INFANT FEEDING PRACTICES OF CARETAKERS IN HLAINGTHARYAR TOWNSHIP, YANGON REGION MYANMAR

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INFANT FEEDING PRACTICES OF CARETAKERS IN HLAINGTHARYAR TOWNSHIP, YANGON REGION MYANMAR

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ABSTRACT

The purpose of this study was to determine the status of infant feeding practices of caretakers in Hlaingtharyar Township, Yangon Region, Myanmar. The study was a cross-sectional and population-based study. One-hundred and eighty caretakers from 20 clusters were interviewed by questionnaire. The chi-square test or Fisher's Exact test was used for determining significant associations of the independent variables with the dependent variables.

The results showed 23.3% of caretakers were good at overall knowledge related to infant feeding practices. Moreover, 63.9% of caretakers had good attitudes towards overall perceptions. However, 23.9% of caretakers received good encouragement. Among them, 13.4% of caretakers were good at six feeding practices. There were significant associations between family income and overall perceptions with infant feeding practices. Creation of income generation activities at home and minimum wage policy are recommended to improve family income. Health education on infant feeding practices and improving accessibility of printed and broadcast media are recommended to improve the knowledge, especially exclusive breast feeding knowledge, timely introduction of complementary feeding, diversity and iron-rich food, and frequency. Communication for development of proper infant feeding practices is recommended to improve the feeding practices, particularly minimum dietary diversity, timely introduction of solid, semi-solid, or soft foods, and to reduce bottle feeding.

KEY WORDS: INFANT FEEDING KNOWLEDGE / PERCEPTIONS / CUES / INFANT FEEDING PRACTICES OF CARETAKERS

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AIDS	Acquired immuno-deficiency syndrome
CSTS	Child Survival Technical Support Project
DHS	Demographic and Health Surveys
EBF	Exclusive breast feeding
HIV	Human Immunodeficiency Virus
IYCF	Infant and Young Child Feeding
MICS	Multiple Indicators Cluster Survey
MMRD	Myanmar Marketing Research and Development Company Limited
NGO	Non-Governmental Organization
UNAIDS	United National Agency for International development
UNICEF	United Nations Children Fund
WFP	World Food Programme
WHO	World Health Organization
HIV	Human Immunodeficiency Virus
NGO	Non-Governmental Organization
WHO	World Health Organization
UNAIDS	United National Agency for International development

CHAPTER I
INTRODUCTION

1.1 Rationale and justification

One-thousand days starting from gestation until 2nd birthday of a child offers a unique window of opportunity to undertake optimal infant feeding practices so that a child is free from malnutrition with subsequent physical stunting, mental impairment, higher susceptibility to disease, increased risk of mortality, poorer performance in school, and lower future incomes. (1) It is the peak age for growth flattering, deficiencies of certain micronutrients, and after 2 years of age it is very difficult to reverse stunting that has already occurred. If malnutrition is repeated for generations, the malnourished girl, when she grows up, will have greater chances of giving birth to a malnourished and low birth weight baby.(2)

WHO Facts sheet for Infant and Young Child Feeding released in February 2014 points out that "Globally, in 2012, poor feeding of breast milk and complementary feeding leaded to stunting of 162 million under 5 children and 52 million children have low weight for height". (3) According to findings of Multiple Indicators Cluster Survey (MICS) 2009 – 2010 in Myanmar jointly carried out by Myanmar Government and UNICEF, stunting and underweight are more common and stunting is the commonest and markedly increase in the ages between 6 – 30 months.(4) Please see Figure 1. MICS 2009 – 2010 findings shows the prevalence of underweight is 28.2%, the prevalence of stunting is 47.8%, and the prevalence of wasting is 10.0%, for under 60-month-old children.

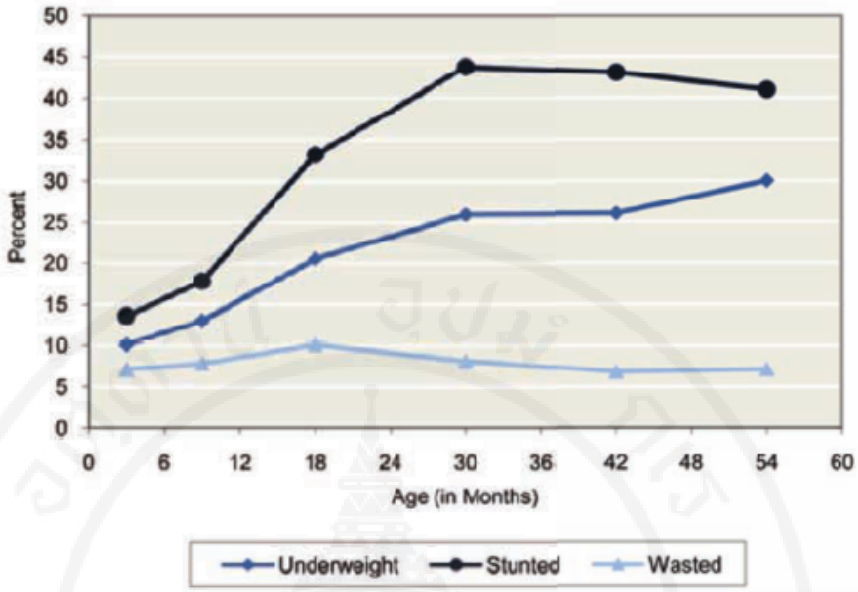


Figure 1.1 Percentage of children who are under-nourished in Myanmar (MICS 2010)

The same study indicates low prevalence of exclusive breastfeeding (23.6%), adequately fed infants (41.00%), adequately fed infants (41%), timely complementary feeding (80.9%) and frequency of complementary feeding (56.5%). These data indicate that feeding practice is important and that is why, this study is needed to be done to study the factors which affect the feeding practice of caretakers.

Hlaingtharyar Township, which is situated in Yangon Region, shown in Figure 1.2, was selected for the study for following reasons. The first reason was based on health data and according to 2012 health profile of the township, the prevalence of underweight in under 5 year old children was 5.9% (22.6% Moderate underweight at National level according to MICS 2009 - 2010) and severe underweight in under 5-year-old children was 0.38% (22.6% Moderate underweight at National level according to MICS 2009 - 2010). (Total under 5 years children is 38,202.) Infant mortality rate per 1000 live births in 2012 was 25 (37.5 at National Level according to MICS 2009 – 2010) and Under 5 year old children mortality per 1000 live births in 2012 was 31.9 (46.1 at National Level according to MICS 2009 – 2010).(5) The nutritional data directly, and the mortality data indirectly, indicated that there were caretakers who did not practice proper infant feeding in the township and

therefore, it was a good place to study and find out the reasons for not practicing proper infant feeding.

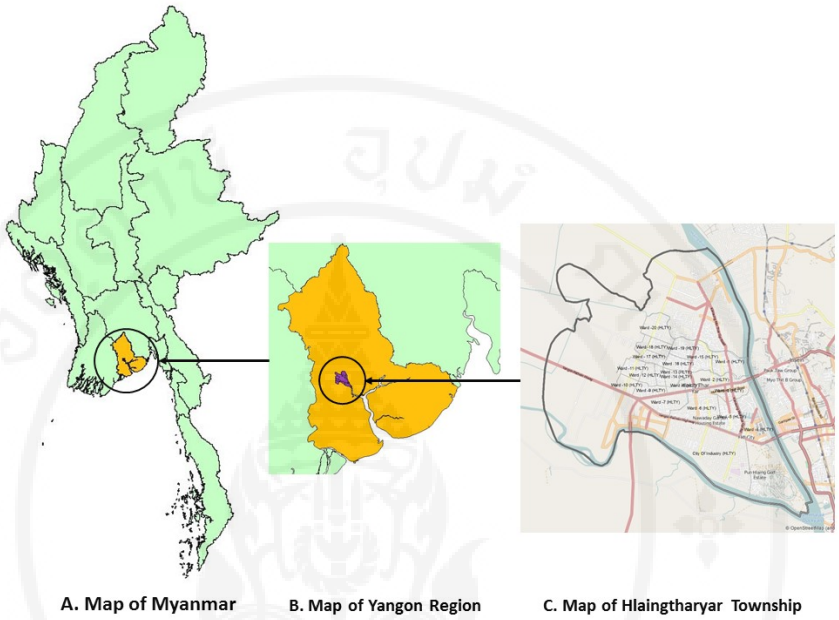


Figure 1.2 Location Map of Hlaingtharyar Township

The other non-health reasons were Hlaingtharyar Township is one of the peri-urban satellite township with mixed urban-rural setting and had different socio-economic-demographic classes with big population and mobile people. The township had 9 industrial estates, 20 wards and 17 villages. Total population of 396,124 (2013 Population) with 9174 under 1 year old children, and about 200,000 mobile population from the different parts of the country were living in the township. These mobile population were living there for various duration of stay in order to find out job opportunities as daily wages or other ranks in industrial estates. Above mentioned health related reasons as well as non-health related reasons made to choose the township as the study site for the infant feeding practice of caretakers.

1.2 Research Objectives

The objectives of the study were presented as general objective and specific objectives.

1.2.1 General objective

To determine the infant feeding practice among the caretakers in Hlaingtharyar township

1.2.3 Specific objective

1.2.3.1 To estimate the prevalence of different types of infant feeding practice among caretakers in Hlaingtharyar township

1.2.3.2 To explore relating factors (socio-economic-demographic factors, nutrition knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy) and infant feeding practices

1.3 Hypotheses

Different socio-economic-demographic factors, nutrition knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy and cues are associated with different infant feeding practices among the caretakers from Hlaingtharyar Township from Yangon Region, Myanmar.

1.4 Research conceptual framework

Research conceptual framework was described in Figure 1.3.

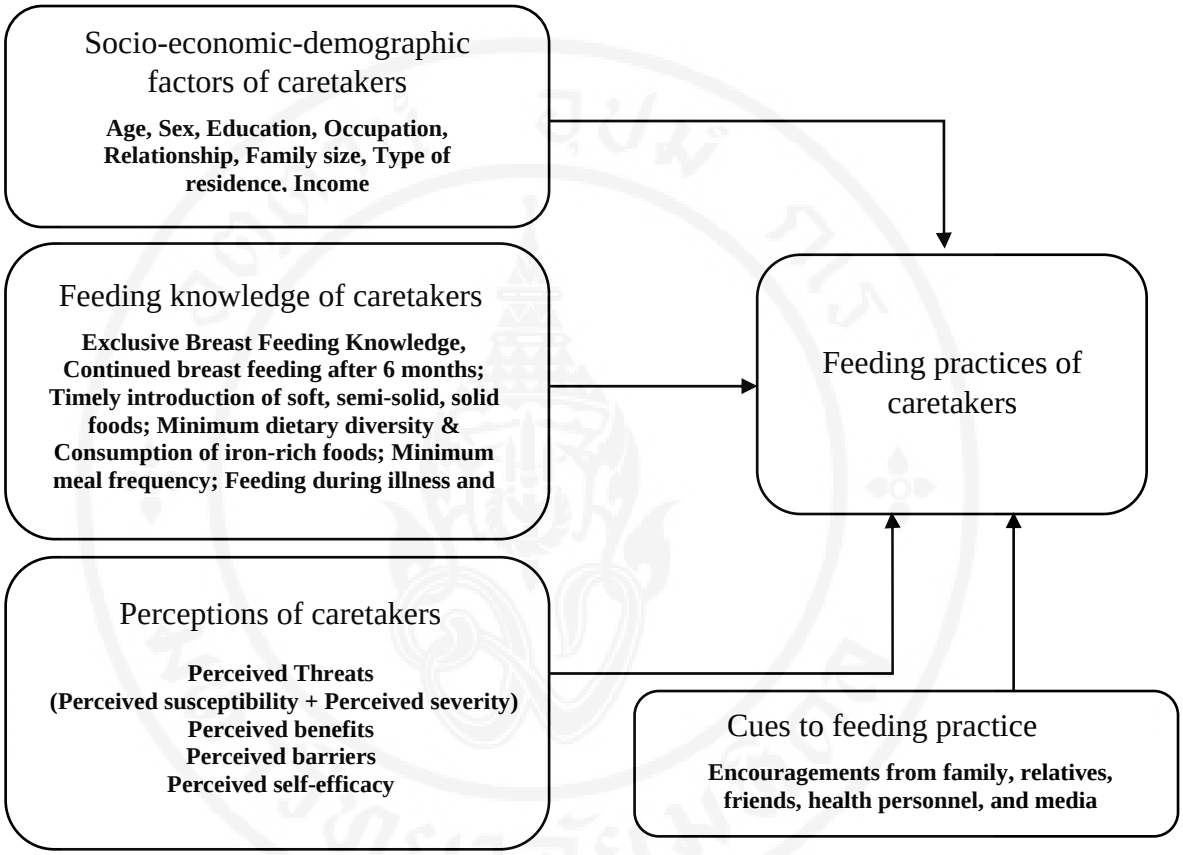


Figure 1.3 Research Conceptual Frame Work

1.5 Variables

1.5.1 Dependent variables

Feeding practice of caretakers for children between 6 – 12 months old and it is qualitative and categorical variable

1.5.2 Independent Variable

1.5.2.1 Socio-economic-demographic variables

- Age of caretakers – quantitative and discrete variable
- Sex of caretakers – qualitative and categorical variable
- Education of caretakers – qualitative, categorical and ordered variable
- Occupation of caretakers – qualitative and categorical variable
- Relationship of caretaker to child – qualitative and categorical variable
- Number of family of caretakers (Family size) – quantitative and discrete variable
- Type of residence of child's family – qualitative and categorical variable
- Family income – qualitative, categorical and ordered variable

1.5.2.2 Nutritional knowledge

- Knowledge of caretakers on different feeding practices for children between 6 – 12 months – qualitative and categorical variable

1.5.2.3 Perceptions of caretakers towards infant feeding practices

- Perceived susceptibility – qualitative and categorical variable
- Perceived severity – qualitative and categorical variable
- Perceived benefits – qualitative and categorical variable
- Perceived barriers – qualitative and categorical variable
- Perceived self-efficacy – qualitative and categorical variable

1.5.2.4 Enabling factors

- Cues to optimal feeding practices – qualitative and categorical variable

1.6 Operational Definitions:

Caretaker refers to any person who determined the most of daily menu for child.

Infant feeding practice is defined based on the information on Infant feeding guideline of National Nutrition Center of Department of Health, Myanmar; Guiding Principles for Complementary Feeding of the Breastfed Child, Page 20, Published by WHO; and Guiding Principles for Complementary Feeding of the Non-Breastfed Child, Page 9, Published by WHO. Infant feeding practice was operationally defined as the practice comprises of 5 components and they are:

(1) Breast feeding practice: The child was exclusively breastfed until 6 months (except oral rehydration salt and medicines which were given when the child was ill) and breast milk should be continued after 6 months until the child was 24 months or more.

(2) Timely introduction of soft, semi-solid or solid foods: It is, together with continuing breast milk, gradual introduction of soft food such as porridge or mashed food at 6 months; semi-solid such as small and soft pieces of meat/fish/poultry/ripened fruits and minced small pieces of vegetables (finger foods"_ foods that can be eaten by children alone) at 8 months; or solid foods or family food at the of 1 year. Complementary feeding should be started with one type of food which is soft such as porridge and continue that food until the child gets used to it. Then, add another new food until complementary feeding for child met minimum dietary diversity.

(3) Minimum dietary diversity: Complementary should be consists of at least 4 foods from the following food groups_

a. Rice as a staple diet;

b. Foods providing energy such as any food made from grains, roots and tubers; any food made from any oil, butter, fats; any foods made from sugary foods such as sugar, palm juice bead, sugarcane juice plate, candy;

c. Foods encouraging body growth such as flesh foods (meat, fish, poultry and liver/organ meats); dairy products (milk, yogurt, cheese); eggs; legumes and nuts;

d. Foods encouraging prevention of diseases such as (i) iron-rich food likes meat and organs from cattle, fowl, fish, and poultry; and non-animal foods such as legumes and green leafy vegetables; (ii) vitamin-A rich fruits and vegetables like pumpkin, carrot, sweet potatoes, any dark green leafy vegetables, ripe mangoes, ripe papayas; (iii) other fruits and vegetables.

(4) Minimum meal frequency: The child should be fed according to age and breast feeding status, and it should be 3 times per day for 6 – 7 months of age, 3-4 times per day for children of 8 – 9 months of age and 4 times per day children of 10 – 12 months of age and 5 times per day for 13 months and onwards.

(5) Not practicing bottle feeding with teat

Feeding knowledge meant the knowledge of caretaker on feeding practice as mentioned in operational definition of Infant feeding practice.

Perceived susceptibility was belief of caretaker on chances of getting malnutrition if the child is not fed properly.

Perceived severity was belief of caretaker about how malnutrition was serious and its consequences such as poor physical growth, poor school performance in student life, getting diseases and infections at any age with increased mortality, and lower future incomes when the child was grown up.

Perceived benefits was belief of caretaker in effectiveness of proper feeding practices that reduced risk or seriousness of malnutrition such as proper feeding led to good nutrition status which caused child to be healthy and better school performance.

Perceived barriers was belief of caretaker on potential negative aspect of proper feeding practice and false belief which prevented proper feeding practice such as proper feeding practice were costly, busy to prepare the food, it made no difference for better nutritional status, feeding meat encouraged worm infestation, feeding eggs made child “bad wind”, feeding vegetables made indigestion, etc.

Perceived self-efficacy was conviction of caretaker to successfully undertake proper feeding practice to make good nutrition status to child.

Cues to proper feeding practice was encouragements from family members, relatives, friends, health personnel and media in terms of helping, reminding, demonstrating to prepare proper food.

CHAPTER II
LITERATURE REVIEW

In order to study the feeding practice of caretakers, literature review was done on infant feeding practices recommended by WHO and UNICEF as well as the feeding guideline of National Nutritional Center of Myanmar, importance of proper infant feeding practice, Indicators to measure the infant and young child feeding practices developed by WHO and UNICEF, infant feeding practices and nutritional status of children in neighbouring countries and Myanmar, and Health belief model.

2.1 Infant feeding practices

Nutritional status of a child is influenced by maternal nutrition during gestation, exclusive breast feeding in the first 6 months and complementary feeding from 7 to 24 months of ages. These periods generally last about 1000 days and nutritionists refer 1000 days as unique window of opportunity to provide right nutrition for a child or the best period to practice the proper infant feeding.

Infant feeding comprises exclusive breast feeding and complementary feeding. Predominance of breast milk or complementary feeding depends on the age of child. Exclusive breast feeding should be proper by means of initiation within one hour of birth, exclusively breastfed until 6 months of ages and continue breastfeeding for 2 years or more. After 6 months of age, breast milk alone is not sufficient enough to provide the nutritional requirements of child due to accelerated growth of child. Therefore, complementary feeding, a process of introducing other foods and liquids, is required to introduce gradually along with breast milk.(6) During 7 to 12 months of age, breast feeding should be predominant to complementary feeding; and complementary feeding should be predominant to breast feeding for child between the ages of 13 – 24 months. Furthermore, complementary feeding practice varies with

whether the child is breast fed or not in order to meet the nutrients requirement according to age.

2.1.1 Brief guiding principle for complementary feeding of breast fed child

The child should be exclusively breastfed until 6 months of age and complementary food should be introduced at 6 months to prevent particularly iron and zinc deficiencies. Breastfeeding should be continued until 24 months or more because it is main source of energy, (it still supplies 35 – 40% of child's energy requirement) and essential fatty acids. It also provides 70% of vitamin A, 40% of calcium and 37% of riboflavin intake at 15 – 18 months of age. (7)

Breast feeding should be responsive feeding.

Safe preparation and storage of complementary foods by washing hands of caretaker and child before and after feeding, using clean utensils for preparation and serving of food, and avoid feeding bottle with teat are important practices to prevent microbial contamination of food which is a major cause of diarrhea in children.

Amount of complementary food needed depends on energy requirement of child which also varies with age. Complementary food should contribute energy of approximately 200 kcal per day at 6-8 months of age, 300 kcal per day at 9-11 months of age, and 550 kcal per day at 12-23 months of age, provided the child receives average breast feeding. The child who is recovering from an illness needs more energy requirement than the amount mentioned above. The amount required will be adjusted by responsive feeding, adequate energy density of food and frequency of meal.

