of knowledge of the mother respondents on breastfeeding. Specifically, this study:

1. Determined the prevalence of breastfeeding among the working government employees in selected offices in Baguio City and La Trinidad;
2. Determined the reasons for selecting type of milk feeding employed;
3. Assesed the level of knowledge of the mothers on breastfeeding;
4. Documented the problems encountered;
5. Determined benefits enjoyed; and,
6. Determine the perceived needs.

## **METHODOLOGY**

This cross sectional study was conducted in nine regional line agencies, one academe and three local government units in La Trinidad, Benguet and Baguio City from January to March 2012. The aforementioned government offices were chosen on the assumption that they take the lead in implementing RA 10028 and considering that all agencies are members of the

Regional Development Council, which formulated the resolution enjoining all line agencies, local government units, state colleges and universities and all private and public stakeholders in the region to implement RA 10028. Implementation is a facilitatory factor that could increase rate of full breastfeeding.

Respondents were 87 female employees with children aged 0-2 years and were reporting to work during the time of data gathering. Majority of the respondents work in various regional line agencies, one in four work in local government units and one out of five respondents are in the academe. Majority belong to middle adulthood, with income brackets of P10,001-30,000, with college and postgraduate degrees and with only 1 or 2 children. More than 50% work in regional line agencies and the remaining 50% are equally distributed in the local government units and academe. Descriptive statistics particularly frequencies and percentage were used to describe the profile of the respondents, reasons for selecting type of feeding, factors considered in selecting type of feeding, responses to questions on breastfeeding. To determine if significant differences exist in most variables by type of feeding, the Friedman test, t-test and F test were used.

The level of knowledge of each respondent was determined based on her score in the 16 true or false questions on breastfeeding concepts and practices and interpreted using the following scale:

13-16 points = very good

9 – 12 points = good

5 – 8 points = fair

1 – 4 points = poor

## **RESULTS AND**

### **DISCUSSION Milk Feeding Practices**

There are three possible ways of feeding the young child – breastfeeding, bottle feeding or mix feeding. An equal proportion (19.5%) of mothers practiced exclusive breastfeeding and bottle-feeding while majority (61.61%) practiced mixed feeding.

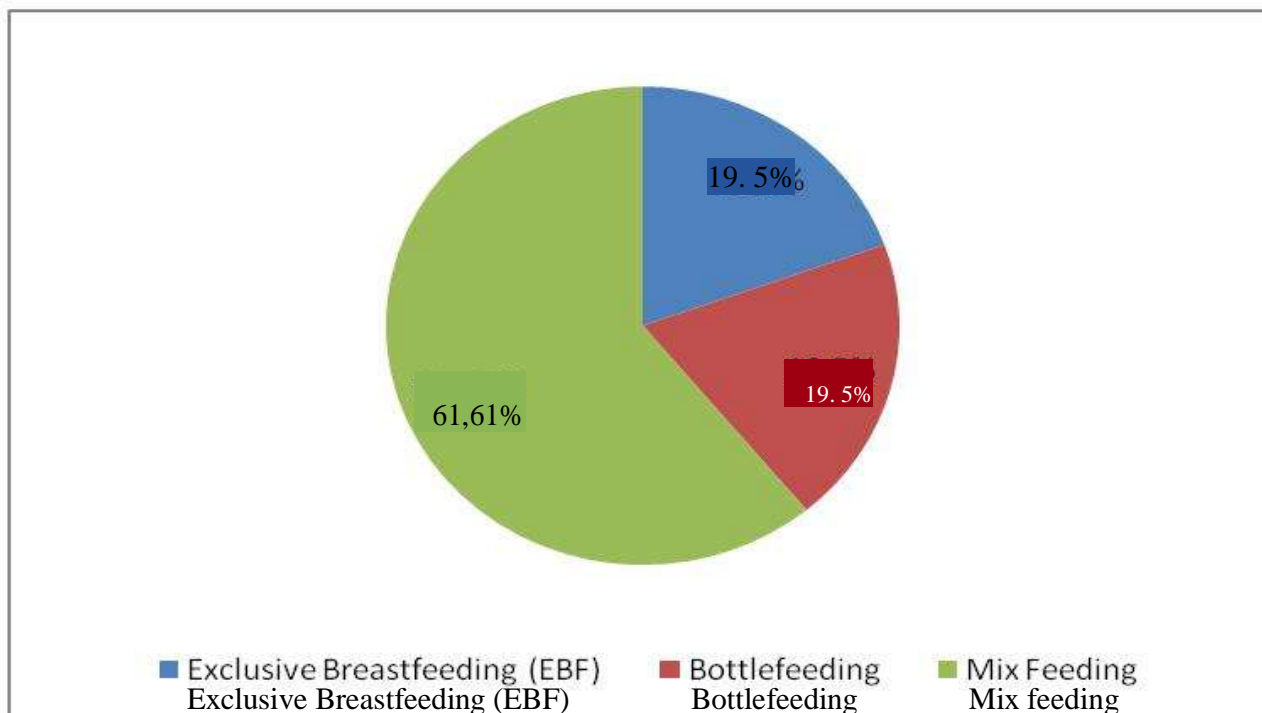


Figure 1. Distribution of respondents by type of milkfeeding

The prevalence is almost half the national prevalence of 36% (FNRI, 2008) and 34% reported by NSO (2008) although higher than 7.5% as reported by Garambas (2008) among working mothers in La Trinidad, Benguet. It is also much lower than the proportion of post partum women who initiated breastfeeding as reported by the Benguet Provincial Health Office for 2010 and 2011, respectively. This implies that many of those who initiated breastfeeding may eventually end up not exclusively breastfeeding their children especially when they resume work after maternity leave. This confirms the short duration of exclusive breastfeeding reported by the FNRI (2008) which is 2.3 months only, slightly longer than the two months duration of maternity leave. The low prevalence of full breastfeeding may be attributed to the employment of the mothers which may have compromised their capacity to breastfeed after their maternity leave.

Breastfeeding is the ideal method considering its numerous advantages to the baby, the mother and society. Bottle and mix feeding which entail feeding with an infant formula are discouraged. INFACT Canada (2004) enumerated at least 14 risks of formula feeding such as increased risk of diseases including asthma, allergy, acute respiratory diseases, infection, childhood cancers, chronic diseases, diabetes,

cardiovascular disease, obesity, and gastrointestinal problems; increased risk of mortality, side effects of environmental contaminants and reduced cognitive development. Additionally, artificial feeding also interferes with bonding, increases risk of mother to another pregnancy, anemia, ovarian and breast cancer (WHO, 2006).

Considering the individual places of work, there is no significant difference in the type of feeding method employed. Regardless of agency, mix feeding prevailed among the mothers. The similarity could be due to the fact that all respondents work in the government where more or less the same policies are observed. The results agree with the statement by Khassawneh *et al.* (2006) that employed women were more likely not to practice breastfeeding and that workplace together with short maternity leaves had a negative impact on breastfeeding.

Statistical analysis (Table 1) revealed no significant differences in the type of feeding resorted to when the respondents are grouped according to variables such as age, income bracket, and highest educational attainment, number of children and age of child currently being milk fed. The type of milk feeding however significantly differed at 5% level of significance when the workplaces are lumped into four only.

Table 1. Distribution of respondents by type of feeding employed and socioeconomic variables