Consistency of food should be appropriate to age of child. Therefore, consistency of complementary food should be gradually increased from mashed and semi-solid foods at the 6 months of age, then to "finger foods" (snacks that can be eaten by children alone) at the age of 8 months when child is capable of munching" (up and down mandibular movements) or chewing (use of teeth), and finally the same type of food as family consumed at the age of 12 months. If the consistency is not appropriate, child may not be able to consume adequate amount. Consistency of food that can cause choking should be avoided.

Frequency of meal depends on energy density of complementary food and usual amount consumed at each feeding. It should be 2-3 times per day for 6-8 months of age, and 3-4 times per day for 9-11 and 12-24 months of age, with additional nutritious snacks for 1-2 times per day as desired, for the average healthy breastfed child. Frequency of meals should be increased if energy density or amount of food per meal is low, or the child is no longer breastfed. Energy density of complementary foods varies with frequencies of meal and breast milk intake.

Nutrient content of complementary foods should be adequate enough to meet needs of child and complementary food should contain meat, poultry, fish or eggs which should be eaten daily or as often as possible, dairy products as good source of calcium, Vitamin A-rich fruits and vegetables which should be eaten daily, and food which contains adequate amount of fat such as breast milk or oil. Therefore, a variety of foods are needed to feed in order to meet the nutrient needs.

Fortified complementary foods or vitamin-mineral supplements are also required for child as well as breast feeding mother. Complementary food which are predominantly plant-based food do not have adequate amount of iron, zinc and Calcium. Although these nutrients are contained in animal-source food, low-income people cannot afford them. This is solved by foods fortified with these nutrients or complementary foods mixed with multi-micro-nutrients sprinkle.

Encouraging increase intake of fluid especially breast milk during illness is important to prevent dehydration. In order to make up for nutrient losses during the illness and for catch-up growth, child needs greater intake of nutrient than usual. Extra food is needed to continue until the child regains his or her respective weight and is growing well again.

2.1.2 Brief guiding principle for complementary feeding of non-breast fed child

Energy requirement for non-breastfed child is approximately 600 kcal per day at 6-8 months of age, 700 kcal per day at 9-11 months of age, and 900 kcal per day at 12-23 months of age. Amount of complementary food should meet these requirements according to age of the child. Child who is recovering from an illness requires more energy. Food such as milk; egg; meat, poultry, fish, or liver; rice or

wheat; lentils; potato; spinach; pumpkin; onion; guava; and oil can provide daily energy requirements for child. (8)

Principle for the consistency of food for non-breastfed child is the same as that of breastfed child. Consistency of food should be gradually increased and variety should be also increased as the child gets older according to the infant's requirements and abilities. Child can eat family food at 12 months. Average healthy child should have meals for 4-5 times per day, with additional nutritious snacks for 1 to 2 times per day, as desired at the age of 12 months.

The appropriate number of feedings depends on the energy density and amounts consumed at each feeding. If energy density or amount of food per meal is low, more frequent meals are required.

Meat, poultry, fish or eggs which are good source of protein as well as iron and zinc should be fed as often as possible. Milk is rich source of calcium and several other nutrients. If the diet does not contain animal source of food, fortified food or nutrients supplements are required to meet all nutrients needs for child. If there are no adequate amount of animal food or milk intake, both grains and legumes should be consumed daily to ensure adequate protein intake. If dairy products are not consumed adequately, small fish with edible bones, cabbage, carrots, squash, papaya, dark green leafy vegetables, guava and pumpkin should be fed for calcium. vitamin A-rich foods (e.g. dark colored fruits and vegetables; red palm oil; vitamin A-fortified oil or foods); vitamin C-rich foods (e.g. many fruits, vegetables and potatoes); riboflavin rich foods (e.g. liver, egg, dairy products, green leafy vegetables, soybeans), vitamin B6 rich food (e.g. meat, poultry, fish, banana, green leafy vegetables, potato and other tubers, peanuts) and folate rich food (e.g. legumes, green leafy vegetables, orange juice) should be contained in daily meal. If animal food is not included in the meal, 10-20 g of added fats or oils are needed or a fat-rich food such as foods or pastes made from groundnuts, other nuts and seeds are needed to feed. If the diet contains animal food, up to 5 g of additional fats or oils may be needed.

Fortified food or vitamins-minerals supplement with Iron which is mixed or fed with food is also required. If the diet does not contain adequate amount of animal origin food, these fortified food or vitamins supplements should also contain

zinc, calcium and Vitamin B12. 100000 IU of Vitamin A once for 6 – 12 months children and 200000 IU twice a year for 13 – 24 months old children is required.

Non-breastfed children need at least 400 – 600 ml per day of extra fluid in a temperate climate and 800 – 1200 ml per day in a hot climate.

Safe preparation and storage of complementary foods by washing hands of caretaker and child before and after feeding, using clean utensils for preparation and serving of food, and avoid using feeding bottle are also important practices for the same reason mentioned above.

Responsive feeding should be practiced by applying principles of psycho-social care by encouraging child to eat instead of forcing, trial with different combinations of food taste and texture if child refuse to take, minimize distractions during meals if the child loses interest easily, and talking to child with eye to eye contact during feeding.

2.1.3 Brief infant feeding guideline of National Nutrition Center of Myanmar

The following points are brief outline of infant feeding guideline recommended by National Nutrition Center of Myanmar. (9)

1. Breastfeeding should be started as early as possible immediately after birth, preferably within 1 hour after delivery.

2. National Nutrition Center of Myanmar recommend mothers to exclusively breast feed the child until 6 months of age.

3. After 6 months, breastfeeding should be continued until the child is 24 months or more. Frequent breast feeding is encouraged and it should also be responsive breastfeeding.

4. At the 6 months of age, complementary feeding should be started with soft food such as porridge or mashed fruits at 6 months, small and soft pieces of fish/meat/pulses/egg yolk or ripened fruits at 7 months, semi-solid food such as small pieces of meat/fish/poultry/vegetables or ripened fruits at 8 months, and solid foods or family food at the age of 1 year.

5. Complementary feeding should be started with one type of food which is soft such as porridge and continue that food until the child gets used to it. Then, add

another new food until the child receives minimum dietary diversity. For example, it should be started with only porridge at first for a few days. When the child gets use to it, then add ripened and squash banana. New foods are added in this way until the child receives minimum dietary diversity.

6. Minimum dietary diversity: Complementary should be consists of at least 1 food from the each of following 4 food groups_

(1) Rice as a staple diet;

(2) Foods providing energy such as any food made from grains, roots and tubers; any food made from any oil, butter, fats; any foods made from sugary foods such as sugar, palm juice bead, sugarcane juice plate, candy;

(3) Foods encouraging body growth such as flesh foods (meat, fish, poultry and liver/organ meats); dairy products (milk, yogurt, cheese); eggs; legumes and nuts;

(4) Foods encouraging prevention of diseases such as (i) Iron-rich food likes meat and organs from cattle, fowl, fish, and poultry; and non-animal foods such as legumes and green leafy vegetables; (ii) vitamin-A rich fruits and vegetables like pumpkin, carrot, sweet potatoes, any dark green leafy vegetables, ripe mangoes, ripe papayas; (iii) other fruits and vegetables.

7. Minimum meal frequency: The child should be fed according to age and breast feeding status, and it should be 3 times per day for 6-7 months of age, 3-4 times per day for children of 8-9 months of age and 4 times per day children of 10-12 months of age and 5 times per day for 13 months and onwards.

8. Encourage the sick child to eat soft or favorite food and to take more fluid intake to prevent dehydration and to eat more than usual amount during recovery period in order to make up the lost during illness and for the catch up during recovery.

2.2 Importance of proper infant feedings

Proper infant feeding has a greater impact on child survival and development, and maternal health. It is also linked to and interrelated with Millennium Development Goals.

2.2.1 Impact on child survival and development and maternal health

Early initiation of breastfeeding within 1 hour after delivery and Exclusive breastfeeding until baby is 6 months old provide a lot of benefits to both mother and child. Early initiation of breastfeeding leads to skin to skin contact between baby and mother which increase the bound between child and mother as well as facilitate the affection of mother toward child. It also encourages feeding of colostrum to baby which provides a lot of maternal antibodies to protect child against many infections. This reduces the neonatal mortality. Breast milk provides half or more of energy requirement of child between the ages of 6-12 months and one third of energy requirement for the child ages between 12-24 months. Breast milk is also important and critical source of energy and nutrients for child during illness and prevents death among the malnourished children. Breast-fed baby is less likely to develop obesity later in the adult life. For mother, breastfeeding reduces risks of breast and ovarian cancers, and offers natural mean of birth spacing called Lactation Amenorrhea Method. (10)

According to UNICEF and WHO statistics, in 2012, globally, only 38% of children between the ages of 0-6 months receive exclusive breast feeding; and only one third of 6-23 months old children receive the complementary feeding which is appropriate for their age. As a result, under-nutrition leads to 45% of child death, 162 million children under 5 children are stunted, 51 million have low weight-for-height, and 44 million were overweight or obese in 2012. These statistics indicate that it is very important to systematically measure the Exclusive breast feeding practice during 0-6 month period and proper complementary feeding practices appropriate for ages between 6-23 month period.

2.2.2 Relationship of infant feeding practices and Millennium Development Goals

Millennium Development Goal 1: Eradicate extreme poverty and hunger targets to reduce Prevalence of underweight children under-five years of age and proportion of population below minimum level of dietary energy consumption. Proper infant feeding practice can fulfil this goal. Goal 2 is to achieve universal primary education and well nourish child can complete full course of primary schooling. Goal

3 is to promote gender equality and empower women: Generally, most of caretakers are women and they decide the daily family menu including foods for child. In this way, proper infant feeding contributes to the achievement of Goal 3. Goal 4 is to reduce child mortality and proper infant feeding can bring down 45% of under-nutrition induced child death. Goal 5 related to improve maternal health and continued breast feeding until the child is 2 years or more can produce “lactational amenorrhea” which leads to natural birth spacing and accelerate post-partum weight loss, and in the long run, chance of breast cancer and ovarian cancer are low in breastfed mothers. Goal 6 is concern with Combat HIV/AIDS, malaria and other diseases: Even HIV infected mother can exclusively breast fed their child and chance of getting HIV infection and death is lower than death from acute respiratory tract infection and diarrhea in formula fed children of HIV infected mothers. Goal 7 which is to ensure environmental sustainability which is important for success of proper infant feeding practice through availability of local crops for dietary diversity and quality. Goal 8 is to develop a global partnership for development and involvement of every sector from health, education, agriculture and livestock, national economics and planning departments from government sector as well as from non-government sectors is important to create enabling environment for proper infant feeding practices. (11)

2.3 Indicators to measure the infant feeding practices

Since 2002, UNICEF and WHO worked on the development of indicators for complementary feeding, in addition to the existing indicators for breast feeding, through many studies and analysis. The final outcome is a revised set of indicators which was developed based on these works. These indicators were discussed by participants at the WHO Global Consensus Meeting on Indicators of Infant and Young Child Feeding held from 6–8 November, 2007 on the premises of the WHO Regional Office for the Americas. From this meeting, a consensus was reached on 8 core indicators and 7 optional indicators to access infant and young child feeding practices by population-based household survey. (12)

Eight core indicators are 1. Early initiation of breastfeeding, 2. Exclusive breastfeeding under 6 months, 3. Continued breastfeeding at 1 year, 4. Introduction of

solid, semi-solid or soft foods, 5. Minimum dietary diversity, 6. Minimum meal frequency, 7. Minimum acceptable diet, and 8. Consumption of iron-rich or iron-fortified foods; and seven optional indicators are 1. Children ever breastfed, 2. Continued breastfeeding at 2 years, 3. Age-appropriate breastfeeding, 4. Predominant breastfeeding under 6 months, 5. Duration of breastfeeding, 6. Bottle feeding, and 7. Milk feeding frequency for non-breastfed children.

The definition of core indicators by UNICEF and WHO are:

1. Early initiation of breastfeeding – Proportion of children born in the last 24 months who were put to the breast within one hour of birth;

2. Exclusive breastfeeding under 6 months – Proportion of infants 0–5 months of age who are fed exclusively with breast milk;

3. Continued breastfeeding at 1 year – Proportion of children 12–15 months of age who are fed breast milk;

4. Introduction of solid, semi-solid or soft foods – Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods;

5. Minimum dietary diversity – Proportion of children 6–23 months of age who receive foods from 4 or more food groups;

6. Minimum meal frequency – Proportion of breastfed and non-breastfed children 6–23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more;

7. Minimum acceptable diet – Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk), and

8. Consumption of iron-rich or iron-fortified foods – Proportion of children 6–23 months of age who receive an iron-rich food or iron-fortified food that is specially designed for infants and young children, or that is fortified in the home.

The definition of optional indicators are:

1. Children ever breastfed – Proportion of children born in the last 24 months who were ever breastfed;

2. Continued breastfeeding at 2 years – Proportion of children 20–23 months of age who are fed breast milk;

3. Age-appropriate breastfeeding – Proportion of children 0–23 months of

age who are appropriately breastfed;

4. Predominant breastfeeding under 6 months – Proportion of infants 0–5 months of age who are predominantly breastfed;

5. Duration of breastfeeding – Median duration of breastfeeding among children less than 36 months of age;

6. Bottle feeding – Proportion of children 0–23 months of age who are fed with a bottle, and

7. Milk feeding frequency for non-breastfed children – Proportion of non-breastfed children 6–23 months of age who receive at least 2 milk feedings.

All of these 15 indicators are assessed based on the previous day feedings.

2.4 Infant feeding practices and nutritional status of children in neighbouring countries and Myanmar

Overview of the Nutrition Situation in Seven Countries in Southeast Asia, studied by Chaparro et al in 2014 (13), described the infant feeding practices in Myanmar, Cambodia, Indonesia, Laos, Philippines, Timor – Leste and Vietnam by using these indicators (Figure 2.1 and 2.2) together with Neonatal, Under-1 and Under-5 Mortality Rates (Figure 2.3) and nutritional status of under 24 moths children in these 7 countries (Table 2.1).

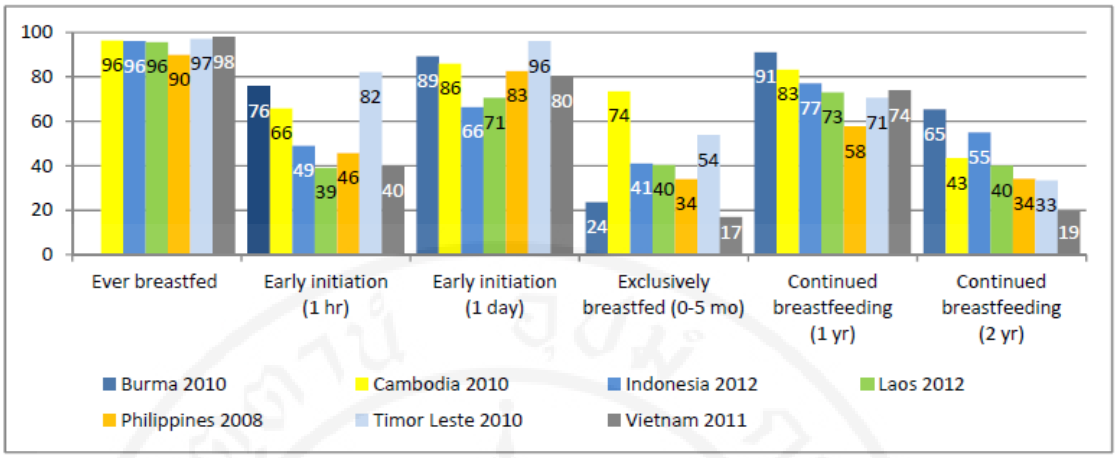


Figure 2.1 Proportion of Breast feeding practices among 7 countries (Chaparro et al., 2014)

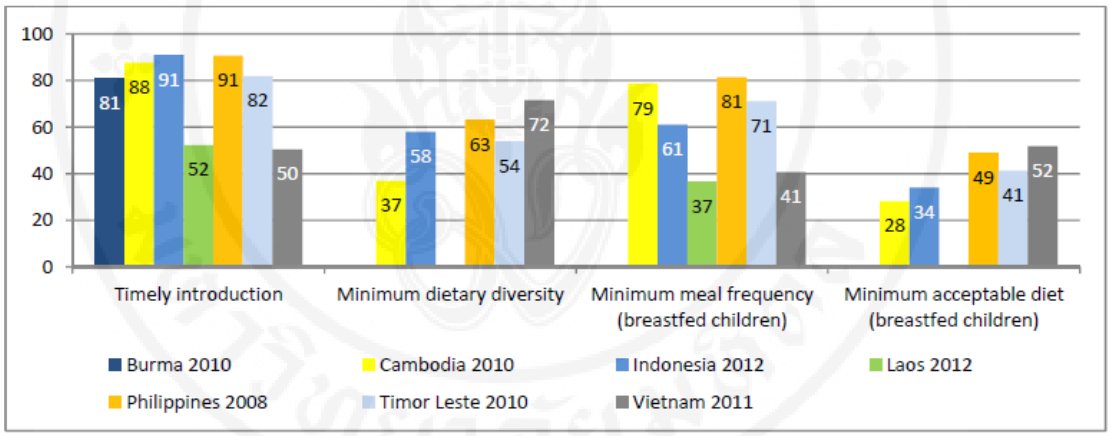


Figure 2.2 Proportion of Complementary feeding practices among 7 countries (Chaparro et al., 2014)

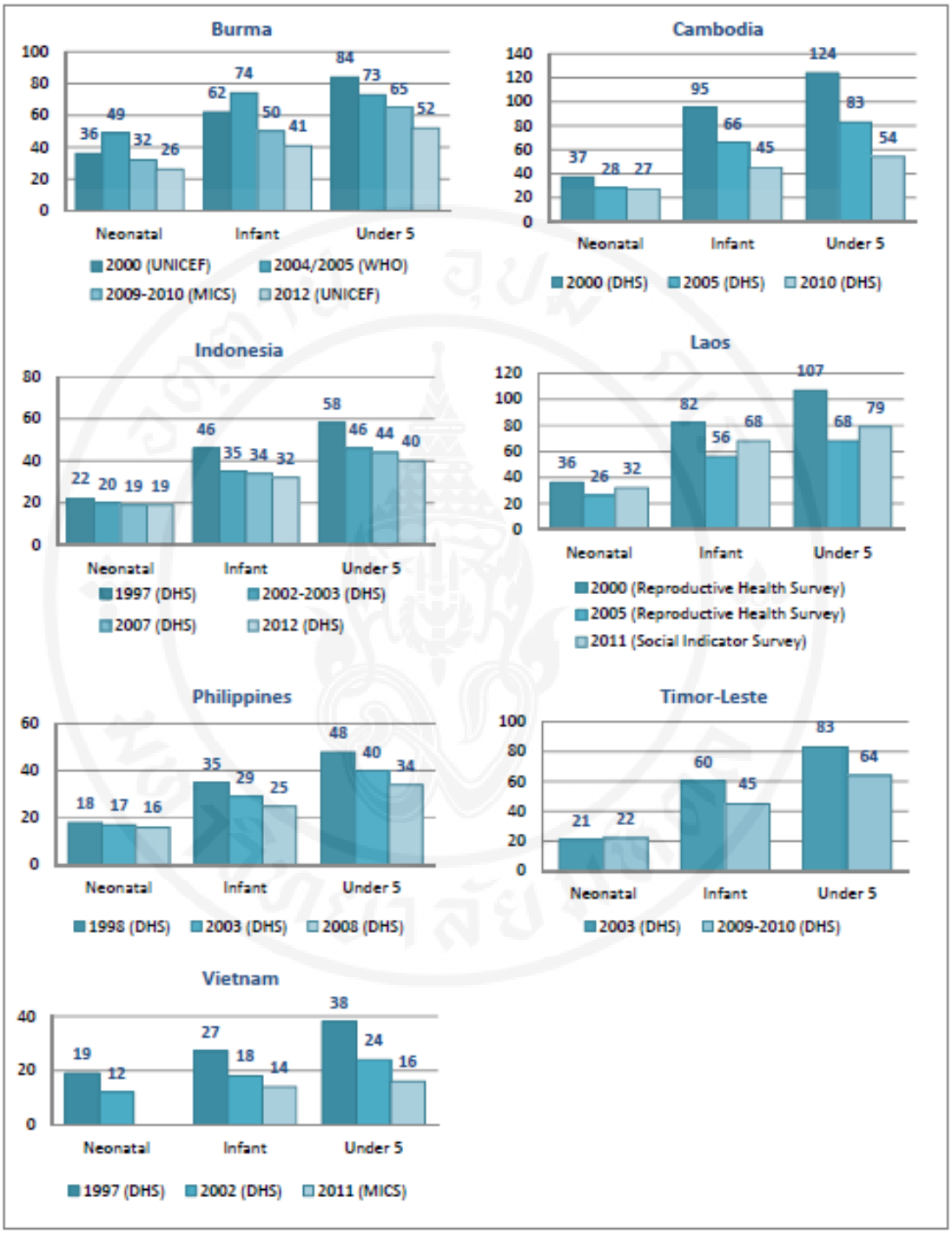


Figure 2.3 Neonatal, Under-1 and Under-5 Mortalities among 7 countries (Chaparro et al., 2014)