VARIABLE Variables	BREASTFEEDING		BOTTLEFEEDING		MIX FEEDING	
	No	%	No	%	No	%
<b>Age in years</b>						
≤ 20	1	5.88	1	5.88	2	3.74
21-30	7	41.18	4	23.53	20	37.74
31-40	9	52.94	10	58.82	30	56.60
>41			2	11.76	1	1.89
total	17	100	17	100	53	100
	$X^2_{r=4.133}^{ns}$		P=0.127		ns=not significant	
<b>Income Bracket</b>						
P 5,00-10,000	2	11.76	3	17.65	3	5.66
P1,001-20,000	13	76.47	3	17.65	9	16.98
P20-001-30,000	1	5.88	11	64.70	31	58.49
>P 30,001	1	5.88	3	17.65	10	18.86
	$X^2_{r=1.286}^{ns}$		P=0.526			
<b>Highest Educational Attainment</b>						
High School level			1	5.88		
College Level					5	9.43
College Graduate	11	64.71	9	52.94	19	35.84
Postgraduate Level Graduate	6	35.29	7	41.18	29	54.71
	$X^2_{r=3.000}^{ns}$		P=0.223			
<b>No. of Children</b>						
1-2	13	76.47	13	76.47	35	66.03
3-4	4	23.53	3	17.65	17	32.07
5-6			1		1	1.89
	$X^2_{r=3.800}^{ns}$		P=0.150			
<b>Age of Of 0-2 y/o child</b>						
0-6 months	14	82.35	6	35.29	8	15.09
7-12 months	3	17.65	7	41.18	18	33.96
13-24 months			4	23.53	27	50.94
	$X^2_{r=2.000}^{ns}$		P=0.368			
<b>Workplace</b>						
Regional line agency	4	23.53	9	52.94	19	35.84
Local Gov't Unit	4	23.53	1	5.88	14	26.41
Benguet State University	5	29.41	1	5.88	13	24.52
Police	4	23.53	6	35.29	7	13.20
	$X^2_{r=6.000}^*$		P=0.05			

The findings confirm those of Garambas (2008) that the infant feeding practices do not significantly vary among three age groups of working nursing mothers in La Trinidad, Benguet. Further, no significant difference was noted in the choice of infant feeding practice according to income level, nature of work (teaching or not) of the mother and number of children.

The result also agrees with the findings of Bilano *et al.*, (2011) that age-specific breastfeeding prevalence were similar which could be due to the fact that all her respondents are in a rural setting where it is traditional practice for a child to be breastfeed. In a study by Vafee *et.al.* (2007) among 1267 mothers in Iran, the mother's age was among the few factors that were significantly related to breastfeeding during the first six months of the child's life. The prevalence of breastfeeding among mothers under 20 years old 68.3 % was significantly decreased to 48% among those aged 36-40 years. The findings do not agree with those of Bilano *et al.*, (2011) on educational attainment. This is perhaps attributed to the difference in study location and characteristics of respondents. There are very few respondents in this study who had low educational attainment.

### **Primary Factor in Selecting Type of Feeding**

In the choice of type of feeding, the child's health was the foremost consideration among the mothers who were purely breastfeeding. Work prevailed as the reason for bottle and mixfeeding. On the whole, work and child's health are the main factors considered regardless of type of milk feeding employed. Other factors included doctors and parental advice, money and mother's health. A similar finding was reported by Garambas (2008) who noted work as the main factor considered in choosing the infant feeding practice. The other factors affecting the type of feeding practiced by nursing mothers were time, mother's health, money and child's health.

Much as mothers want to continue breastfeeding after their maternity leave, there was no way as their residences were far from the workplace and it was quite impractical to bring the child during working hours especially during rainy season. The following statements reveal the mothers' sentiments:

*"I like to breastfeed my child as long as she wants but I just can't because our house is so far from my work place."*

*"I am after my child's health and I know breastmilk is better so I do mix feeding."*

*"With my work, it is quite impossible to go home and come back within an hour. It would be too costly to bring my child here just so I can breastfeed."*

*"There is no place to breastfeed in the office even if someone will bring my child here."*

The NNC (2010) reiterated that mothers can continue breastfeeding even when they have to return to work after their maternity leave. While at work, they can express their milk to relieve pain due to full breasts, to ensure continuous milk production and prevent breasts from drying up. While the mother is away, the expressed breastmilk can be fed to the baby using a clean cup.

With work as the main factor considered in choosing type of feeding, it is imperative that workplaces should be mother and baby-friendly, that is, it provides support for women who breastfeed providing among others a breastfeeding education program for pregnant and lactating mothers in the workplace (NNC, 2003). An adequate support system has long been recognized as one of the key factors that enable women's decision to breastfeed and continue to do so successfully.

The promulgation of RA 10028 which provides among others extended work breaks with compensation and establishment of lactation stations should be an ideal solution to the problems of lactating mother. Unfortunately, of the 13 government offices where the respondents are working, only two have established lactation stations but which remain unused.

### **Level of Knowledge on Breastfeeding**

A great majority of respondents answered each of the queries on selected breastfeeding concepts correctly, thus implying they are very knowledgeable on such. This is shown in Table 2.

Table 2. Distribution of respondents by the correctness of answers to breastfeeding questions

QUESTION	CORRECT (%)	INCORRECT (%)
1. Breastmilk is highest in nutrients yet of best quality & proportion	97.70	2.30
2. Breastfeeding causes the breast to sag.	74.71	25.29
3. Breast size affects amount of milk secreted.	85.06	34.94
4. Breastfeeding delays ovulation.	89.66	10.34
5. Breastmilk protects against illnesses.	95.40	4.60
6. Breastmilk enhances child intelligence.	91.95	8.05
7. Regular emptying of breast will prevent engorgement.	86.21	13.79
8. Breastfeeding may continue even beyond 2 years.	89.66	10.34
9. Purely breastfeed for the first 6 months of life	98.85	1.15
10. Offer water even when purely breastfeeding.	57.47	42.53
11. Express and discard little milk when tired.	48.28	51.72
12. If with influenza, stop breastfeeding temporarily	68.97	31.03
13. Throw away the first yellowish greenish milk secreted.	85.06	14.94
14. Expressed milk may be stored.	78.16	21.84
15. Initiate breastfeeding at once upon delivery.	93.10	6.50
16. Breastfeed less often if little milk is produced.	73.56	26.44

Almost all mothers knew that breast size does not affect the amount of milk produced, that regular emptying of the breast can prevent engorgement and that breastmilk has the highest amount of nutrients, protects against illnesses, enhances intelligence and even delays ovulation. The same percentage of the respondents were knowledgeable of the fact that breastfeeding should be initiated immediately after delivery, done continuously for the first 6 months and that it can be continued even up to two years. Further, the mothers knew that the colostrums should not be thrown away. These findings do not agree with the finding of Bilano *et al.*, (2011) that a substantial proportion of mothers had incorrect knowledge on duration of exclusive breastfeeding but is similar with the findings by foreign researchers (Khassawneh *et al.* 2006; Kruger & Gerda, 2001).

A considerable proportion of the respondents do not know that water should not be given when exclusively breastfeeding for the first six months, that there is no need for the mother to express and throw little breastmilk when tired and that a mother who is sick with influenza can still breastfeed her baby.

As emphasized by NNC (2011), breastmilk has all the water and nutrients that the baby needs for the first six months of life. As such, the baby should be exclusively breastfed from birth to six months to achieve optimal growth, development and health. Exclusive breastfeeding means giving a baby only breastmilk and no other liquids or solids, not even water. By age six months, breastmilk is not anymore enough for the growing needs of the infant. Continued breastfeeding beyond six months accompanied by the consumption of nutritionally adequate, safe and appropriate complementary foods will help meet the nutritional requirements of infants when breastmilk is important but no longer sufficient.

Among the many advantages of breastfeeding is its ability to protect against infection, illnesses and allergies. Further, the nutritionally-superior breastmilk is believed to enhance the intelligence of the child. Almost all respondents know these. As cited by the NNC (2011) 10 ml/day increase in breastmilk intake among extremely low birthweight (LBW) infants increased mental dev't index by 0.59 pts; psychomotor

dev't index by 0.56 pts & total behavioral %ile score by 0.99 pts using the Bayley Mental Devt Score according to the American Academy of Pediatrics. Risk of hospitalization from discharge to 30 months decreased by 5%. Further, the average IQ of 7 & 8 yr old children who were breastfed during early life were 10 pts higher than their bottle-fed counterparts according to the World Alliance for Breastfeeding Action (NNC 2011).

When exclusive breastfeeding is continuous for the first six months, there is no need for water as this may deprive the child the opportunity to maximize breastmilk as the child feels full with water. When sick with influenza, a mother does not need to temporarily stop breastfeeding and then resumes when she gets well. There are only a few conditions when breastfeeding may be contraindicated as in AIDS, active tuberculosis and advanced stages of cancer. While a great majority answered correctly, there are still many who need to be educated on the various aspects of breastfeeding.