Table 2.1 Number of Children Under-5 Affected by Malnutrition among 7 countries (Chaparro et al., 2014)

	Under 5 Population	**Underweight (Total, Moderate, Severe)**		**Stunting (Total, Moderate, Severe)**		**Wasting (Total, Moderate, Severe)**	
		%	**#**	**%**	**#**	**%**	**#**
Cambodia		**28.3**	**1,002,174**	**39.9**	**666,010**	**10.9**	**181942**
(2010 DHS)	1,669,197	21.6	753,848	26.3	438,999	9.3	155235
		6.7	248,304	13.6	227,011	1.6	26707
Indonesia		**19.6**	**4,825,990**	**37.2**	**9,159,533**	**12.1**	**2,979,310**
(2013	24,622,400	13.9	3,422,514	18.0	4,432,032	6.8	1,674,323
Riskesdas)		5.7	1,403,477	19.2	4,727,501	5.3	1,304,987
Laos (2011-2012 Social Indicator Survey)	889,200	**26.6**	**236,527**	**44.2**	**393,026**	**5.9**	**52,463**
		19.4	172,505	25.4	225,857	4.5	40,014
		7.2	64,022	18.8	167,170	1.4	12,449
Myanmar		**22.6**	**1,002,174**	**35.1**	**1,556,474**	**7.9**	**350,318**
(2009-10	4,434,400	17.0	753,848	22.4	993,306	5.8	257,195
MICS)		5.6	248,304	12.7	653,169	2.1	93,112
Philippines							
(2011		**20.2**	**2,255,249**	**33.6**	**3,751,306**	**7.3**	**815,016**
Nutritional	11,164,600	1.9	1,764,007	23.2	2,590,187	4.9	547,065
Status		4.4	491,242	10.4	1,161,118	2.4	267,950
Survey)							
Timor Leste		**44.7**	**85,064**	**58.1**	**110,564**	**18.6**	**35,396**
(2009-10	190,300	29.3	55,758	25.5	47,956	13.9	26,452
DHS)		15.4	29,306	32.9	62,609	4.7	8,944
Vietnam		**11.7**	**840,551**	**22.7**	**1,630,813**	**4.1**	**294,552**
(2011	7,184.200	9.9	711,236	16.7	1,199,761	2.9	208,342
MICS)		1.8	129,316	6.0	431,052	1.2	86,210

Early initiation of breastfeeding, which was important for prevention of neonatal morbidity and mortality, was lowest in Laos according to 2012 data, where only 2 in 5 infants started breastfeeding within the first hour of life and according to Social indicator survey in 2011 – 2012, Neonatal Mortality Rate was 32 per 1000 live births; Infant mortality rate was 68 per 1000 live births; and Under-5 mortality rate was 79 per 1000 live births. Laos had the highest mortality rates of Neonatal, Under-1 and Under-5 among the 7 countries.

Proportion of children who had minimum acceptable diet in Timor Leste was 41% and according to DHS 2010 data, Timor Leste had the greatest proportion of children who were stunted (44.7%); the greatest proportion who were wasted (18.6%) and greatest proportion who were underweight (44.7%) among the 7 countries.

The proportion of children under 2 whose diets met minimum standards for dietary diversity (37%), and that of Minimum acceptable diet (28%), were lowest in Cambodia according to 2010 data. According to 2010 DHS data, proportion of Underweight was 28.3% (second highest); proportion of Stunting was 39.9% and proportion of Wasting was 10.9% which were the third highest among 7 countries.

In Myanmar, Ministry of National Planning and Economic Development, Ministry of Health and UNICEF Myanmar jointly implemented Multiple Indicators Cluster Survey (MICS) in 2009 – 2010, and the survey used 8 out of 15 infant feeding practice indicators. Survey results together with nutritional status were shown in Table 2.2. (14)

Table 2.2 MICS 2009 - 2010 Survey showing Nutritional Status and used IYCF indicators

Topic	Indicator	Value (%)
Nutritional Status	Underweight prevalence	
	Moderate	22.6
	Severe	5.6
	Stunting prevalence	
	Moderate	35.1
	Severe	12.7
	Wasting prevalence	
	Moderate	7.9
	Severe	2.1
IYCF Indicators	Timely initiation of breast feeding	75.8
	Exclusive breast feeding rate	23.6
	Continued breast feeding rate	
	At 12-15 months	91.0
	At 20-23 months	65.4
	Timely complementary feeding rate	80.9
	Frequency of complementary feeding	56.5
	Adequately fed infants	41.0

In November 2012, Myanmar Marketing Research and Development (MMRD) Company Limited carried out Population-based Maternal and Child Health Survey in 6 cyclone Nargis affected townships (effected in 2008) _ Bogale, Dedaye, Labutta, Mawlamyinegyun, Ngaputaw, and Pyapon. In this survey, the research team used mainly 4 out of 15 indicators of IYCF and results were shown in Table 2.3. (15)

Table 2.3 Population-based Maternal and Child Health Survey by MMRD in 6 cyclone Nargis effected townships in Delta region

Child health indicators	%
Breast feeding	
Child put to breast within first hour of birth	87.8
Child put to breast within first 24 hour of birth	97.1
Continued breast feeding 6-23 months	27.5
Exclusive feeding among 0-5 months of age	42.7
Child anthropometry (6-59 months)	
Prevalence of wasted children	18.8
Prevalence of underweight children	42.3
Prevalence of stunted children	33.7

The above mentioned two extensive surveys in Myanmar done by Ministries, United Nations agencies, and Non-government Research Agency used some of infant and young child feeding indicators and focused mainly on prevalence of the practices but not explored the contributing factors to these practices. Many scholarly articles and researches done in Myanmar previously were mainly focused on nutritional status rather than prevalence of infant feeding status of children as dependent variable.

2.5 Application of health belief model in infant feeding practices

Health belief model was initially developed to explain why people fail to participate in programmes to prevent and detect disease. Later, it was extended to study people's responses to symptoms, their behaviours in responses to a diagnosed illness especially adherence to the treatment. Therefore, this model was also fit to study why caretakers fail to practice proper infant feeding practices to prevent malnutrition of their children with subsequent morbidity and mortality. (16)

The following figure, which was based on the concept of Health belief model, might explain factors and individual beliefs of caretaker towards proper infant feeding practice. (Figure 2.4)

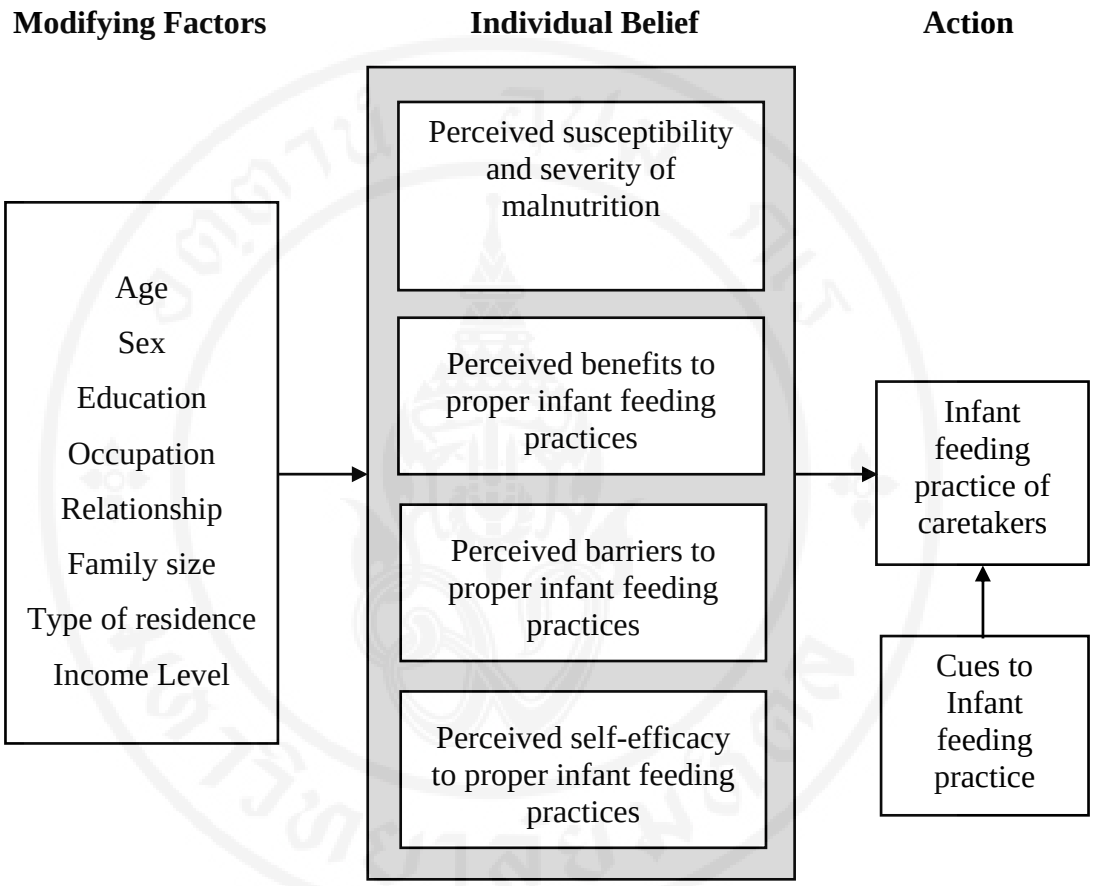


Figure 2.4 Health belief model for optimal infant feeding practices of caretaker

According to health belief model, Perceived threat (combination of Perceived susceptibility and Perceived severity) was developed if caretaker believed improper infant feeding practice would make her child to suffer from malnutrition with severe consequences such as physical stunting, mental impairment, higher susceptibility to disease, increased risk of mortality, poorer performance in school, and lower future incomes. When caretaker believed proper infant feeding made good nutrition status which resulted in healthy and better school performance and wealthy future to child, Perceived benefits was said to be developed. On the other hand, if caretaker believed proper infant feeding would make child illness, for example, in

Myanmar, some caretaker thought feeding eggs caused “bad wind to child”, feeding meat encouraged worm infestation, then she would not try the proper infant feeding practices. Such kind of belief was called Perceived barriers. Perceived barriers also included inability to buy adequate amount of quality food, poor availability of foods, lack of time to prepare and feed proper feeding and lack of capacity to prepare proper infant feeding. Having the respective knowledge indirectly influenced these perceptions. Convictions of caretaker to successfully undertake proper infant feeding practice in terms of confidence in right knowledge, ability to continue breast feeding until the child is 24 months old, and ability to prepare nutritious complementary feeding without using very expensive food were called Perceived Self-efficacy and it would also encouraged caretaker for proper infant feeding. Support from the family members, health education through different media and communication for development from health staff would enforced caretaker to practice proper infant feeding and these were called as Cues.

Therefore, in order to develop the proper infant feeding practice, Perceived threats was required to develop first, followed by Perceived benefits. It was also important to eliminate or reduce Perceived barriers so that caretaker could be able to do proper feeding practice. Perceived self-efficacy made caretaker to confident herself so that she could practice proper infant feeding. Cues encouraged her to focus on the proper infant feeding practice. Age, sex, education, occupation, relationship, incomes and family size indirectly influenced, as modifying factors, the infant feeding practice through these perceptions.

By studying the infant feeding practices of caretaker by using Health belief model, encouraging factors and discouraging factors for proper infant feeding practices would be more and more understood and this would facilitate nutrition programme manager to design the intervention more effectively.

Overview of the Nutrition Situation in Seven Countries in Southeast Asia indicated gender inequality and women’s status, maternal education and social status, poverty including landownership influenced the infant feeding practice. In Myanmar, age, ethnic, religious of a family determine gender inequality and women’s status in some ethnic and religious groups. Education, occupation and relationship also determine status of a caretaker in the family. Occupation with different level of

incomes determine social status and together with family size and type of residence with land ownership effect poverty of a family.

2.6 Choice of indicators to measure the practice of caretaker for this study

The core indicators for assessing infant and young child feeding practices recommended by WHO and UNICEF were mainly used in this study. Exclusive breast feeding until 6 months was important to know because exclusively breast fed children were healthier than non-exclusively breastfed children. Continued breast feeding was important to know since it was main source of calories and minerals such as zinc and calcium until child was 2-year-old. Introduction of soft, semi-solid, solid food was important because right consistency at right age favored easy chewing and swallowing by child with optimal absorption of nutrients from intestines. Minimum dietary diversity and iron-rich food indicator ensured whether child received all the required nutrient types or not. Minimum meal frequency indicated whether child received adequate amount of nutrients.

From the optional indicators, bottle feeding was selected. It is important to know bottle feeding status because it may potentially interfere with proper breast feeding practice especially in under 12 moths children as well as it can cause increase diarrheal disease with morbidity and mortality.

Moreover, these indicators could be easily accessed by asking previous day information.

CHAPTER III
MATERIALS AND METHODS

3.1 Study Site

Study site was Hlaingtharyar Township from Yangon Region in Myanmar.

3.2 Study Period

Study period was 1-April-2015 to 30-April-2015.

3.3 Research design

The research design was Cross-sectional study in which the independent variables (contributing factors including perceptions for feeding practices) and dependent variables (feeding practices) from caretakers were studied for only one time during above mentioned period in the proposed study site. It was also Population based study and interviewer visited every house in the selected clusters to find the eligible caretakers until the required sample size for each cluster was fulfilled.

3.4 Study population and sample

3.4.1 Study population

Study population was 9,174 caretakers of 9,174 infants from 20 wards and 17 villages Hlaingtharyar Township.

3.4.2 Sampling procedure

Sampling method was two stage cluster sampling method. (17)

Sampling frame was list of 20 wards and 17 villages of Hlaingtharyar Township with total population obtained from Township Department of Health.

Clusters (wards and villages for data collection) with respective cumulative population numbers which was calculated by the formula mentioned below are selected from the sampling frame. Cluster size for data collection was 20 (15 wards and 5 villages).

Table 3.1 Formula to calculate cumulative population numbers for each cluster

Cluster Number	Formula to calculate cumulative population numbers
1	Cumulative population which is equal to (R)
2	Cumulative population which is equal to (R + I)
3	Cumulative population which is equal to (R + 2 * I)
- - -	- - -
- n	Cumulative population which is equal to (R + (n – 1) * I)

Where_

R = Random number

n = Sample size to be collected

I = Sampling Interval, which is calculated by following formula_

Sampling Interval (I) = $\frac{\text{Total population}}{n}$

Sample size for cluster sampling with finite population (less than 10,000) was calculated as following.

– *Sample size simple random sampling with infinite population* (n_{srs})

$$= \frac{Z^2_{1-\frac{\alpha}{2}} P(1-P)}{d^2}$$

(Infinite population is N > 10,000)

– *Sample size simple random sampling with finite population* (n^f_{srs})

$$= n_{srs}/(1 + n_{srs}/N)$$

– *Sample size for cluster sampling* (n_{cls}) = $n^f_{srs} \times$ *Design effect*

Where_

$Z^2_{1-\alpha/2}$ = Standard normal deviate at 95% Confidence Interval

α = Level of significance

P = Prevalence of the interested outcome

1.7= Design effect for cluster sampling

d = Error allowance in terms of percentage of P

N = Number of target population

n = Sample size

The prevalence of outcome of interest, at national level according to Multiple Cluster Indicator Survey 2010 (MICS 2010), for Timely initiation of breast feeding was 75.8%, for Continued breast feeding at 12 – 15 months was 91.0%, for Continued breast feeding at 20 – 23 months was 65.4%, for timely complementary feeding was 80.9%, for Frequency of complementary feeding was 56.5% and for Adequately fed infants was 41.0%. Hlaingtharyar Township had total population of more than 400,000 and infant population of 9,174 according to 2014 Township Health Profile.

Level of significance, Standard normal deviate at 95% confidence interval and Design effect for cluster sampling used to calculate the sample size for this study were 0.5, 1.96 and 0.7 respectively. Sample size to be collected for two stage cluster sampling method for the various prevalence of infant feeding practices, were calculated for different For Error allowance of 0.01, 0.05 and 0.075, and results were shown in Table 3.1. According to the calculations, sample size to be calculated ranged from 94 caretakers to 13,376 caretakers.

However, due to time constrain for data collection in the studied township during April (which were discussed in detailed under the topic 3.10 Limitation of the Study), the sample size of 177 ~ 180 was selected based on under-1 year children population of the Township (N) = 9,174, α = 5%, $Z^2_{1-\alpha/2}$ = 1.96, d = 0.075%, Design effect for cluster sampling = 1.7, and prevalence (P) of Timely Complementary Feeding = 80.9%.

Table 3.2 Sample sizes for various prevalence and error allowance for the study

Error allowance in terms of % of prevalence	Timely initiation of breast feeding (75.8%)	Continued breast feeding at 12 – 15 months (91.0%)	Continued breast feeding at 20 – 23 months (65.4%)	Timely complementary feeding (80.9%)	Frequency of complementary feeding (56.5%)	Adequately fed infants (41.0%)
0.01	6,775	3982	7,587	6,126	7,910	1,3376
0.05	464	211	569	393	616	3,029
0.075	210	94	258	177	280	1,509

Figure 3.1 explained the sampling procedure for the study.

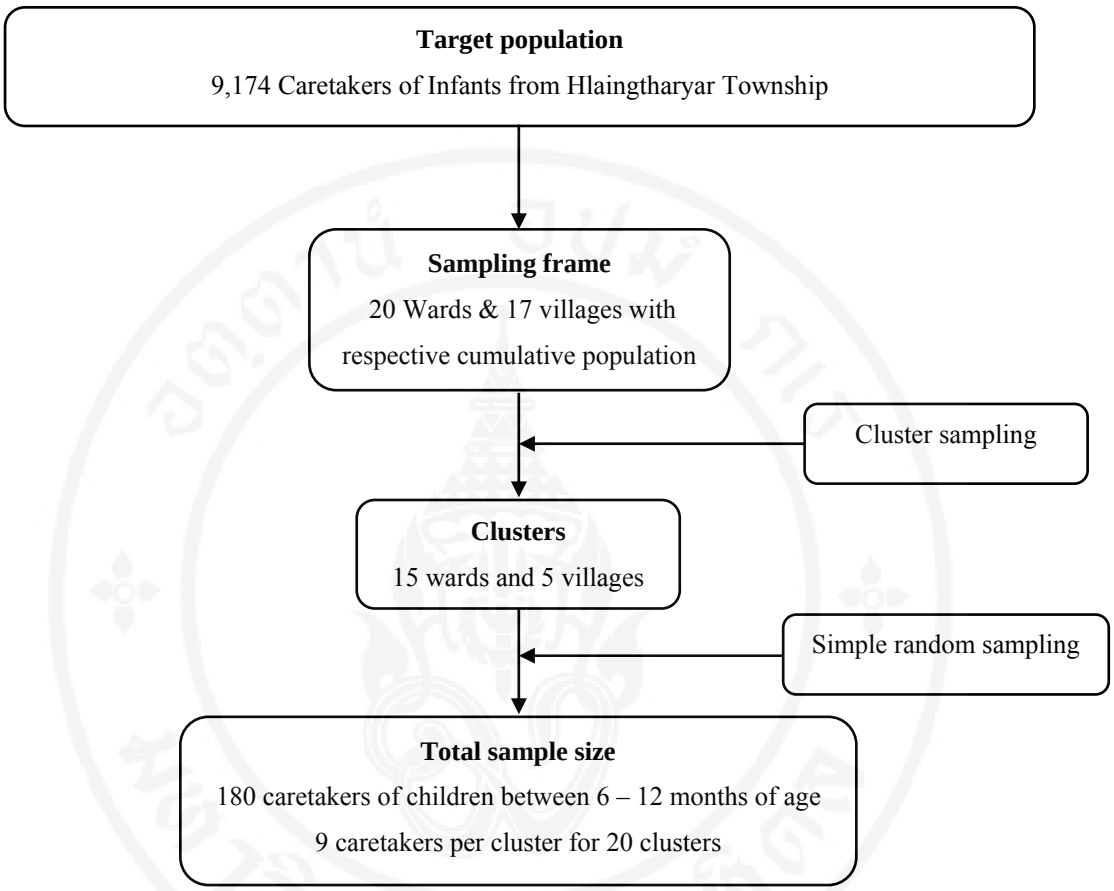


Figure 3.1 Sampling Procedure for the study

3.4.3 Inclusion and exclusion criteria

Inclusion criteria and exclusion criteria of sample were as follows:

3.4.3.1 Inclusion criteria

Child's mother or any person who mainly decided and prepared the meal for the child and the child was 6 months to 12 months old at the time of 1 April 2015 and was still alive.