This implies the need for an enhanced, sustained information, education and communication campaign on breastfeeding to enhance knowledge on breastfeeding as well as correct misconceptions. The mothers' understanding of breastfeeding will significantly affect her decision whether or not to breastfeed. On the whole, majority of the working mothers obtained scores interpreted as very good. Slightly more than one third of the lactating mothers obtained a good rating and only two were rated fair.

While the highest percentage of respondents who scored very good practiced purely breastfeeding, statistical tests revealed no significant difference in the level of knowledge of the mothers by type of feeding method employed. This implies that for many mothers, the choice of feeding method could be attributed to other factors other than knowledge. As presented in the preceding sections, work is the major determinant in selecting the type of feeding employed.

Bilano *et al.*, (2011) attributed the average to high knowledge among mothers to several influences such as elders, local health workers and mass media. Being in an urban setting, access to information on breastfeeding would be relatively easy considering the availability of flyers, posters, television and radio.

## Feeding Practices

All of the respondents who practiced complete breastfeeding started doing so a few hours after giving birth. Among those practicing bottle and mix feeding, the period of initiation is varied. A few claimed that they did all means to breastfeed first but failed. Thus to many, they had to resort to bottle and mix feeding when they failed to produce milk or had to return to work after their maternity leave. On the whole, one-fourth of the respondents started feeding within 24 hours after birth. Statistical analysis revealed no significant difference in the type of feeding and the time milk when feeding was started.

Successful lactation can be attained if breastfeeding is initiated early i.e. 30 minutes after normal delivery and 3-4 hours after delivery by caesarian section, with the mother relaxed and free from tension, with the correct breastfeeding techniques and if the baby is exclusively breastfed (NNC, 2003)

When asked of the age of their children when they stopped or intend to stop milk feeding, one-third stated from 19-24 months. It was notable that among those who practiced complete breastfeeding, no one will stop at 0-6 months. The second Nutritional Guidelines for Filipinos states that at this age, the infant should be breastfed exclusively after which complementary feeding should be given in addition to breast milk (FNRI, 2000). Many intend to stop even beyond two years which is the minimum recommended duration for breastfeeding. Statistical analysis revealed no significant difference in the type of milk feeding employed based on the age of child when milk feeding was or is intended to be stopped.

## Problems Encountered during Milk Feeding

Among those purely breastfeeding, the main problem cited by the respondents was lack of time to breastfeed within working hours (40%), usually due to heavy workload and distance from home (33%), followed by lack of a place to breastfeed or express milk while at work (23%). A lone respondent stated sore and painful nipples. Similarly, distance from home to workplace was also reported by Garambas (2008).



The distance from home to workplace is a major factor inhibiting the practice of breastfeeding. Even mothers in the two government offices with lactation stations do not find it easy or practical to have their children brought to the lactation station as the child would be exposed to pollution along the way. Bringing out a child entail too much preparation and can be costly and difficult during inclement weather.

The extended break time afforded to breastfeeding mothers is accordingly, still limited if a mother has to travel a kilometer or more to go home rather than have the child brought to the office. Some respondents in the academe also find the lactation station quite far from their work station. Thus for those who live near, it is more practical to go home and breastfeed rather than use the lactation station. As some mothers verbalized:

*“The lactation station is quite far from the office. If I have to ride to go there, I’d rather ride to go home if I live near.”*

*“The child’s safety/protection should be considered. Pollution and bad weather may do more harm than not breastfeeding.”*

*“A 30 minute break time is not enough for me to go home as I need 20 minutes round trip travel.”*

Painful breast was encountered by majority of the mothers who are bottle feeding and one-third of those mix feeding.

This is because when the breasts are not sucked, they become full and eventually become engorged, tender and painful (WHO, 2006). One in every three mothers also cited the high cost of formula feeding. Other reasons cited were difficulty in preparing formula and the child easily getting sick (Figure 3). In Garambas’ study, the main problem of mothers practicing bottlefeeding was the expensive cost of formula feeding.

Statistical analysis revealed no significant differences in the problems encountered by bottle and mix feeding mothers.

**Benefits Enjoyed by the Lactating Mothers**

A great majority of the breastfeeding mothers enjoy extended and compensable break time during the working hours which is one provision of the Expanded Breastfeeding Act (RA10028). Exactly half of that mix feeding also enjoy extended and compensable break time during working hours. Only two breastfeeding mothers availed of a lactation room and a lone respondent indicated receiving free information on breastfeeding.

A great majority of bottle feeding mothers and almost one third of those mix feeding did not avail of benefits provided for in the RA 10028 as shown in Figure 4. On the whole, the benefits enjoyed by the respondents did not significantly differ by type of feeding employed.

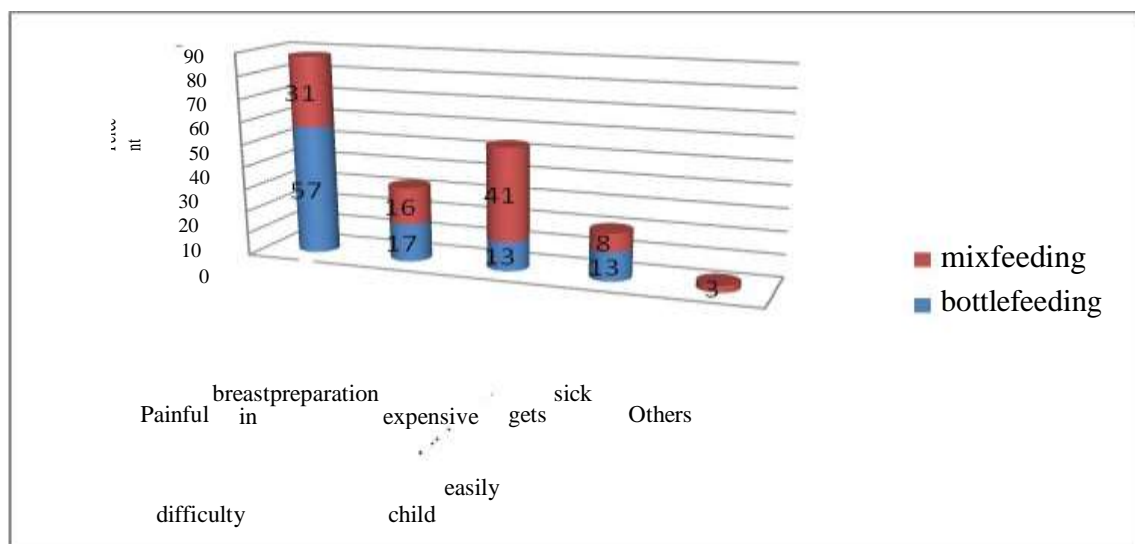


Figure 3. Distribution of respondents by problem encountered in milk feeding (%)