3.4.3.2 Exclusion criteria

Child's mothers or caretakers who were not at home at the time of visit for interview were excluded from the study.

Moreover, mothers or caretakers who had no will to participate in the study were also excluded.

3.5 Research Instrument

Questionnaire was used to elicit and measure independent variables and dependent variables.

The extensive literature review was first carried out on the nutritional information related to infant and young child feeding from the guideline of National Nutrition Center of Myanmar, guidelines and references from WHO, UNICEF, and other institutions. Then, the objectives, research hypotheses, and research conceptual framework together with independent and dependent variables were defined together with operational definition of some variables for this study. Then, questionnaire was developed in order to elicit the respective information for the variables (both independent and dependent) described in the research conceptual framework.

The questionnaires from Multiple Cluster Indicators Survey by UNICEF, Population-based Maternal and Child Health Survey in 6 cyclone Nargis affected townships (affected in 2008) carried out by Myanmar Marketing Research and Development (MMRD) Company Limited in 2010, and Guideline on Knowledge, Practices, and Coverage Survey, Module2: Breastfeeding and Infant and Young Child Feeding by Child Survival Technical Support Project (CSTS) funded by USAIDs (18), and Indicators for assessing infant and young child feeding practices - Part 2 Measurement (19) were also studied and the concept learned from these documents were applied in the development of the questionnaire.

It was developed in English at first and then translated into Myanmar by the researcher.

The questionnaire had 5 parts_ (I) Caretaker information; (II) Child information; (III) Knowledge of caretaker on Infant feeding practice; (IV) Perception of caretaker on Infant feeding practice; and (V) Information on Infant feeding practices.

Part I. Caretaker information

The socio-economic-demographic data of caretaker was believed to influence the feeding practice of caretaker according to the conceptual framework. Therefore, questions in the Part I were designed to elicit the information of the socio-economic-demographic information of caretaker.

Part II: Child information

The current age of child in months on the completed birthday and breastfed status were required to determine whether the feeding practices of caretakers were consistent with recommended guidelines of National Nutrition Center or WHO/UNICEF, or not. Therefore, during the questionnaire development, age of child in months on the completed birthday and breastfed status were included in Part II.

Part III: Knowledge of caretaker on infant feeding practice

According to the research conceptual framework, nutritional knowledge of caretaker also influenced the feeding practice. The questions in this part were developed to capture the knowledge of caretaker on feeding practice.

Part IV: Perception of caretaker on Infant feeding practice

The developed research conceptual framework also described perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficiency and cues determine feeding practice of caretaker. Therefore, questions in the Part IV were developed in order to pick up the information on the perceptions of caretaker towards the infant feeding practice.

Part V: Information on infant feeding practice

Outcome interest of this study was infant feeding practices of caretakers and the questions in Part IV were developed to explore the feeding practices of caretakers which were operationally defined for this study in Chapter 1.

3.6 Quality of research instrument

After setting of research objective, extensive literature review, developing independent and dependent variables with operational definition for variables, the questionnaire was constructed. Advice on the quality of the questionnaire was obtained from the advisors and expert from the nutrition field of UNICEF Myanmar.

Then, pretesting was done in Kyimyindine Township from Yangon Region in Myanmar by interviewing 30 caretakers of 6 months to 12 months old children. During the pretesting, the language used was easily understanding or not, and sequence of order of questions was making sense or not were also observed.

3.6.1 Content validity

The content validity or whether the questionnaire could elicit the information which was intended to obtain or not, including the clarity of the language, the appropriate wording, the accuracy and completeness of the content, its relevance to the target population were discussed and got advices from the supervisors and the experts in the nutrition field. The developed questionnaire was pretested and modified according to the pretest findings.

3.6.2 Reliability test

Reliability of questions was checked by Cronbach's coefficient of alpha and it was tested from the results obtained from the pretest. The questionnaire was revised after the first pretest since Cronbach's coefficient of alpha value for perception questions were not greater than 0.7, the value at which the questions were considered as reliable to elicit the desired information. After the revision, the questionnaire could not be pretested again because of time constrain. The questions for Perceived susceptibility and Perceived severity were combined as Perceived Threat because Cronbach's Alpha values for Perceived severity was 2.28E-16 after revision although the alpha values for the rest of perception questions were increased.

The Cronbach's coefficient of alpha value after the modification was shown in Table 3.3.

Table 3.3 Cronbach's coefficient of alpha value after first pretest

Focused area of the questions	Number of questions	Cronbach's Alpha values
1. Infant feeding knowledge	12	0.575
2. Perceived threat	9	0.538
3. Perceived benefits	5	0.794
4. Perceived barriers	5	0.447
5. Perceived self-efficacy	3	0.767
6. Above 4 Perceptions	22	0.663
7. Cues for the infant feeding practice	5	0.729

3.7 Data Collection

Data were collected by the researcher and 9 basic health staff from Township Health Department. Health staff were trained on how to do data collection by explaining and discussion on the questionnaire followed by field practice in the nearby area which was not the surveyed cluster for the study.

Caretakers from the selected 20 clusters by cluster sampling method were randomly selected. The interviewer went to the center of the selected cluster and randomly selected the road or direction to go by spinning a ball pen. Then, the first house to be visited in that randomly selected road was chosen by the last digits of a randomly picked up banknote. The house with the household number which was the same as the last digits of the bank note was the first house to be visited. The household members were enquired about the presence of eligible caretaker in this house according to the inclusion criteria or exclusion criteria as mentioned in Topic 3.4.3. If the eligible caretaker was found, face-to-face interview was done by pretested questionnaire after getting the informed consent. If the eligible caretaker was not found, interviewer moved to the next house and found the eligible caretaker until the interview had been done with 9 caretakers in that particular cluster. However, the required number of caretakers (9 caretakers per cluster) was obtained easily within a

short distance from the starting point due to very high population density of the township.

After collection of data from each and every cluster, each questionnaire was checked by researcher for any error, missing and completeness. If errors and missing were found, they were corrected at once (Verification).

3.8 Data Analysis

Entry of data was done by Epi Data Version 3.1 and analysis was done by SPSS version 18.

3.8.1 Data entry and data cleaning

Data entry is done by Epi Data version 3.1. After data entry, data cleaning is done by editing and verifying the wrong entry.

3.8.2 Measurement and Scoring Criteria

Scoring system was used for measurement of some variables in Part I: Socio-economic-demographic_ income level, Part III: knowledge of feeding practice, Part IV: perceptions of caretakers and Part V: feeding practice for the further procedures in descriptive statistics.

Part I: Socio-economic-demographic

29.7±7.55 years (Mean ± SD) was used as cutting points for the classification of caretakers' age.

214,666.67±116,772.95 kyats (Mean ± SD) was used as cutting points for the stratification of family monthly income.

4.76 ± 1.79 persons (Mean ± SD) was used as cutting points for grouping of family members.

Part III: Knowledge of feeding practice

There were 12 questions to assess the knowledge of feeding practice of caretaker. If caretaker's answer for each question was right, she scored "1", otherwise "0". Total minimal score was 0 and maximal score was 12. By using Bloom's theory, the knowledge of feeding practice of caretaker was categorized into 3 groups by:

(1) Scores less than 9 (<60%) = Poor

(2) Scores equal to 10 (60%-80%) = Fair

(3) Scores between 11 – 12 (>80%) = Good

Part IV: Perceptions of caretakers

There are 9 questions to measure the perceived threats and possible responses were_ "No" (score "1"); "Uncertain" (score "2"); and "Yes" (score "3"). Total minimal score was 9 and maximal score was 27. Level of perceived threat was divided into 3 levels by:

(1) Scores between 9 – 21 (<60%) = Poor

(2) Scores between 22 – 24 (60%-80%) = Fair

(3) Scores between 25 – 27 (>80%) = Good

To measures the perceived benefits, there were 5 questions with similar Likert scale as mentioned in perceived threats. Total minimal score was 5 and maximal score was 15. Level of perceived benefit was divided into 3 levels by:

(1) Scores between 5 – 11 (<60%) = Poor

(2) Scores between 12 – 13 (60%-80%) = Fair

(3) Scores between 14 – 15 (>80%) = Good

Five questions were used to measure the perceived barriers, and Likert scale was between 1 to 5, ranking from lowest to highest used. The 5 ranks were converted into scores 1, 2 and 3. (Table 3.4)

Table 3.4 Conversion of Perceived Barriers' ranks into scores

Question No.	Perceptions	Perceptions Rank				
		Low ---------- High				
		1	2	3	4	5
PIF-16	Burden from the cost of proper feeding	3		2		1
PIF-17	Burden from time for proper feeding	3		2		1
PIF-18	Child benefits from proper feeding	1		2		3
PIF-19	Amount of suitable food in proper feeding	1		2		3
PIF-20	Availability of food	1		2		3

Total minimal score was 5 and maximal score was 15. Level of perceived barriers was divided into 3 levels by:

(1) Scores between 5 – 11 (<60%) = Poor (means high barriers)

(2) Scores between 12 – 13 (60%-80%) = Fair

(3) Scores between 14 – 15 (>80%) = Good (means low barrier)

Perceived self-efficacy had 3 questions and each question also had 5 Likert scales. These 5 Likert scales were converted into 3 levels with total minimum score of 3 to total maximum score of 9. Therefore,

(1) Scores between 3 – 6 (<60%) = Poor

(2) Scores equal to 7 (60%-80%) = Fair

(3) Scores between 8 – 9 (>80%) = Good

There were 22 questions for all perceptions and eventually, each type of perception had "Good" with score 3, "Fair" with score 2 and "Poor" with score 1. The following score was used to classify overall perceptions.

(1) Scores between 22 – 52 (<60%) = Poor

(2) Scores equal to 53 – 59 (≥60% - ≤80%) = Fair

(3) Scores between 60 – 66 (>80%) = Good

Similarly, cues for action also had 5 questions and each question had 5 Likert scales, and by applying the same principles as mentioned above, the scoring system was:

(1) Scores between 5 – 19 (<60%) = Poor

(2) Scores between 20 – 22 (60%-80%) = Fair

(3) Scores between 23 – 25 (>80%) = Good

Part V: Infant feeding practices of the caretakers

There were total 7 questions to measures the 6 feeding practice of caretakers with codes of "1" for "No" and "2" for "Yes" for each question. These codes were converted into scores_ from 1 to 0 and from 2 to 1 respectively. Total minimal score to measure feeding practice was, now, "0" and the total maximal score was "6".

Finally, the scoring system to categorize the feeding practice of caretaker was:

(1) Scores less than 4 (<60%) = Poor

(2) Scores equal to 5 (≥60% - ≤80%) = Fair

(3) Scores equal to 6 (>80%) = Good

3.7.3 Data processing and analysis

After cleaning of entered data, data were analyzed for descriptive statistics and inferential statistics by SPSS version 18.

For the descriptive statistics, prevalence in terms of percentage was used to describe the socio-economic-demographic factors, nutritional knowledge, perception and feeding practice of caretakers.

Chi-square test or Fisher's Exact test at the significant level of 5% was used to draw the inference about the association between independent variables (Socio-economic-demographic, knowledge of infant feeding practice, perceptions on infant feeding practices) and dependent variables (feeding practices of caretakers).

3.9 Ethical consideration

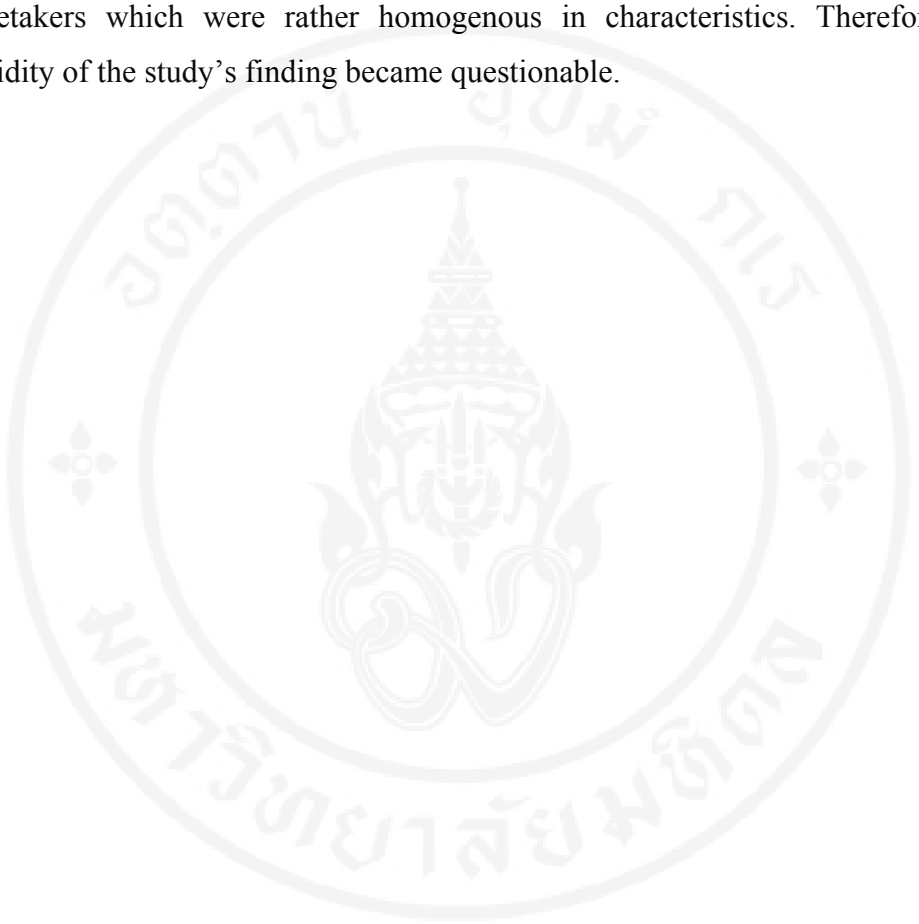
Ethical aspect of the study was reviewed by Ethical Review Committee of Faculty of Public Health, Mahidol University, as well as Ethical Review Committee of Department of Medical Research in Myanmar. After ethical clearances for the study were obtained, permission to data collection in the studied township was obtained from the Department of Public Health, Ministry of Health of Myanmar. After each and every step, the data collection was started.

During the data collection interview, introduction of interviewer together with purpose and explanation of objectives of the interview and research were carried out. Keeping confidentiality of the interview information except using it in the mentioned study, sharing the research findings without caretaker's information to Department of Public Health and Mahidol University were emphasized. Caretaker was explained no need to worry for any wrong answers since every interview information would be kept confidential. Moreover, health education session was also planned after the interview, and she would learn from this session so that she becomes clearer on what was right and what was wrong about her knowledge, perception and practice of proper infant feeding. Furthermore, the information would be kept confidential and volunteer's name were not be recorded and a code was used instead of the name. Interview duration would be last about 20 – 30 minutes. Caretaker would be explained that she was free to decline to participate in the interview furthermore at any time if she unexpectedly had any personal business. It was also emphasized that her declination would not be disclosed to any authority. After all of these, informed consent for the interview was obtained from the caretakers.

3.10 Limitation of the study

Data collection period was during 1 – 30 April 2015. The first 10 days of every month is immunization days in this township. During these days, basic health staff were not available for data collection since they were occupied with immunization activity. It was followed by 11 holidays for Water festival and New Year holidays. Therefore, only 9 days was available for office procedure with

Township Health Department and data collection. This time constrain made researcher to choose the sample size of 180 so that the data collection was finished with in that short period. Small sample size of 180 (9 caretakers from 20 clusters) in relation to estimated 9,174 caretakers and 2 stage cluster sampling method resulted in selection of caretakers which were rather homogenous in characteristics. Therefore, external validity of the study's finding became questionable.



CHAPTER IV
RESULTS

The study was done in 15 out of 20 wards and 5 out of 17 villages (total of 20 clusters) from Hlaingtharyar Township and interview was done with 180 caretakers of children between 6-12 months old by using questionnaire during 22 April 2015 to 30 April 2015 by the researcher and 9 Public Health Supervisors (Grade 2) from Hlaingtharyar Township Health Department after giving the data collection training for them. The data were analyzed with SPSS 18 and presented as descriptive statistics with frequency and percentage; and inferential statistics with Chi-square test or Fisher's exact test with p-values at significant level of 0.05.

4.1 Description of socio-economic-demographic characteristics of caretakers

The data showed 69.4% was between 22 years and 37 years, and average age was 29.7 years with standard deviation of 7.6 years; minimum age was 17 years and maximum age was 66 years. Female were 97.2% of study group. Biological parents comprised of 95.6% of caretakers. Education status of 64.4% of caretakers was middle or high school. Proportion of caretakers, who were dependent, was 77.8%. Permanent residential were 87.2%. Population of the caretakers with income between 98,000 and 330,000 Kyats was 81.1%, and average income was 214,666.7 Kyats with standard deviation of 116,773.0 Kyats. Minimum income was 30,000.0 Kyats and maximum income was 700,000.0 Kyats. Average family size of the studied caretakers was 4.8 persons with standard deviation of 1.8 persons: 55.0% of them had family size of 4-6 persons. Minimum family size was 2 persons and maximum family size was 6 persons. Table (4.1)

Table 4.1 Socio-economic-demographic characteristics of caretakers (n=180)

Characteristics	Number	Percent
1. Age		
- ≤ 22 years	28	15.6
- 22-37 years	125	69.4
- ≥ 37 years	27	15.0
- Mean ± S.D	29.7 ± 7.6	
- Minimum	17	
- Maximum	66	
2. Sex		
- Male	5	2.8
- Female	175	97.2
3. Relationship to the child		
- Biological parent	172	95.6
- Grandparents	3	1.6
- Elder brothers/sisters	3	1.6
- Relatives	1	0.6
- Neighbours	1	0.6
4. Education of caretakers		
- Never go to school	6	3.3
- Informal education	1	0.6
- Primary school	41	22.8
- Middle/high school	116	64.4
- University/higher	16	8.9
5. Occupation of caretakers		
- Dependent	140	77.8
- Retirement	1	0.6
- Private sector	5	2.8
- Own business	23	12.7
- Others	11	6.1

Table 4.1 Socio-economic-demographic characteristics of caretakers (n=180) (Cont.)

Characteristics	Number	Percent
6. Type of residence		
- Permanent	157	87.2
- Mobile (Temporary)	23	12.8
7. Family income (Kyats)*		
- ≤ 98,000	10	5.6
- 98,000-330,000	146	81.1
- ≥ 330,000	24	13.3
- Mean ± S.D	214666.7 ± 116773.0	
- Minimum	30,000.00	
- Maximum	700,000.00	
8. Family members		
- ≤ 3	53	29.4
- 4-6	99	55.0
- ≥ 7	28	15.6
- Mean ± S.D	4.8 ± 1.8	
- Minimum	2	
- Maximum	12	

*1070 Kyats = 1 US$

4.2 Description of infant feeding knowledge of caretakers

Generally, 23.3% of them had good overall knowledge of infant feeding practice. However, the overall knowledge of 56.7% of them was poor. (Table 4.2)

Table 4.2 Overall status of infant feeding knowledge of caretakers (n=180)

Infant feeding knowledge	Number	Percent
Overall knowledge of Infant feeding practices		
- Good (≥80%)	42	23.3
- Fair (60%-80%)	36	20.0
- Poor (<60%)	102	56.7

More than 80% of caretakers knew correctly about continued breastfeeding after 6 months, oral rehydration salt solution or medicines or vitamins drops can be given to breastfed under 6 months child, timely introduction of soft food at 6 months, feeding during illness and timely introduction of solid food at 12 months. Less than 60% of them gave correct responds to the minimum meal frequency at 6 – 7 months, minimum meal frequency at 12 months and feeding in recovery phase. (Appendix A)

4.3 Description of perceptions of caretakers towards malnutrition and proper infant feeding

Generally, 63.9% of caretakers had good attitudes towards infant feeding practices. However, 27.8% of them had the attitudes which were uncertain about the proper infant feeding practice and 8.3% of then had poor attitude towards the proper infant feeding practice. Table 4.3.

Table 4.3 Overall perceptions of caretakers towards malnutrition & optimal infant feeding (n=180)

Perceptions	Number	Percent
Overall perceptions of caretakers		
- Good (≥80%)	115	63.9
- Fair (60%-80%)	50	27.8
- Poor (<60%)	15	8.3

The detailed analysis indicated 75.0 % of caretakers had good perceived threats. Perceived self-efficacy was good in 71.1% of caretakers. Proportion of caretakers with good perceived benefits was 70.0%. Caretakers with good perceived barriers (who felt themselves as having low barrier) was only 55.0%. (Table 4.4)

Table 4.4 Perceptions of caretakers towards malnutrition & optimal infant feeding (n=180)

Perceptions	Level of perception (%)		
	Good	Fair	Poor
1. Perceived threats	75.0	16.7	8.3
2. Perceived benefits	70.0	21.1	8.9
3. Perceived barriers	55.0	23.9	21.1
4. Perceived self-efficacy	71.7	10.0	18.3

4.4 Description of cues for proper feeding practice of caretakers

Overall status of cues showed 76.1% of caretakers did not received any cues. Table 4.5.

Table 4.5 Overall cues of caretakers to perform infant feeding practice (n=180)

Cues	Number	Percent
Overall cues		
- Received	43	23.9
- Not received	137	76.1

The detailed analysis revealed that over 44.4% of caretakers received good encouragement from their family. Only 31.7% of them had the information from media. Appendix B.

4.5 Description of infant feeding practices of caretakers for 6 – 12 months children

Overall feeding practice indicated 13.4% of caretakers undertook good feeding practice. However, 57.2% of them practiced poorly. Table 4.6.

Table 4.6 Overall infant feeding practices of caretakers for 6 – 12 months children (n=180)

Infant feeding practices	Numbers	Percent
1. Overall feeding practice		
- Good (≥80%)	24	13.4
- Fair (60%-80%)	53	29.4
- Poor (<60%)	103	57.2

According to individual analysis, continued breastfeeding after 6 months was practiced by 90.6% and minimum meal frequency according to the recommended frequency for respective ages was practiced by 80.0% of caretakers. Exclusive breastfeeding until 6 months was practiced by 53.9% of them. Timely Introduction of solid, semi-solid or soft foods according to the recommended consistency for respective ages was practiced by 43.9% of caretakers. The dangerous practice of bottle feeding with teat was carried out by only 23.9 percent of caretakers. (Appendix C)

The following figure explained the amount of food types fed to children by caretakers according to memory recall of food fed yesterday. (Figure 4.1)

According to the recall of memory from the yesterday feeding, more than 80% of caretakers fed rice and other foods containing calorie such as grains, roots, tubers, oils, butters, fats, sugary foods and flesh foods, followed by Vitamin A rich foods (57.2%). Proportion of caretakers who fed dairy products to children was 62.8%. Only 14.4% of caretakers fed Iron-rich foods to children.

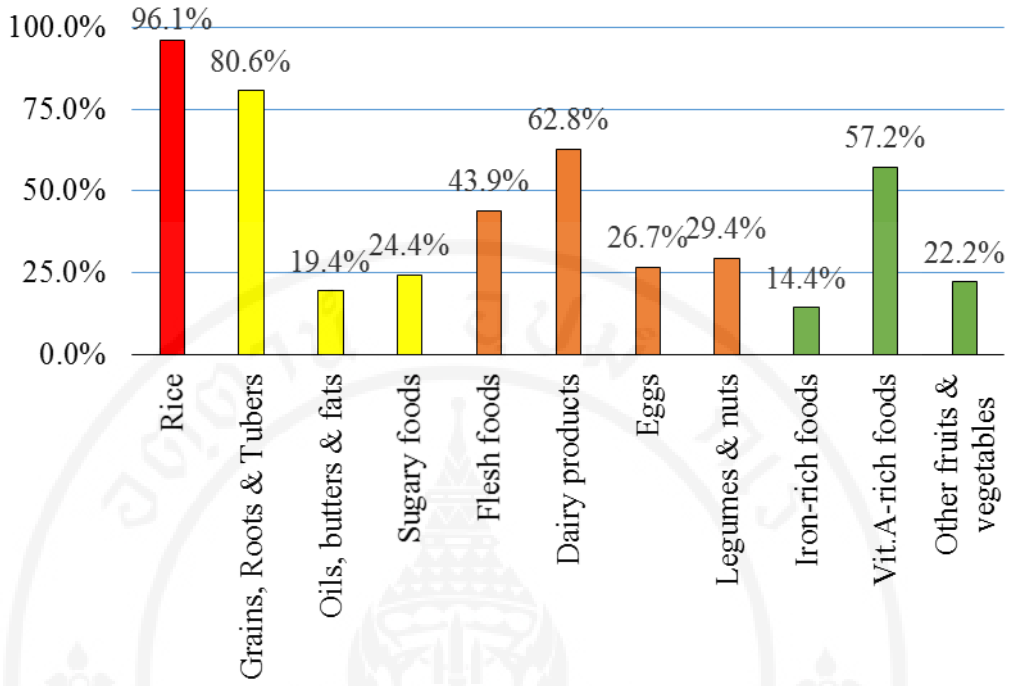


Figure 4.1 Percentage of caretaker according to each food fed yesterday to children between the ages of 6 months to 12 months

4.6 Association between socio-economic-demographic characteristics and infant feeding practices of caretakers

The significant association existed only between family incomes with infant feeding practices among the study group. (Table 4.7)

Table 4.7 Association between socio-economic-demographic characteristics and infant feeding practice of caretaker (n=180)

Characteristics	Total response	Infant Feeding Practice (%)		P-value
		Good	Poor	
1. Age (Years)				0.999[C]
- < 37	153	13.7	86.3	
- ≥ 37	27	11.1	88.9	
2. Sex				0.999[F]
- Male	5	0.0	100.0	
- Female	175	13.7	86.3	
3. Relationship				0.999[F]
- Parents	172	13.4	86.6	
- Others	8	12.5	87.5	
4. Education				0.452[F]
- Non-university	164	12.8	87.2	
- University/higher	16	18.8	81.2	
5. Occupation				0.523[F]
- Unemployed	141	14.2	85.8	
- Employed	39	10.3	89.7	
6. Type of residence				0.517[F]
- Permanent	157	12.7	87.3	
- Temporary	23	17.4	82.6	
7. Family income (Kyats)				0.023[F] *
- < 330,000	156	10.9	89.1	
- ≥ 330,000	24	29.2	70.8	
8. Family members				0.876[C]
- ≤ 3	53	11.3	88.7	
- 4 – 6	99	14.1	85.9	
- ≥ 7	28	14.3	85.7	

[C] Chi-square Test. [F] Fisher's Exact Test. * Significant at α = 0.05

4.7 Association between knowledge of infant feeding practice and the feeding practices of caretakers

There was no significant association between overall knowledge of infant feeding and infant feeding practices. (Table 4.8)

Table 4.8 Association between Knowledge of Infant feeding practice of caretakers and Infant feeding practices (n=180)

Knowledge	Total response	Infant Feeding Practice (%)		P-value
		Good	Poor	
Overall knowledge of Infant feeding practices				0.078[C]
- Good	42	21.4	78.6	
- Fair + Poor	138	10.9	89.1	

[C] Chi-square Test.

4.8 Association between perceptions and infant feeding practices of caretakers

There was association between overall perceptions and infant feeding practice. (Table 4.9)

Table 4.9 Association between perception of caretakers and infant feeding practices (n=180)

Perception	Total response	Infant Feeding Practice (%)		P-value
		Good	Poor	
Overall perceptions towards infant feeding practices				0.033[C *]
- Good	115	17.4	82.6	
- Fair + Poor	65	6.2	93.8	

[C] Chi-square Test. * Significant at α = 0.05

4.9 Association between Cues and infant feeding practices

There was no significant association between availability of assistances from caretakers' environment when they were busy or ill, and proper practice of infant feeding.

Table 4.10 Association between Cues to caretakers and Infant feeding practices (n=180)

Cues	Total response	Infant Feeding Practice (%)		P-value
		Good	Poor	
Overall cues				0.244[(C)]
- Received	43	18.6	81.4	
- Not received	137	11.7	88.3	

[C] Chi-square Test.

CHAPTER V
DISCUSSION

The research was a cross-sectional and population based study. The study was intended to explore to establish the associations between the independent variables (socio-economic-demographic factors of caretakers, infant feeding knowledge of caretakers, perceptions of caretakers towards infant feeding practice and cues to infant feeding practice) and dependent variable (feeding practices of caretakers) in order to support the research hypotheses.

The discussion was presented in 2 parts: Discussion on the research methodology and Discussion on the analysis findings as followings:

For discussion on the research methodology,

5.1 Sample size and sampling method

5.2 Questionnaire development

For discussion on the analysis findings

5.3 Socio-economic-demographic factors and feeding practice of caretakers

5.4 Infant feeding knowledge and feeding practice of caretakers

5.5 Perceptions of caretakers and feeding practice

5.6 Cues and feeding practice of caretakers

5.7 Infant feeding practice of caretakers from Hlaingtharyar

5.1 Sample size and sampling method

Sample size of 177 ~ 180 based on 80.9% prevalence of timely complementary feeding and error allowance of 0.075 as the percentage of the prevalence was chosen because of time constrain. Total cluster to be visited was 20

out of 37 clusters of the township, and 9 caretakers who had the children between the ages of 6 to 12 months were randomly selected from each cluster. Because of high population density of the township, the required number of caretakers from each cluster for the survey was obtained within a short distance from the starting point. As a result, this study could not access caretakers from different social classes from 20 clusters and the interviewed caretakers were more or less homogenous.

5.2 Questionnaire development

The questionnaire was pretested and revised according to the findings. However, it could not be tested again due to time constrain.

Cronbach's Alpha values for knowledge was quite good. After the revision, Cronbach's Alpha values for perceived benefits, perceived self-efficacy and cues for the infant feeding practice became improved. The questions for perceived susceptibility and perceived severity were combined as perceived threats due to Cronbach's Alpha values for perceived severity was 2.28E-16. Alpha values for perceived threats and perceived barriers were still needed to improve.

5.3 Socio-economic-demographic factors and the feeding practices of caretakers

According to the results, significant association of family incomes and infant feeding practice was existed. Proportion of family whose income was equal to or greater than 330,000 Kyats was higher than those with income less than 330,000 Kyats in practicing good infant feeding practices. It indicated that the more the family had better income, the more practice of good infant feeding by caretakers. In order to improve the infant feeding practices of caretakers, improvement of family incomes played an important role. Apart from family incomes, the rest of socio-economic-demographic characteristics such as age, sex, relationship, education status, occupation, type of residence and family size had no association with infant feeding

practices although the association was mentioned in Overview of the Nutrition Situation in Seven Countries in Southeast Asia. (Chaparro et al., 2014)

This lack of association of these characteristics with infant feeding practices was probably due to the interviewed caretakers were rather homogenous.

5.4 Infant feeding knowledge and the feeding practices of caretakers

The analysis results indicated there was no association between overall infant feeding knowledge and the feeding practices of caretakers. This was probably due to homogeneousness of the study caretakers. On the other hand, interviewer bias by giving good scores to most of the respondent's answers might be one of the possibilities for this lack of association.

The descriptive statistics showed that majority of caretakers from this township had good knowledge of different infant feeding practices particularly exclusive breastfeeding (giving oral rehydration solution, medicines, vitamins, etc.), continued breastfeeding after 6 months, introduction of soft food at 6 months, feeding during illness (above 90% of caretakers correctly answered them); between 70-80% of them correctly answered questions for exclusive breastfeeding (introduction of water and complementary feeding), introduction of semi-solid food at 8 months, introduction of solid food at 12 months, and minimum meal frequency at 8-9 months. This was due to extensive efforts of Township Health Department such as baby friendly hospital initiatives, nutrition promotion, prevention and management, together with the enthusiastic supports from an International Non-government Organization called World Vision which was working there for more than 10 years in giving nutritional knowledge and the necessary demonstrations related to nutrition including infant feeding for the community.

The knowledge of exclusive breastfeeding (introduction of water and complementary feeding), introduction of semi-solid food at 8 months, minimum dietary diversity & iron-rich food and minimum meal frequency at 8-9 months were evaluated as fair since they scored between 60% – 80%.

The studied group scored less than 60% for, or poorly knew, the knowledge of minimum meal frequency at 6-7 months, minimum meal frequency at 12 months and feeding in recovery phase.

Among 127 caretakers who had good knowledge of exclusive breast feeding, only 17.3% of them practiced good infant feeding, but the rest did not practice it. The reasons was that they only received the information to practice exclusive breast feeding without any explanations such as breast milk contained enough water and nutrients until child was 6 months old, child were prone to get diarrhea from feeding of water and complementary food, and the child intestines could not absorb nutrients very well from complementary feeding, etc. As a result, caretakers were worried their children would be thirsty or would not get adequate nutrition and fed complementary feeding and water. Another important factor was influence of parent or parent-in-law who did not have the knowledge of proper infant feeding practice.

Among 115 caretakers with good knowledge of Minimum dietary diversity and iron rich food, 79.1% of them did not practice and family income might play a role in this failure.

5.5 Perceptions of caretakers and the feeding practices

The study results indicated that overall perceptions (combination of perceived threat, perceived benefits, perceived barriers and perceived self-efficacy) had significant association with proper infant feeding practices. The caretakers with good overall perceptions performed proper infant feeding practices more than those with fair and poor overall perceptions. This finding was important to improve the infant feeding practices by modifying the perceptions of caretakers.

This finding was different from the study about “Factors Affecting the Infant Feeding Practices among Myanmar Migrant Mothers in Mahachai District, Samut Sakorn Province, Thailand” which showed there was no association between and perceptions and infant feeding practices. (Phyo., 2007) (20) There were some major differences between these two study groups which were accountable for this

different finding: Majority of caretakers from Hlaingtharyar were unemployed or dependent, permanent resident and education level was middle or high school, while majority of Myanmar caretakers from Mahachai District were workers, education level was primary school and they were migrant workers.

Good overall perceptions determined the caretakers to concentrate on proper infant feeding practices according to health belief model. Descriptive statistics showed that majority of the caretakers had good perceived threats followed by good perceived self-efficacy and good perceived benefits. Good perceived threat made these caretakers to be aware of dangers of improper infant feeding practices while the good perceived benefits among caretakers led to realization of the positive outcomes of proper infant feeding practices. The good perceived self-efficacy and the low perceived barriers led them to focus on proper infant feeding practices.

5.6 Cues and feeding practices of caretakers

The results showed there was no significant association between overall cues and infant feeding practices. This was possibly due to homogeneity of the study caretakers. Descriptive statistics also revealed less than half of the study caretakers received the encouragements from family, media, relatives, and friends possibly due to poverty, and from health personnel due to high population density compared to health staff in the township (37 basic health staff: 401,439 population or 1:10,850).

5.7 Infant feeding practices of caretakers from Hlaingtharyar

Analysis results showed continued breast feeding after 6 months, minimum meal frequency, and exclusive breast feeding were good infant feeding practices: Low bottle feeding practice and minimum dietary diversity were fair practices: Timely introduction of solid, semi-solid or soft foods was poor practice among the study caretakers. Unemployment status of 77.8% of the caretakers as dependent made them to share more time to practice continued breast feeding after 6 months, minimum meal frequency and exclusive breast feeding. Health education and nutrition promotion activities of Township Health Department and other institutions

also encouraged these practices to certain extent. On the other hand, interviewer bias and information bias due to lack or poor cooperation of the caretakers to give true answer due to any reason might play for these good data.

According to the recall of memory from the yesterday feeding, foods containing calorie such as grains, roots, tubers, oils, butters, fats, sugary foods and flesh foods were consumed by most of the children; followed by Vitamin A rich foods. If consumption of dairy products prepared from breast milk substitutes in this study was not taken into account, foods containing protein were consumed by less than half of the children of the study caretakers. Children were not given enough iron-rich foods.

Knowledge of fair or poor infant feeding practice on minimum dietary diversity, timely introduction of solid, semi-solid or soft foods, low consumption of foods containing protein and iron-rich foods in the study group was important for decision makers to design the nutrition promotion and education programme.

CHAPTER VI
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Infant feeding practice of caretakers from Hlaingtharyar Township from Yangon Region, Myanmar was studied during April 2015 by interviewing with 180 caretakers of 6-12 months old children randomly selected by two stage cluster sampling method from 20 out of 37 clusters from the township.

The study findings showed presence of significant associations between family income from socio-economic-demographic factors of caretakers and overall perceptions with infant feeding practices of the caretakers.

Therefore, the analysis results supported the research hypothesis of "Different socio-economic-demographic factors, nutrition knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy and cues are associated with different infant feeding practices among the caretakers from Hlaingtharyar Township from Yangon Region, Myanmar" up to certain extent. Description of the characteristics of the caretakers showed the caretakers were more or less homogenous and therefore, there may be some external validity issue of the research findings. Therefore, the findings are at least useful for the Scaling Up Nutrition Activities which was launched in February 2014, implemented by Department of Health and assisted by UNICEF, as well as for any institutions which are working in the field of nutrition in developing strategies for health education and communication for development as well as designing interventions for nutrition promotion and prevention of malnutrition, and resource allocation for nutrition activities in Hlaingtharyar Township.

6.2 Recommendations for promotion of infant feeding practices

Promotion of infant feeding practices is cross-sectoral issue, and multi-sectoral involvement of other departments and organization together with Department of Public Health is crucial to achieve the objective. The following activities are recommended to improve infant feeding practices of caretakers based on the research findings in relation to health belief model concept.

6.2.1 Creation of income generation activities at home

The study showed the majority of the caretakers were dependent or unemployed. Creation of small income generation activities at home for this type of population may solve the problem up to certain extent.

6.2.2 Minimum wages policy to meet the basic needs for an average family size of 4

Average family income per month of the study caretakers was about 214,666.67 Kyats or 200.62 US$ and average family members was 5. Every family member in the studied group shared 0.95 US$ a month and the amount is below the international poverty line of a $1.25/day set by the World Bank (2005 prices).(21) Myanmar government passed The Minimum Wage Law, 2013 in 22 March 2013. (22) The minimum wages should be paid enough to meet the basic needs of a family with average size of 5 members.

Creation of small income generation activities at home and minimum wages policy will modify perceived barriers.

6.2.3 Health education on infant feeding practices

Health education for promotion of proper infant feeding practice should be focused especially on knowledge of exclusive breastfeeding (introduction of water and complementary feeding), introduction of semi-solid food at 8 months, minimum dietary diversity & iron-rich food and minimum meal frequency at 8-9 months which were evaluated as fair, and minimum meal frequency at 6-7 months, minimum meal frequency at 12 months and feeding in recovery phase which were evaluated as poor.

Since parent and parent-in-law had influence over caretakers, health education programme for infant feeding practice should broadly cover not only caretakers but also parent and parent-in-law of them.

According to the study, it is very important to give not only infant feeding practice information alone but also together with the reasons of why should they do like this. Health education on infant feeding practices will modify perceived threats and perceived benefits by understanding the right knowledge.

6.2.4 Communication for development of proper infant feeding practices

The study showed bottle feeding with teat and minimum dietary diversity were fair practices and timely introduction of solid, semi-solid or soft foods was poor practice among the study caretakers. Therefore, communication for the development should be focused on these practices.

It should also consist of demonstration and contest, especially for low income community, that cheaper and easily available foods which also provide protein such as eggs or lentils or legume, etc. and iron-rich vegetables can be fed instead of expensive food such as meat or flesh for body growth.

Burrhus Frederic Skinner, an American psychologist and behaviourist, stated, “the mere temporal association between a behavior and an immediately following reward was regarded as sufficient to increase the probability that the behavior would be repeated.” (23) According to Skinner, such activity as cooking demonstration and contest followed by award should be repeated as much as possible to developed proper infant feeding practices. This communication for development also improves perceived self-efficacy of the caretakers to do proper infant feeding practices.

6.2.5 Improve accessibility of printed and broadcast Media

The analysis revealed that less than half of the caretakers had access to nutrition education media. It is important to find out which media can be easily accessed by most of the caretakers to improve the accessibility of printed and broadcast media.

6.3 Recommendations for further research

This study had done for the best within limited period of time to achieve better and useful results. However, it still has some area for improvement if this type of study is interested to do again in future. The following improvements are recommended for the future research.