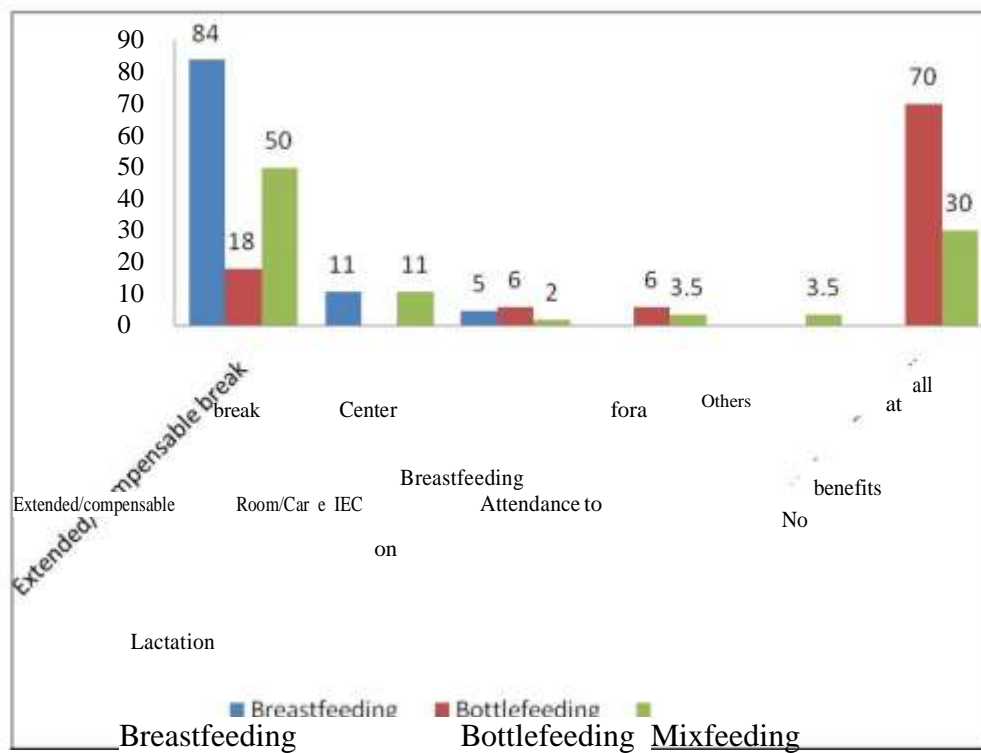


Figure 4. Distribution of respondents by benefits enjoyed (%)

### Perceived Needs of the Mothers

Regardless of type of milk feeding employed, an extended maternity leave beyond two months topped the needs of the lactating mothers. As only two of the 13 agencies have a lactation room, the need to establish a lactation room at the workplace follows. Some expressed the need for extended breastfeeding time during working hours and a few mothers who were bottle feeding verbalized the need for information and education campaign on breastfeeding (Figure 4).

### SUMMARY AND CONCLUSIONS AND RECOMMENDATIONS

An equal proportion of the mothers (19.5%) practiced complete breastfeeding and bottle-feeding while the great majority employed mix feeding. The type of feeding did not differ based on the respondents' age in years of the mother, income bracket, educational attainment, number of children, age of 0-2 year old child however, the type of feeding significantly varied by workplace.

The primary factors considered in selecting type of feeding were the child's health and work. Breastfeeding is initiated a few hours after birth. Bottle and mix feeding started at varying points in time mostly after 1 month or beyond however did not differ significantly. The age at which milk feeding was stopped differed significantly as more mothers intend to stop when the child is 19-24 months.

Majority of the mothers had very good level of knowledge regardless of type of feeding employed. By specific knowledge component, many did not know that there is no need to express and discard little breastmilk even when tired; that young children (0-5 months) should not be given water if purely breastfed; and that there is no need to stop breastfeeding temporarily when either mother or child is sick with influenza. Some mothers have the misconception that breastfeeding causes breast sagging and that mothers with little milk should breastfeed more often. In contrast, almost all respondents know the nutritional superiority of breastmilk, its ability to protect against illnesses as well as enhance child intelligence, the six months duration of exclusive breastfeeding and the need to initiate breastfeeding at once upon delivery.

It remains a fact then that many still do not practice breastfeeding due to a variety of reasons. The good to very good level of knowledge reflects the effectiveness of information and education programs but do not guarantee practice of breastfeeding as work prevails to be the primary factor in selecting type of milk feeding employed. There remains a need to enhance information and education efforts and ensure that all aspects of breastfeeding are understood.

Problems encountered were lack of time to breastfeed within the day and distance from home to work place among breastfeeding mothers, expensive formula and painful breasts among those who are bottle and mix feeding.

A great majority of breastfeeding mothers enjoyed extended and compensable break time which were also availed of by half of those mix feeding. Many of the bottle and mix feeding mothers apparently do not enjoy any benefit. Perceived needs include extended maternity leave, lactation room and more time to breastfeed during working hours.

## Recommendations

In the light of the findings, the following are recommended:

1. There is a need to disseminate RA 10028 and its IRR to all employees as some offices are not aware and even do not have copies in spite of reported dissemination by the NNC-CAR;
2. Full implementation of RA 10028 all government agencies. While some provisions had already been implemented, the development of a clear set of guidelines on its use should be in order;
3. Consider accessibility of lactation/ / breastfeeding rooms to majority of employee;
4. The Personnel/Human Resource Management Office may organize symposia on breastfeeding on a regular basis targeting all employees as clients; and,

5. Information campaign should be done for the enancement of complete breastfeeding practice among nursing mothers.

Finally, this study also support the recommendations of Bilano *et al.* (2011) on the formulation of a standard index for assessing knowledge on breastfeeding.

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