6.3.1 Improvement of the questionnaire

Pretest of the questionnaire should be repeated until Cronbach's Alpha value for perceptions questions achieve above 0.7.

6.3.2 Sampling method

Hlaingtharyar Township has different socio-economic classes. Therefore, the sampling method should be modified so that future study can access caretakers from different socio-economic classes.

6.3.3 Selection of survey team

Independent survey team rather than health staff is recommended to avoid possible bias in future survey.

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APPENDICES

APPENDIX A

Different infant feeding knowledge of caretakers (n=180)

Knowledge type	Correct Answers	
	Number	Percentage
1. Exclusive breastfeeding (Introduction of water and complementary feeding)	127	70.6
2. Exclusive breastfeeding (Giving ORS, medicines, vitamins, etc.)	172	95.6
3. Continued breastfeeding after 6 months	177	98.3
4. Introduction of soft food at 6 months	170	94.4
5. Introduction of semi-solid food at 8 months	140	77.8
6. Introduction of solid food at 12 months	144	80
7. Minimum dietary diversity & Iron-rich food	119	66.1
8. Minimum meal frequency at 6 – 7 months	93	51.7
9. Minimum meal frequency at 8 – 9 months	139	77.2
10. Minimum meal frequency at 12 months	88	48.9
11. Feeding during illness	167	92.8
12. Feeding in recovery phase	79	43.9

APPENDIX B

Different cues for proper feeding practice of caretakers (n=180)

Encouragement types	Level of Cues (%)		
	Good	Fair	Poor
1. From family members	44.4	22.8	32.8
2. From medias	31.7	13.9	54.4
3. From relatives and friends	36.7	21.7	41.6
4. From health personnel	35.6	22.2	42.2
5. Availability of assistances from family or friends or neighbours when caretaker is busy	37.8	28.9	33.3

APPENDIX C

Individual infant feeding practices of caretakers for 6 – 12 months children (n=180)

Infant feeding practices	Numbers	Percent
1. Exclusive breastfeeding until 6 months		
- Practice	97	53.9
- Not practice	83	46.1
2. Continued breastfeeding after 6 months		
- Practice	163	90.6
- Not practice	17	9.4
3. Practice of bottle feeding		
- Practice	43	23.9
- Not practice	137	76.1
4. Timely Introduction of solid, semi-solid or soft foods		
4.1 Overall Introduction of solid, semi-solid or soft foods (n=180)		
- Correct	79	43.9
- Incorrect	101	56.1
4.2. Introduction of soft food at 6 months (n=54)		
- Correct	30	55.6
- Incorrect	24	44.4
4.3. Introduction of semi-solid soft food at 8 months (n=97)		
- Correct	38	39.2
- Incorrect	59	60.8
4.4. Introduction of solid food at 12 months (n=29)		
- Correct	8	27.6
- Incorrect	21	72.4

Individual infant feeding practices of caretakers for 6 – 12 months children (n=180) (Cont.)

Infant feeding practices	Numbers	Percent
5. Minimum dietary diversity		
5.1. Feeding consists of all 4 food groups		
- Yes	112	62.2
- No	68	37.8
5.2. Feeding consists of Rice as staple food		
- Yes	173	96.1
- No	7	3.9
5.3. Feeding consists of foods providing energy		
- Yes	153	85.0
- No	27	15.0
5.4. Feeding consists of foods encourage growth		
- Yes	172	95.6
- No	8	4.4
5.5. Feeding consists of foods encourage prevention of diseases		
- Yes	125	69.4
- No	55	30.6
6. Minimum meal frequency		
6.1. Overall minimum meal frequency (n=180)		
- Meet	144	80.0
- Not meet	36	20.0
6.2. Minimum frequency for 6 – 7 months (n=54)		
- Meet	41	75.9
- Not meet	13	24.1
6.3. Minimum frequency for 8 – 9 months (n=53)		
- Meet	47	88.7
- Not meet	6	11.3

Individual infant feeding practices of caretakers for 6 – 12 months children (n=180) (Cont.)

Infant feeding practices	Numbers	Percent
6.4. Minimum frequency for 10 – 12 months (n=73)		
- Meet	56	76.7
- Not meet	17	23.3

APPENDIX D

QUESTIONNAIRE (ENGLISH)

Infant feeding practice of the caretakers in Hlaingtharyar Township in Yangon Region, Myanmar

Questionnaire

- **Part – I: Caretaker information**

CI-1. Age: __ __ **CI-2. Sex:** ☐1. Male ☐2. Female
CI-3. Relationship to the child: ☐1. Biological parent ☐2. Non-biological parent ☐3. Grandparents ☐4. Elder brothers/sisters ☐5. Relatives ☐6. Housemaid ☐7. Neighbors
CI-4. Education: ☐1. Never go to school ☐2. Informal Education ☐3. Primary ☐4. Middle/High ☐5. University and Higher
CI-5. Occupation: ☐1. Dependent ☐2. Retirement ☐3. Public sector ☐4. Private sector ☐5. NGO ☐6. Own business ☐7. Others: _____
CI-6. Type of residence: ☐1. Permanent ☐2. Mobile (Temporary)
CI-7. Monthly income of the family (in Kyats): __ __ __ __ __ __ __
CI-8. Number of family member: __ __

- **Part – II. Age and Breast feeding status of the child**

AB-1. What is the age of the child in months on the completed birthday? __ __
AB-2. Is the child ever breastfed? ☐1. No ☐2. Yes

- **Part – III: Knowledge on Infant feeding practice**

If caretaker's answer is "True" circle "2" and if "False", circle "1". If "Don't know", circle "0"

No.	Question	DK	False	True
IFK-1.	You do not need to give plain water to a breastfed child who is under 6 months. Is it true? (Knowledge of Exclusive breast feeding)	0	1	2
IFK-2.	Can you give ORS, Medicines and Vitamin drops if the breastfed under 6 months old child is ill? (Knowledge of Exclusive breast feeding)	0	1	2
IFK-3.	Do you think breast feeding is needed to continue after the child is 6 months old? (Knowledge of Continued breast feeding)	0	1	2

IFK-4.	Which consistency of complementary feeding will you introduce according to age of child? (Knowledge of Timely introduction of soft, semi-solid, and solid foods) Read out the responses. At 6 months of age_ (a) "Soft food such as Mashed food or porridge (b) Semi-solid food such as small and soft pieces of meat/fish/poultry or ripened fruits (finger foods that can be eaten child alone) (c) Solid food such as family food **If answer is (a), then circle "2", otherwise, circle "1".**	0	1	2
IFK-5	At 8 months of age_ (a) "Soft food such as Puree or porridge (b) Semi-solid food such as small and soft pieces of meat/fish/poultry or ripened fruits (finger foods that can be eaten child alone) (c) Solid food such as family food **If answer is (b), then circle "2", otherwise, circle "1".**	0	1	2
IFK-6	At 12 months of age_ (a) "Soft food such as Mashed food or porridge (b) Semi-solid food such as small and soft pieces of meat/fish/poultry or ripened fruits (finger foods that can be eaten child alone) (c) Solid food such as family food **If answer is (c), then circle "2", otherwise, circle "1".**	0	1	2
IFK-7	How many kinds of food do you need to feed your child daily to attain good nutrition status? (Knowledge of Minimum dietary diversity & Iron-rich food). (Opened question. Do not read out the answers.) **Underline the food answered by caretaker. Then circle the respective line number and respective Food Group Number.** If all 4 food group numbers are circled after caretaker finishes answering, Circle "2" from right column; otherwise, circle "1".)			
	Group I. Staple diet i. Rice	0	1	2
	Group II. Foods providing energy ii. Any food made from grains, roots and tubers iii. Any food made from any oil, butter, fats iv. Any foods made from sugary foods such as sugar, palm juice bead, sugarcane juice plate, candy			

	Group III. Foods encouraging body growth v. flesh foods (meat, fish, poultry and liver/organ meats) vi. dairy products (milk, yogurt, cheese) vii. eggs viii. legumes and nuts			
	Group IV. Foods encouraging prevention of diseases ix. Iron-rich food likes meat and organs from cattle, fowl, fish, and poultry; and non-animal foods such as legumes and green leafy vegetables x. vitamin-A rich fruits and vegetables like pumpkin, carrot, sweet potatoes, any dark green leafy vegetables, ripe			
	(xii) Other foods (mentioned food name: _____)			
IFK-8	How many times do you need to feed your child minimally in a day? Ask for each age group. (Knowledge of Minimum meal frequency) At 6 – 7 months of age: at least _____ times a day.	0	1	2
IFK-9	At 8 – 9 months of age: at least _____ times a day. **If answer is (3-4 times), circle "2" otherwise, circle "1".** **If answer is "Don't know", circle "0".**	0	1	2
IFK-10	At 10 – 12 months of age: at least _____ times a day. **If answer is (4 times), circle "2" otherwise, circle "1".** **If answer is "Don't know", circle "0".**	0	1	2
IFK-11	When the child is sick, will you_ (a) encourage child to drink more fluid especially breast milk and to eat soft, varied appetizing, favorite foods? (or) (b) stop feeding? (Knowledge of Feeding during illness) **If answer is (a), circle "2" otherwise, circle "1".** **If answer is "Don't know", circle "0"**	0	1	2
IFK-12	After recovery from illness, the amount of food intake should be (a) as usual or before illness? (b) less than before illness? (c) more than before illness? (Knowledge of Feeding during recovery)	0	1	2

- **Part – IV: Perception of caretaker on Infant feeding practice**

A. Perceived susceptibility

No.	Question	No	Uncertain	Yes
PIF-1.	Do you think giving water and complementary feeding (except giving ORS/Medicines when child is ill and Vitamins drops) to breastfed child who is less than 6 months is not good for child?	1	2	3
PIF-2.	Do you think stopping breast feeding after 6 months of age have significant effect on child's nutritional status, health and development?	1	2	3
PIF-3.	Do you agree starting complementary feeding before 6 months or after 8 months can make malnutrition?	1	2	3
PIF-4.	Do you think meal with less than 4 varieties of food causes malnutrition?	1	2	3
PIF-5.	If you do not feed at least one food from liver, meat, poultry, fish, and green leafy vegetables daily, child will not get enough iron. Do you agree?	1	2	3
PIF-6.	Do you agree your child can get malnutrition if the child does not get minimally required frequency of meal according to the respective age?	1	2	3

B. Perceived severity

No.	Question	No	Uncertain	Yes
PIF-7.	Malnutrition causes frequent illness to child.	1	2	3
PIF-8.	Malnutrition causes poor physical development to child.	1	2	3
PIF-9.	School performance will be poor in student life if a child suffers from malnutrition now.	1	2	3
PIF-10.	Is it possible that his/her future income will be poor if the child is not fed well now?	1	2	3

C. Perceived benefit

PIF-11.	Not feeding water to breast-fed, under 6 months old child is good for nutrition and health of child.	1	2	3
PIF-12.	Introduction of complementary feeding at 6 months prevents a child from malnutrition.	1	2	3
PIF-13.	Complementary feeding which consists of at least one food from each food group prevents frequent illness, stunting, and poor school performance.	1	2	3
PIF-14.	Complementary feeding which meets minimum meal frequency for respective age prevents frequent illness, stunting, and poor school performance.	1	2	3

PIF-15.	Appropriate consistency of complementary feeding according to respective age prevents child from malnutrition.	1	2	3

D. Perceived barriers

Read out the caretaker the following paragraph:

Your child needs to eat at least 1 food from each group of Group I. Rice as a staple diet; Group II. Foods providing energy such as any food made from grains, roots and tubers; any food made from any oil, butter, fats; any foods made from sugary foods such as sugar, palm juice bead, sugarcane juice plate, candy; Group III. Foods encouraging body growth such as flesh foods (meat, fish, poultry and liver/organ meats); dairy products (milk, yogurt, cheese); eggs; legumes and nuts; and Group IV. Foods encouraging prevention of diseases such as (i) Iron-rich food likes meat and organs from cattle, fowl, fish, and poultry; and non-animal foods such as legumes and green leafy vegetables; (ii) vitamin-A rich fruits and vegetables like pumpkin, carrot, sweet potatoes, any dark green leafy vegetables, ripe mangoes, ripe papayas; (iii) other fruits and vegetables.

Frequency of meal should be 3 times per day for 6 – 7 months of age, 3-4 times per day for children of 8 – 9 months of age and 4 times per day children of 10 – 12 months of age and 5 times per day for 13 months and onwards.

Consistency of food should be soft food such as porridge or Mashed food for 6 months, semi-solid such as small and soft pieces of meat/fish/poultry or ripened fruits for 8 months and solid foods or family food for 1 year old child.

When a child is sick, encourage the child to drink more fluid especially breast milk and to eat soft, varied appetizing and favorite food. After recovery from the illness, the amount of food intake should be more than before the illness.

Ask the questions to caretaker and then ask her to point out her score from 1 (Lowest) to 5 (Highest).

No.	Question	Low ----------High				
PIF-16.	What is your score for the cost of feeding for your child as mentioned above?	1	2	3	4	5
PIF-17.	What is your score to share your time to prepare the food for your child as mentioned above?	1	2	3	4	5
PIF-18.	What is score for your believe that feeding as mentioned above make benefit to your child?	1	2	3	4	5
PIF-19.	How much food from above mentioned list are good for your child?	1	2	3	4	5

PIF-20.	How much easily can you find above mentioned food?	1	2	3	4	5

E. Perceived self-efficacy

Ask the questions to caretaker and then ask her to point out her confident score from 1 (Lowest) to 5 (Highest).

No.	Question	Low ----------High				
PIF-21.	How much are you confident yourself that you can continue breast feeding until your child is 2 years old to prevent malnutrition? (For Breast-fed mother only)	1	2	3	4	5
PIF-22.	How much are you confident yourself that you have enough knowledge to feed your child to get good nutrition?	1	2	3	4	5
PIF-23.	How much are you confident yourself that you can prepare nutritious complementary food for your child to prevent malnutrition?	1	2	3	4	5
PIF-24.	How much are you confident yourself that you can prepare nutritious complementary food for your child without using expensive food?	1	2	3	4	5

F. Cues for optimal infant feeding practice

No.	Question	Low ----------High				
PIF-25.	Does your family member remind you to feed your child as mentioned above?	1	2	3	4	5
PIF-26.	Have you ever watched/listened to feed your child as mentioned above from TV/Radio/Billboard/Poster/ Newspaper/Journal or Magazine?	1	2	3	4	5
PIF-27.	Have your friends/relatives ever told you to feed your child as mentioned above?	1	2	3	4	5
PIF-28.	Have health personnel ever told you to feed your child as mentioned above?	1	2	3	4	5
PIF-29.	Do your family members or friends or neighboring help you to prepare nutritious food for child whenever you are busy/ill?	1	2	3	4	5
PIF-30.	Have you ever watched cooking demonstration on how to prepare and cook nutritious diet for your child?	1	2	3	4	5

- **Part – V: Information on Infant feeding practice**

No.	Question	Response	Skip
IF-1.	Did you ever breastfed the child? (Ever breastfed)	No ---------- 1 Yes---------- 2	➲ Go to **IF-4** ➲ Go to **IF-2**
IF-2.	Was the child breastfed yesterday during the day or at night? (Continued Breast feeding)	No ---------- 1 Yes ---------- 2	➲ Go to **IF-3.a**
IF-3.a	Did the child get expressed breast milk by spoon, cup or bottle without teat? (Continued Breast feeding)	No ---------- 1 Yes ---------- 2	➲ Go to **IF-3.b** ➲ Go to **IF-4**
IF-3.b	What is the reason for not feeding breast milk yesterday:	_____	
IF-4.	Was the child fed infant formula, any food or drink with a bottle with teat during previous day? (Bottle feeding)	No ---------- 1 Yes ---------- 2	
IF-5.a	Have already fed water to child? If you did so, at what age of the child, did you start feeding water? (Exclusive Breast Feeding) ➲ Answer: ☐ Not started yet ☐__ __ months		
IF-5.b	Have already started complementary feeding to child? If you have already started it, at what age of the child, did you start it? (Exclusive Breast Feeding) ➲ Answer: ☐ Not started yet ☐__ __ months ☞ **If the answer for either IF-5.a or IF-5.b is "Not started yet" for under 6 months old child, ☞ Circle "2".** Otherwise. Circle "1". **If the answer is "more than 6 months" for 6 months and above old child, Circle "2".**	Not EBF ---- 1 EBF---------- 2 DK ---------- 3	
IF-6.	☞ **To ask caretaker of 6 – 7 months old child_** At which age of the child (in months), did you start introducing soft foods like porridge or Mashed food? (Timely introduction of solid, semi-solid or soft foods) ➲ Answer: __ __ months ☞ **If the answer is 6 months, Circle "2".** Otherwise. Circle "1".	No ---------- 1 Yes ---------- 2 DK ---------- 3	
	☞ **To ask caretaker of 8 – 11 months old child_** At which age of the child (in months), did you		

	start introducing semi-solid foods like small and soft pieces of meat/fish/poultry or ripened fruits? ➲ Answer: __ __ months **If the answer is 8 months, Circle "2".** Otherwise. Circle "1".		
	☞ **To ask caretaker of 12 months old child_** At which age of the child (in months), did you start introducing solid foods like family food? ➲ Answer: __ __ months **If the answer is 12 months, Circle "2".** Otherwise. Circle "1".		

IF-7. Please describe everything that the child ate yesterday since getting up from bed, whether at home or outside the home. After that, what did the child eat anything else? Repeat this question until the child went to sleep. (Minimum dietary diversity & Iron-rich foods)
Do not read out the answers.

Listen the answers and underline the respective food answered by caretaker and then circle "Food Group Number".

After caretaker finishes answering, circle "2" if caretakers' answers include all 4 food groups: Otherwise, circle "1".

No.	Questions	No	Yes
IF-7.	**Food Group I. Staple diet** i. Rice or porridge	1	2
	Food Group II. Foods providing energy ii. Any food made from grains, roots and tubers iii. Any food made from any oil, butter, fats iv. Any foods made from sugary foods such as sugar, palm juice bead, sugarcane juice plate, candy		
	Food Group III. Foods encouraging body growth v. flesh foods (meat, fish, poultry and liver/organ meats) vi. dairy products (milk, yogurt, cheese) vii. eggs viii. legumes and nuts		
	Food Group IV. Foods encouraging prevention of diseases ix. Iron-rich food likes meat and organs from cattle, fowl, fish, and poultry; and non-animal foods such as legumes and green leafy vegetables x. vitamin-A rich fruits and vegetables like pumpkin, carrot, sweet potatoes, any dark green leafy vegetables, ripe mangoes, ripe papayas xi. other fruits and vegetables		
	Other foods (Mentioned name of the food):		
IF-8.	How many times did the child eat complementary food yesterday during the day or at night? (Minimum meal frequency)		
	To ask For the child who is between 6 – 7 months of age: _____ times. **If answer is (3 times and above), circle "2" otherwise, circle "1".**	1	2
	To ask For the child who is between 8 – 9 months of age: _____ times.		

	If answer is (3 – 4 times and above), circle "2" otherwise, circle "1".		
	To ask For the child who is between 10 – 12 months of age: _____ times. **If answer is (4 times and above), circle "2" otherwise, circle "1".**		

End of the questionnaire.

APPENDIX E

မြန်မာနိုင်ငံ၊ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်အတွင်းတွင်ရှိ ကလေးသူငယ်ပြုစုစောင့်ရှောက်သူတို့၏ တစ်နှစ်အောက်ကလေးအတွက် အာဟာရကျွေးမွေးခြင်းဆိုင်ရာ အလေ့အထကို လေ့လာခြင်း

(တွေ့ဆုံဆွေးနွေးခြင်း မေးခွန်းလွှာ)

အပိုင်း – ၁။ ကလေးငယ်ကို ပြုစုစောင့်ရှောက်သူ၏ သတင်းအချက်အလက်

CI-1. အသက် __ __ CI-2. ကျား/မ ☐၁။ ကျား ☐၂။ မ

CI-3. ကလေးနှင့်အမျိုးတော်စပ်ပုံ ☐၁။ မိဘအရင်း ☐၂။ မွေးစားမိဘ ☐၃။ အဖိုးအဖွား ☐၄။ အစ်ကိုကြီး/အစ်မကြီး ☐၅။ ဆွေမျိုးသားချင်း ☐၆။ အိမ်ဖော် ☐၇။ အိမ်နီးချင်း

CI-4. ပညာရေး ☐၁။ ကျောင်းမနေဘူးပါ ☐၂။ ကျောင်းပြင်ပ ပညာရေး ☐၃။ မူလတန်း ☐၄။ အလယ်တန်း/အထက်တန်း ☐၅။ တက္ကသိုလ်နှင့်အထက် ပညာရေး

CI-5. အလုပ်အကိုင် ☐၁။ မှီခို ☐၂။ ပင်စင် ☐၃။ အစိုးရဝန်ထမ်း ☐၄။ ပုဂ္ဂလိကဝန်ထမ်း ☐၅။ အစိုးရမဟုတ်သော အဖွဲ့အစည်း ☐၆။ ကိုယ်ပိုင်လုပ်ငန်း ☐၇။ အခြား _____

CI-6. ယခုလိပ်စာတွင် နေထိုင်မှု ☐၁။ အမြဲနေထိုင် ☐၂။ ယာယီနေထိုင်

CI-7. မိသားစု ခန့်မှန်း လစဉ်ဝင်ငွေ (ကျပ်) __ __ __ __ __ __ __

CI-8. မိသားစုဝင်ဦးရေ __ __

အပိုင်း – ၂။ ကလေးငယ်၏အသက်နှင့် မိခင်နို့တိုက်ကျွေးမှုအခြေအနေ

AB-1. ကလေး၏ပြည့်ပြီးအသက်__ __

AB-2. ကလေးကို မိခင်နို့တိုက်ကျွေးဖူးခြင်း ☐၁။ တိုက်ဖူးပါသည်။ ☐၂။ မတိုက်ဖူးပါ။

အပိုင်း – ၃။ တစ်နှစ်အောက်ကလေးအတွက် အာဟာရကျွေးမွေးခြင်းဆိုင်ရာ ဗဟုသုတ

မဟုတ်ပါ/မမှန်ပါဟု ဖြေဆိုပါက (၁) ကို ဝိုင်းပါ။ ဟုတ်ပါသည်/မှန်ပါသည်ဟုဖြေဆိုပါက (၂)ကို ဝိုင်းပါ။ (ခဲတံဖြင့်သာ)

အမှတ်စဉ်	မေးခွန်းများ	မသိပါ	မှား	မှန်
IFK-1.	အသက်(၆)လအောက် မိခင်နို့တိုက်နေသော ကလေးကို ရေတိုက်ရန် မလိုအပ်ပါ။	၀	၁	၂
IFK-2.	အသက်(၆)လအောက် မိခင်နို့တိုက်နေသော ကလေးကို ရေမတိုက်ရသော်လည်း နေမကောင်း ဖြစ်ပါက ဓါတ်ဆားရည်၊ ဆေး၊ အားဆေးတို့ကို တိုက်ကျွေးနိုင်ပါသည်။	၀	၁	၂
IFK-3.	ကလေး၏အသက်(၆)လပြည့်သွားသော်လည်း မိခင်နို့ဆက်လက်တိုက်ကျွေးပေးရန် လိုအပ်ပါသည်။	၀	၁	၂
IFK-4.	အောက်ပါ အဖြေတို့ကို ဖတ်ပြ၍ အဖြေတစ်ခုကို ရွေးချယ်ခိုင်းပါ။ ကလေး၏အသက်(၆)လတွင် ကျွေးရမည့်အစာအစာများမှာ - (က) အစာပျော့ပျော့ - ဥပမာ နူးနေအောင်ပြုတ်ထားသောဆန်ပြုတ်၊ ဇွန်းဖြင့် ခြေထားသော ထမင်း၊ ငှက်ပျောသီးမှည့်၊ သင်္ဘောသီးမှည့် (ခ) မမာမပျော့သောအစားအစာ - ဥပမာ နူးညံ့အောင်ချက်ထားသော အသား/ငါး၊ မှည့်နေသော သစ်သီး (ကလေးကိုယ်တိုင် လက်ဖြင့်ကိုင်စား			

	နိုင်သော အစားအစာ) (၈) အပူအစပ်မှလွဲ၍ လူကြိုးစားသော ထမင်းဟင်းအတိုင်း **အဖြေ (က) ကို ရွေးချယ်ပါက (၂) ကို ဝိုင်းပါ၊ မဟုတ်ပါက (၁) ကို ဝိုင်းပါ၊ မသိပါက (၀) ကို ဝိုင်းပါ။**	၀	၁	၂
IFK-5	ကလေး၏အသက်(၈)လတွင် ကျွေးရမည့်အစာအစာများမှာ - (က) အစာပျော့ပျော့ - ဥပမာ နူးနေအောင်ပြုတ်ထားသောဆန်ပြုတ်၊ ဇွန်းဖြင့် ချေထားသော ထမင်း၊ ငှက်ပျောသီးမှည့်၊ သင်္ဘောသီးမှည့် (ခ) မမာမပျော့သောအစားအစာ - ဥပမာ နူးညံ့အောင်ချက်ထားသော အသား/ငါး၊ မှည့်နေသော သစ်သီး (ကလေးကိုယ်တိုင် လက်ဖြင့်ကိုင်စားနိုင်သော အစားအစာ) (၈) အပူအစပ်မှလွဲ၍ လူကြိုးစားသော ထမင်းဟင်းအတိုင်း **အဖြေ (ခ) ကို ရွေးချယ်ပါက (၂) ကို ဝိုင်းပါ၊ မဟုတ်ပါက (၁) ကို ဝိုင်းပါ၊ မသိပါက (၀) ကို ဝိုင်းပါ။**	၀	၁	၂
IFK-6	ကလေး၏အသက်(၁၂)လတွင် ကျွေးရမည့်အစာအစာများမှာ - (က) အစာပျော့ပျော့ - ဥပမာ နူးနေအောင်ပြုတ်ထားသောဆန်ပြုတ်၊ ဇွန်းဖြင့် ချေထားသော ထမင်း၊ ငှက်ပျောသီးမှည့်၊ သင်္ဘောသီးမှည့် (ခ) မမာမပျော့သောအစားအစာ - ဥပမာ နူးညံ့အောင်ချက်ထားသော အသား/ငါး၊ မှည့်နေသော သစ်သီး (ကလေးကိုယ်တိုင် လက်ဖြင့်ကိုင်စားနိုင်သော အစားအစာ) (၈) အပူအစပ်မှလွဲ၍ လူကြိုးစားသော ထမင်းဟင်းအတိုင်း **အဖြေ (၈)ကို ရွေးချယ်ပါက (၂) ကို ဝိုင်းပါ၊ မဟုတ်ပါက (၁) ကို ဝိုင်းပါ၊ မသိပါက (၀) ကို ဝိုင်းပါ။**	၀	၁	၂
IFK-7	တစ်နှစ်အောက်ကလေးငယ် အာဟာရပြည့်ဝစေရန်အတွက် နေ့စဉ်နေ့တိုင်းကျွေးရန် လိုအပ်သော အစားအစာများကို ပြောပြပါ။ အဖြေကို ဖတ်မပြပါနှင့်။ သူပြောသည်ကို နားထောင်ပါ။ **သူပြောပြသော အစားအစာသည် အောက်ပါစာရင်းတွင် ပါဝင်ပါက ထိုအစားအစာများကို မျဉ်းသားပါ၊ ပြီးလျှင် ထိုအစားအစာနှင့်သက်ဆိုင်သော လိုင်းနံပါတ်ကို မျဉ်းသားပါ၊ ထို့နောက် ထိုအစားအစာ၏ အုပ်စုနံပါတ်ကို ဝိုင်းပါ။** ဖြေဆိုခြင်း ပြီးဆုံးသွားပါက အစားအစာအုပ်စု နံပါတ်အားလုံးကို ဝိုင်းထားပါက ညာဘက် ကော်လံတွင်ရှိ (၂) ကို ဝိုင်းပေးပါ။ အစားအစာအုပ်စု နံပါတ်အားလုံးကို ဝိုင်းမထားလျှင် (၁) ကို ဝိုင်းပါ။			
	အုပ်စု – ၁။ အဓိက အစားအစာ (၁) ထမင်း		၁	၂
	အုပ်စု – ၂။ အားဖြစ်စေသော အစားအစာများ (၂) ဆန်၊ဂျုံပြောင်း၊ကောက်ညှင်းစသည်တို့ဖြင့်ပြုလုပ်ထားသောအစားအစာ၊ အာလူး၊ကန်စွန်း၌ ပိန်း၌ (၃) ဆီ၊ ထောပတ် စသည်တို့ဖြင့်ပြုလုပ်ထားသောအစားအစာ (၄) သကြား၊ ထန်းလျက်၊ ကြံသကာစသည့် ချိုသောအစားအစာ			
	အုပ်စု – ၃။ ခန္ဓာကိုယ်ကြီးထွားဖွံ့ဖြိုးစေသော အစားအစာများ (၅) အသားအမျိုးအမျိုး (ကြက်၊ဝက်၊ငါး၊ငါးကလေး၊ပုဇွန်၊ပုဇွန်ဆိတ်)၊ အသည်း၊			

	ဘဲသွေး (၆) နို့အမျိုးမျိုးနှင့် နို့ဖြင့်ပြုလုပ်ထားသောအစားအစာ (ဥပမာ - ဒိန်၊ ဒိန်ချဉ်) (၇) ဥအမျိုးအမျိုး (၈) ပဲအမျိုးမျိုး၊ ပဲအမျိုးမျိုးဖြင့်ပြုလုပ်ထားသောအစားအစာ ဥပမာ - တို့ဟူး၊ ပဲပြား၊ ပဲပုပ်ပြား			
	အုပ်စု – ၄။ ရောဂါကာကွယ်စေသော အစားအစာများ (၉) သံဓါတ်ပါသော အမဲ၊ဝက်ကြက်စသည်တို့၏ အသားအမျိုးမျိုး၊ အသည်းနှင့် အစိမ်းရောင် ရှိသော အရွက်အမျိုးမျိုး (၁၀) ဗီတာမင် - အေဓာတ်ပါဝင်သော အဝါရောင်ရှိသော အသီးအမျိုးမျိုး ဥပမာ - ဖရုံသီး၊ မုန်လာဥနီ၊ ကန်ဇွန်းဥ၊ သင်္ဘောသီးမှည့်၊ သရက်သီးမှည့်၊ နှင့် အစိမ်းရင့်ရောင်ရှိသော အရွက် အမျိုးမျိုး ဥပမာ - ဟင်းနုနယ်ရွက် (၁၁) အခြား အသီးအမျိုးမျိုးနှင့် အရွက်အမျိုးအမျိုး			
	(၁၂) အခြားအစားအစာ (အမည်ကို ရေးပေးပါ)			
IFK-8	တစ်နှစ်အောက်ကလေး အာဟာရပြည့်ဝစေရန်အတွက် တနေ့လျှင် အနည်းဆုံး ဘယ်နှစ်ကြိမ် ကျွေးရန် လိုအပ်ပါသလဲ။ အဖြေတို့ကို အသက်အုပ်စု အလိုက် မေးပါ။ အသက် ၆-လမှ ၇-လ အတွင်း ➢အဖြေ တနေ့လျှင် အနည်းဆုံး ___ ကြိမ် **အကယ်၍ (တနေ့လျှင် အနည်းဆုံး ၃ – ကြိမ်) ကို ဖြေလျှင် (၂) ကို ဝိုင်းပါ၊ မဟုတ်ပါက (၁) ကို ဝိုင်းပါ၊ မသိပါက (၀) ကို ဝိုင်းပါ။**	၀	၁	၂
IFK-9	အသက် ၈-လမှ ၉-လ အတွင်း ➢အဖြေ တနေ့လျှင် အနည်းဆုံး ___ ကြိမ် **အကယ်၍ (တနေ့လျှင် အနည်းဆုံး ၃ – ၄ ကြိမ်) ကို ဖြေလျှင် (၂) ကို ဝိုင်းပါ၊ မဟုတ်ပါက (၁) ကို ဝိုင်းပါ၊ မသိပါက (၀) ကို ဝိုင်းပါ။**	၀	၁	၂
IFK-10	အသက် ၁၀-လမှ ၁၂-လ အတွင်း ➢အဖြေ တနေ့လျှင် အနည်းဆုံး ___ ကြိမ် **အကယ်၍ (တနေ့လျှင် အနည်းဆုံး ၄ – ကြိမ်) ကို ဖြေလျှင် (၂) ကို ဝိုင်းပါ၊ မဟုတ်ပါက (၁) ကို ဝိုင်းပါ၊ မသိဟု ဖြေပါက (၀) ကို ဝိုင်းပါ။**	၀	၁	၂

အပိုင်း – ၄။ ကလေးသူငယ်ပြုစုစောင့်ရှောက်သူ၏ တစ်နှစ်အောက်ကလေးအတွက် အာဟာရကျွေးမွေးခြင်း အပေါ်သဘောထား

က။ အာဟာရချို့တဲ့မှု အလွယ်တကူ ခံစားရနိုင်ခြင်းအပေါ် သဘောထား

အမှတ်စဉ်	**မေးခွန်းများ**	**သဘောမတူပါ**	**မသိ/မသေချာ**	**သဘောတူပါသည်**
PIF-1.	မိခင်နို့တိုက်နေသည့် အသက် ၆-လအောက်ကလေးကို ရေတိုက်ခြင်းကြောင့် ကလေး အာဟာရချို့တဲ့ နိုင်ပါသည်။	၁	၂	၃
PIF-2.	ကလေးအသက် ၆-လပြည့်ပြီးနောက် မိခင်နို့ဖြတ်လိုက်လျှင် ကလေး၏ အာဟာရပြည့်ဝမှု၊ ကျန်းမာရေး နှင့် ကြီးထွားဖွံ့ဖြိုးမှုတို့ကို ထိခိုက်နိုင်ပါသည်။	၁	၂	၃

PIF-3.	ကလေးအသက် ၆-လမပြည့်ခင် ဖြည့်စွက်စာကျွေးခြင်း သို့မဟုတ် ၈-လ ပြည့်ပြီးနောက်မှ ဖြည့်စွက်စာကျွေးခြင်းတို့ကြောင့် ကလေးအာဟာရချို့တဲ့နိုင်သည်။	၁	၂	၃
PIF-4.	တစ်နေ့လျှင် အစာအာဟာရအမျိုးအစား (၄)မျိုးထက်လျော့ကျွေးပါက ကလေးအာဟာရ ချို့တဲ့ နိုင်သည်။	၁	၂	၃
PIF-5.	အသည်း၊ အသား၊ ငါး၊ အစိမ်းရင့်ရောင်ရှိသောအရွက်စသည်တို့မှ အစားအစာအနည်းဆုံး တစ်မျိုးကို နေ့စဉ်ကျွေးရန်လိုအပ်ပါသည်၊ သို့မဟုတ်ပါက ကလေးအတွက် လုံလောက်သော သံဓာတ် မရနိုင်ပါ။	၁	၂	၃
PIF-6.	အသက်အလိုက် အနည်းဆုံးကျွေးရမည့် အကြိမ်ရေမပြည့်ပါက ကလေးသည် အလွယ်တကူ အာဟာရ ချို့တဲ့နိုင်ပါသည်။	၁	၂	၃

ခ။ အာဟာရချို့တဲ့ခြင်းကြောင့် ရောဂါ၊နောက်ဆက်တွဲများ ပြင်းထန်စွာ ခံစားရနိုင်ခြင်းအပေါ် သဘောထား

အမှတ်စဉ်	**မေးခွန်းများ**	**သဘောတူ**	**ဘာမှမပြော**	**သဘောမတူ**
PIF-7.	အာဟာရချို့တဲ့ခြင်းကြောင့် ကလေးငယ် မကြာခဏ နေမကောင်းဖြစ်နိုင်သည်။	၁	၂	၃
PIF-8.	အာဟာရချို့တဲ့ခြင်းကြောင့် ကလေးငယ် ခန္ဓာကိုယ်ဖွံ့ဖြိုးမှု ထိခိုက်နိုင်သည်။	၁	၂	၃
PIF-9.	ယခုအချိန်တွင် အာဟာရချို့တဲ့ခြင်းကြောင့် ကလေးငယ် ကျောင်းနေသည့်အခါ ပညာရေး ညံ့ဖျင်းနိုင် ပါသည်။	၁	၂	၃
PIF-10.	ယခုအချိန်တွင် အာဟာရချို့တဲ့ခြင်းကြောင့် အရွယ်ရောက်လာသည့်အခါ ဝင်ငွေကောင်းစွာ မရှာနိုင် တော့ပါ။	၁	၂	၃

ဂ။ အာဟာရစနစ်တကျကျွေးမွေးခြင်းကြောင့် ရရှိသည့်အကျိုးကျေးဇူးအပေါ် သဘောထား

အမှတ်စဉ်	မေးခွန်းများ	သဘောမတူပါ	ဓဒ္ဓ/မသေချာပါ	သဘောတူပါသည်
PIF-11.	အသက် ၆-လအောက် မိခင်နို့တိုက်နေသော ကလေးကို ရေလုံးဝ မတိုက်လျှင် အာဟာရပြည့်ဝပြီး ကျန်းမာရေးလည်း ကောင်းမွန်သည်။	၁	၂	၃
PIF-12.	အသက် ၆-လပြည့်မှ ဖြည့်စွက်စာကျွေးခြင်းသည် ကလေးအတွက် အာဟာရပြည့်ဝပြီး ကျန်းမာရေး လည်း ကောင်းမွန်စေသည်။	၁	၂	၃
PIF-13.	အသက် ၁-နှစ်အောက်ကလေးကို အာဟာရအုပ်စု ၄-ခုစလုံးမှ အစားအစာ တစ်မျိုးခြင်းစီ နေ့စဉ် ပါဝင်အောင် ကျွေးပါက အာဟာရချို့တဲ့ခြင်း၊ မကြာခဏဖျားနာခြင်း နှင့် ကြီးထွားဖွံ့ဖြိုးမှု ထိခိုက်ခြင်း တို့ကို ကာကွယ်နိုင်ပါသည်။	၁	၂	၃
PIF-14.	အသက် ၁-နှစ်အောက်ကလေးကို အသက်အလိုက် အနည်းဆုံး ကျွေးရမည့်အကြိမ်ရေ ပြည့်မီအောင် ကျွေးခြင်းဖြင့် အာဟာရချို့တဲ့ခြင်း၊ မကြာခဏဖျားနာခြင်း နှင့် ကြီးထွားဖွံ့ဖြိုးမှုထိခိုက်ခြင်း တို့ကို ကာကွယ်နိုင်ပါသည်။	၁	၂	၃
PIF-15.	အစားအစာအပျော့အမာကို အသက်အလိုက် သင့်လျော်အောင် ကျွေးခြင်းဖြင့် အာဟာရချို့တဲ့ခြင်းမှ ကာကွယ်နိုင်ပါသည်။	၁	၂	၃

ဃ။ အာဟာရစနစ်တကျကျွေးမွေးရန်အတွက် အခက်အခဲတွေ့ကြုံရမှုအပေါ် သဘောထား

အောက်ပါစာပိုဒ်ကို ဖတ်ပြပါ။

(၁) ထမင်းကို အဓိကထားပြီး ကျန်သောအာဟာရအုပ်စု ၃-ခုဖြစ်သည့်

(၂) ခွန်အားဖြစ်စေသောအစားအစာများ ဥပမာ - ဆန်၊ဂျုံ၊ ပြောင်း၊ကောက်ညှင်းစသည်တို့ဖြင့် ပြုလုပ်ထားသော အစားအစာများ၊ အာလူး၊ကန်စွန်းဥ၊ပိန်းဥ၊ဆီ၊ထောပတ် စသည်တို့ဖြင့်ပြုလုပ်ထားသော အစားအစာများ၊ သကြား၊ထန်းလျက်၊ ကြံသကာစသည့် ချိုသောအစားအစာများ၊

(၃) ခန္ဓာကိုယ်ကြီးထွားဖွံ့ဖြိုးစေသော အစာများဖြစ်သည့် အသားအမျိုးမျိုး (ကြက်၊ဝက်၊ငါး၊ငါးကလေး၊ ပုဇွန်၊ပုဇွန်ဆိတ်)၊ အသည်း၊ ဘဲသွေး၊ နို့အမျိုးမျိုးနှင့် နို့ဖြင့်ပြုလုပ်ထားသော အစားအစာ (ဥပမာ - ဒိန်၊ ဒိန်ချဉ်)၊ ဥအမျိုးအမျိုး၊ ပဲအမျိုးမျိုး၊ ပဲအမျိုးမျိုးဖြင့် ပြုလုပ်ထားသောအစားအစာ ဥပမာ - တို့ဟူး၊ ပဲပြား၊ ပဲပုပ်ပြားစသည့် အစာအမျိုးမျိုး၊

(၄) ရောဂါကာကွယ်စေသောအစာများဖြစ်သည့် သံဓာတ်ပါသော အမဲ၊ဝက်ကြက်စသည်တို့၏ အသားအမျိုးမျိုး၊ အသည်း နှင့် အစိမ်းရင့်ရောင်ရှိသော အရွက်အမျိုးမျိုး ဥပမာ - ဟင်းနုနယ်ရွက်၊ ဗီတာမင် - အေဓာတ်ပါဝင်သော အဝါရောင် အနီရောင် ရှိသော အသီး အမျိုးမျိုး ဥပမာ - ဖရုံသီး၊ မုန်လာဥနီ၊ ကန်ဇွန်းဥ၊ သဘော်သီးမှည့်၊ သရက်သီးမှည့် နှင့် အစိမ်းရောင်ရှိသော အရွက်အမျိုးမျိုး အခြား အသီးအမျိုးမျိုးနှင့် အရွက်အမျိုးအမျိုး

အထက်ဖော်ပြပါအစာအုပ်စုများမှ အနည်းဆုံး အစားအစာ ၄-မျိုးကို နေ့စဉ်ကျွေးရန်လိုအပ်ပါသည်။

အသက် ၆-လမှ ၇-လ အရွယ်ကလေးငယ်ကို တနေ့လျှင် ၃-ကြိမ်၊ အသက် ၈-လမှ ၉-လ အရွယ်ကလေးငယ်ကို တနေ့လျှင် ၃-ကြိမ်မှ ၄-ကြိမ်၊ အသက် ၁၀-လမှ ၁၂-လ အရွယ်ကလေးငယ်ကို တနေ့လျှင် ၄-ကြိမ်၊ အသက် ၁၃-လနှင့်အထက် ကလေးငယ်ကို တစ်နေ့လျှင် ၅-ကြိမ် ကျွေးရန် လိုအပ်ပါသည်။

ဖြည့်စွက်စာကို ကလေးအသက် ၆-လတွင် စတင်ကျွေးရမည်ဖြစ်ပြီး၊ အသက် ၆-လတွင် အစာပျော့ပျော့ - ဥပမာ နူးနေ အောင်ပြုတ် ထားသောဆန်ပြုတ်၊ ဇွန်းဖြင့်ချေထားသော ထမင်း၊ ငှက်ပျောသီးမှည့်၊ သင်္ဘောသီးမှည့် စသည်တို့ကို ကျွေးရမည်။ အသက် ၈-တွင် မမာမပျော့သောအစားအစာ - ဥပမာ နူးညံ့ အောင်ချက်ထားသော အသား/ငါး၊ မှည့်နေ သော သစ်သီး (ကလေးကိုယ်တိုင် လက်ဖြင့် ကိုင်စားနိုင်သော အစားအစာ)စသည်တို့ကို ကျွေးရမည်။ အသက် ၁၂-လမှ စတင်၍ အပူအစပ်မှလွဲ၍ လူကြီးစားသော ထမင်းဟင်းအတိုင်း ကျွေးရမည်။

အကယ်၍ ကလေးနေမကောင်းဖြစ်ပါက မိခင်နို့ (သို့) အရည်များများ တိုက်ပေးရမည်၊ ခံတွင်းလိုက်စေ သော ကလေး ကြိုက်တတ်သော အစာပျော့ပျော့ကို ချော့ကျွေးရမည်။ ကလေးနာလန်ပြန်ထချိန်တွင် ဆုံးရှုံး သွားသော အာဟာရများကို ပြန်လည်ဖြည့်တင်းရန်အတွက် ယခင်က ကျွေးနေသည့် အစာပမာဏထက် ပိုကျွေးရပါမည်။

မေးခွန်းကို ဖတ်ပြပါ၊ ပြီးလျင် အနည်းဆုံး ထင်မြင်ချက် အဆင့်(၁) မှ အများဆုံး ထင်မြင်ချက် အဆင့် (၅) အတွင်း ဖြေဆိုသူနှင့် ကိုက်ညီမှု ရှိမည့် အဆင့်ကို ရွေးနိုင်ပါ။

အမှတ်စဉ်	မေးခွန်းများ	အနည်းဆုံး ------ အများဆုံး				
PIF-16.	ပြောပြခဲ့သည့်အတိုင်း ကလေးငယ်ကို ကျွေးမွေးရန်အတွက် ကုန်ကျစရိတ် အပေါ် ထင်မြင်ချက်	၁	၂	၃	၄	၅
PIF-17.	ပြောပြခဲ့သည့်အတိုင်း တိတိကျကျ ကျွေးမွေးရန်အတွက် သင်အချိန်ပေးမှု အဆင့်	၁	၂	၃	၄	၅
PIF-18.	ပြောပြခဲ့သည့်အတိုင်း ကျွေးမွေးပါက ကလေးအာဟာရဖွံ့ဖြိုးမှု အတွက် အထောက်အကူပြုမည်ဟုထင်သည့် အဆင့်	၁	၂	၃	၄	၅
PIF-19.	အထက်ပါအစားအစာများအနက်မှ ကလေးနှင့် သင့်လျော်သော အစားအစာ များ ပါဝင်သည် ဟုထင်မြင်မှုအဆင့်	၁	၂	၃	၄	၅
PIF-20.	အထက်တွင် ဖော်ပြထားသော အစားအစာများကို သင့်ပတ်ဝန်းကျင်တွင် အလွယ်တကူ ရှာဖွေဝယ်ယူ၍ ရရှိနိုင်မှုအဆင့်	၁	၂	၃	၄	၅

c။ အာဟာရစနစ်တကျကျွေးမွေးရန်အတွက် မိမိကိုယ်မိမိ ယုံကြည်မှု

မေးခွန်းကို ဖတ်ပြပါ၊ ပြီးလျင် အနည်းဆုံး ယုံကြည်မှု အဆင့်(၁) မှ အများဆုံး ယုံကြည်မှု အဆင့် (၅) အတွင်း ဖြေဆိုသူနှင့် ကိုက်ညီမှုရှိမည့် အဆင့်ကို ရွေးနိုင်ပါ။

အမှတ်စဉ်	မေးခွန်းများ	အနည်းဆုံး ----- အများဆုံး				
PIF-21.	အာဟာရချို့တဲ့ခြင်းမှကာကွယ်ရန်အတွက် ကလေးငယ် အသက် ၂-နှစ် ပြည့် သည်အထိ မိခင်နို့ကို ဆက်လက်တိုက်ကျွေးနိုင်သည်ဟု သင့်ကိုယ်သင် ယုံကြည်မှုအဆင့် မည်မျှ ရှိပါသလဲ။ (နို့တိုက်မိခင်ကို သာမေးရန်)	၁	၂	၃	၄	၅
PIF-22.	ကလေးငယ်ကို အာဟာရပြည့်ဝအောင်ကျွေးရန်အတွက် လုံလောက်သော ဗဟုသုတရှိပြီးဖြစ်သည်ဟု သင့်ကိုယ်သင် ယုံကြည်မှုအဆင့် မည်မျှ ရှိပါ သလဲ။	၁	၂	၃	၄	၅
PIF-23.	ကလေးငယ်အတွက် အာဟာရပြည့်ဝသော အစားအစာကို ပြင်ဆင်ချက်ပြုတ် နိုင်သည်ဟု သင့်ကိုယ်သင် ယုံကြည်မှုအဆင့် မည်မျှ ရှိပါသလဲ။	၁	၂	၃	၄	၅
PIF-24.	ကလေးငယ်အာဟာရပြည့်ဝစေရန်အတွက် ဈေးကြီးသော အစားအစာများ မပါဝင်ပဲ ပြင်ဆင်ချက်ပြုတ်နိုင်သည်ဟု သင့်ကိုယ်သင် ယုံကြည်မှုအဆင့် မည်မျှ ရှိပါသလဲ။	၁	၂	၃	၄	၅

c။ ကလေးငယ်ကို အာဟာရစနစ်တကျကျွေးမွေးရန်အတွက် ပတ်ဝန်းကျင်မှ လှုံ့ဆော်မှု

မေးခွန်းကို ဖတ်ပြပါ၊ ပြီးလျင် အနည်းဆုံး ထင်မြင်ချက် အဆင့်(၁) မှ အများဆုံး ထင်မြင်ချက် အဆင့် (၅) အတွင်း ဖြေဆိုသူနှင့် ကိုက်ညီမှု ရှိမည့် အဆင့်ကို ရွေးနိုင်ပါ။

အမှတ်စဉ်	မေးခွန်းများ	အနည်းဆုံး ----- အများဆုံး				
PIF-25.	အထက်တွင် ရှင်းပြထားသလို ကလေးငယ်ကို ကျွေးမွေးရန်အတွက် သင့်မိသားစု က သင့်ကို တိုက်တွန်းကူညီမှု အဆင့်။	၁	၂	၃	၄	၅
PIF-26.	အထက်တွင် ရှင်းပြထားသလို ကလေးငယ်ကို ကျွေးမွေးရန်အတွက် တိုက်တွန်းချက်ကို ရေဒီယို၊ ရုပ်မြင်သံကြား၊ သတင်းစာ၊ ဂျာနယ်၊ ကြော်ငြာ၊ ပိုစတာတို့တွင် နားထောင်ဖူး၊ မြင်ဖူး၊ ကြားဖူးသည့် အကြိမ်များ။	၁	၂	၃	၄	၅
PIF-27.	အထက်တွင် ရှင်းပြထားသလို ကလေးငယ်ကို ကျွေးမွေးရန်အတွက် ဆွေမျိုး မိတ်ဆွေများက သင့်ကို တိုက်တွန်းကူညီမှု အဆင့်။	၁	၂	၃	၄	၅
PIF-28.	အထက်တွင် ရှင်းပြထားသလို ကလေးငယ်ကို ကျွေးမွေးရန်အတွက် ကျန်းမာရေး ဝန်ထမ်းများက သင့်ကို သင်ကြားတိုက်တွန်းမှု အဆင့်။	၁	၂	၃	၄	၅
PIF-29.	သင် မအားလပ်သည့်အခါ နေမကောင်းသည့်အခါ ကလေးငယ်ကို စနစ်တကျ ကျွေးမွေးရန် မိသားစု၊ မိတ်ဆွေများ၊ အိမ်နီးနားချင်းများက သင့်ကို တိုက်တွန်း ကူညီမှု အဆင့်။	၁	၂	၃	၄	၅
PIF-30.	သင့်ကလေးအတွက် အာဟာရဖြစ်စေမည့် အစားအစာများကို ပြင်ဆင် ကျွေးမွေးခြင်းနှင့်ပတ်သက်သော သရုပ်ပြမှုများကို မြင်တွေ့ဖူးသည့် အကြိမ်များ။	၁	၂	၃	၄	၅

အပိုင်း – ၅။ ကလေးသူငယ်ကို အာဟာရကျွေးမွေးခြင်း အလေ့အထ

အမှတ်စဉ်	မေးခွန်းများ	အဖြေ	ကျော်မေးရန်လမ်းညွှန်
IF-1.	သင့်ကလေးကို မိခင်နို့တိုက်ဖူးပါသလား။	မတိုက်ဘူးပါ----- ၁ တိုက်ဘူးပါသည် - ၂	➲ မေးခွန်း **IF-4** ကိုကျော်မေးပါ။ ➲ မေးခွန်း **IF-2** ကိုမေးပါ။
IF-2.	မနေ့က သင်ကလေးကို မိခင်နို့တိုက်ခဲ့ပါသလား။	မတိုက်ခဲ့ပါ----- ၁ တိုက်ခဲ့ပါသည် - ၂	➲ မေးခွန်း **IF-3.a** ကိုဆက်မေးပါ။ ➲ မေးခွန်း **IF-4** ကိုကျော်မေးပါ။
IF-3.a	မိခင်နို့ကို ညစ်ထုတ်ပြီး ဇွန်းခွက်ပုလင်းတွင် ထည့်၍ ကလေးကို တိုက်ပါသလား။	မတိုက်ခဲ့ပါ----- ၁ တိုက်ခဲ့ပါသည် - ၂	➲ မေးခွန်း **IF-3.ab** ကိုမေးပါ။ ➲ မေးခွန်း **IF-4** ကိုကျော်မေးပါ။
IF-3.b	မနေ့က မိခင်နို့မတိုက်ဖြစ်သည့် အကြောင်းများကို ပြောပြပါ။	----------	
IF-4.	မနေ့က ကလေးကို နို့မှန့်၊ အာဟာရမှုန့် သို့မဟုတ် အရည်တစ်မျိုးမျိုး စသည်တို့ကို နို့သီးခေါင်းပါသော ပုလင်းဖြင့် တိုက်ခဲ့ပါသလား။	မတိုက်ဘူးပါ----- ၁ တိုက်ဘူးပါသည် - ၂	
IF-5.a	ကလေးကို ရေတိုက်နေပြီလား။ ကလေးကို ရေစတိုက်နေပြီဖြစ်ပါက သင့်ကလေးကို ရေစတင်တိုက်ခဲ့သည့် အသက်ကို ပြောပြပါ။ အဖြေ ☐ မတိုက်သေးပါ ☐ လ ___ ___ တွင် စတိုက်ခဲ့ပါသည်။	EBF မဟုတ်ပါ--- ၁ EBFဟုတ်ပါသည်- ၂	

IF-5.b	ကလေးကို ဖြည့်စွက်စာ စတင်ကျွေးနေပြီလား။ အကယ်၍ ဖြည့်စွက်စာ စတင်ကျွေးနေပြီဖြစ်ပါက ဖြည့်စွက်စာ စတင်ကျွေးခဲ့သည့် အသက်ကို ပြောပြပါ။ အဖြေ ☐ မကျွေးသေးပါ ☐ လ ___ ___ တွင် စတင်ကျွေးခဲ့ပါသည်။ **➲ အသက် ၆–လအောက်ကလေးကို ဖြည့်စွက်စာ မကျွေး/ ရေမတိုက် ရသေးပါက ညာဘက် ကော်လံ တွင်ရှိ (၂) ကို ဝိုင်းပါ၊ ဖြည့်စွက်စာ ကျွေးခဲ့ဖူးပါက (၁) ကို ဝိုင်းပါ။** **➲ အသက် ၆–လအထက်ကလေးကို ဖြည့်စွက်စာ ကျွေး/ရေတိုက်ခဲ့သော အသက်သည် ၆–လအထက်ဖြစ်ပါက ညာဘက် ကော်လံတွင်ရှိ (၂) ကို ဝိုင်းပါ၊ ၆–လအောက်ဖြစ်ပါက (၁) ကို ဝိုင်းပါ။**		
IF-6.	**☞အသက် ၆–လမှ ၇–လအတွင်းရှိ ကလေး၏ ပြုစုစောင့်ရှောက် သူကို သာမေးရန်။** သင့်ကလေးကို အစာပျော့ပျော့ - ဥပမာ နူးနေအောင် ပြုတ်ထားသော ဆန်ပြုတ်၊ ဇွန်းဖြင့်ခြေထားသော ထမင်း၊ ငှက်ပျောသီးမှည့်၊ သင်္ဘော သီးမှည့် စသည်တို့ကို ကျွေးခဲ့သော အသက်ကို ပြောပြပါ။ ➲ အဖြေ ___ ___ လ **☞ အကယ်၍ ၆–လ ဟုဖြေပါက (၂) ကို ဝိုင်းပါ။** မဟုတ်လျှင် (၁) ကို ဝိုင်းပါ။	မှား ---------- ၁ မှန် ---------- ၂ မမှတ်မိ-------- ၈၈	
	☞အသက် ၈–လမှ ၁၁–လအတွင်းရှိ ကလေး၏ ပြုစုစောင့်ရှောက် သူကို သာမေးရန်။ သင့်ကလေးကို မမာမပြော့သောအစားအစာ - ဥပမာ နူးညံ့အောင်ချက်ထားသော အသား/ငါး၊ မှည့်နေသော သစ်သီး (ကလေးကိုယ်တိုင် လက်ဖြင့် ကိုင်စားနိုင်သော အစားအစာ) စသည်တို့ကို စတင် ကျွေးခဲ့သော အသက်ကို ပြောပြပါ။ ➲ အဖြေ ___ ___ လ **အကယ်၍ ၈–လ ဟုဖြေပါက (၂) ကို ဝိုင်းပါ။** မဟုတ်လျှင် (၁) ကို ဝိုင်းပါ။		
	☞အသက် ၁၂–လပြည့်ပြီးသောကလေး၏ ပြုစုစောင့်ရှောက်သူကို သာမေးရန်။ သင့်ကလေးကို အပူအစပ်မှလွဲ၍ လူကြီးစားသော ထမင်းဟင်းအတိုင်း စတင် ကျွေးခဲ့သော အသက်ကို ပြောပြပါ။ ➲ အဖြေ ___ ___ လ **အကယ်၍ ၁၂–လ ဟုဖြေပါက (၂) ကို ဝိုင်းပါ။** မဟုတ်လျှင် (၁) ကို ဝိုင်းပါ။		

IF-7. မနေ့က ကလေးအိပ်ယာမှနိုးသည့်အချိန်တွင် (အိမ်တွင်ဖြစ်စေ၊ပြင်ပတွင်ဖြစ်စေ) ကျွေးခဲ့သော အစားအစာတို့ကို ပြောပြပါ။ ဤမေးခွန်းကို ဖြေပြီးပါက၊ နောက်ထပ် ဘယ်အစားအစားတွေထပ်ကျွေးသေးလဲ မေးပါ။ နောက်ထပ် ဘယ်အစားအစားတွေ ကျွေးသေးလဲဆိုသော မေးခွန်းကို ကလေးအိပ်ယာဝင်ချိန်ရောက်သည်အထိ မေးသွားပါ။

အဖြေများကို ဇတ်မပြပါနှင့်။ သူဖြေသည်ကို နားထောင်ပြီး ပြောသွားသော အစားအစာများ၏ အမည်အောက်တွင် မျဉ်းသားပါ။ ပြီးလျှင် သက်ဆိုင်ရာအစားအစာအုပ်စုတွက်ရေးထားသော အစားအစာအုပ်စုနံပါတ်ကို ဝိုင်းပါ။

ဖြေဆိုပြီးစီးသွားပါက အစားအစာ အုပ်စုအားလုံး၏နံပါတ်အားလုံးကို ဝိုင်းထားပြီးသားဖြစ်လျင် (၂) ကို ဝိုင်းပါ။ သို့မဟုတ်ပါက (၁) ကို ဝိုင်းပါ။

အမှတ်စဉ်	မေးခွန်းများ	များ	မှန်
IF-7	**၁။ အဓိကအစားအစာ** (၁) ထမင်း		
	၂။ အားဖြစ်စေသော အစာများ (၂) ဆန်၊ဂျုံပြောင်း၊ကောက်ညှင်းစသည်တို့ဖြင့်ပြုလုပ်ထားသောအစားအစာ၊အာလူး၊ကန်စွန်းဥ၊ ပိန်းဥ (၃) ဆီ၊ ထောပတ် စသည်တို့ဖြင့်ပြုလုပ်ထားသောအစားအစာ (၄) သကြား၊ ထန်းလျက်၊ ကြံသကာစသည့် ချိုသောအစားအစာ	၁	၂
	၃။ ခန္ဓာကိုယ်ကြီးထွားဖွံ့ဖြိုးစေသောအစာများ (၅) အသားအမျိုးမျိုး (ကြက်၊ဝက်၊ငါး၊ငါးကလေး၊ပုဇွန်၊ပုဇွန်ဆိတ်)၊ အသည်း၊ဘဲသွေး (၆) နို့အမျိုးမျိုးနှင့် နို့ဖြင့်ပြုလုပ်ထားသောအစားအစာ (ဥပမာ - ဒိန်၊ ဒိန်ချဉ်) (၇) ဥအမျိုးအမျိုး (၈) ပဲအမျိုးမျိုး၊ ပဲအမျိုးမျိုးဖြင့်ပြုလုပ်ထားသောအစားအစာ ဥပမာ - တို့ဟူး၊ ပဲပြား၊ ပဲပုပ်ပြား		
	၄။ ရောဂါကာကွယ်စေသောအစာများ (၉) သံဓာတ်ပါသော အမဲ၊ဝက်ကြက်စသည်တို့၏ အသားအမျိုးမျိုး၊ အသည်း နှင့် အစိမ်းရောင် ရှိသော အရွက်အမျိုး မျိုး (၁၀) ဗီတာမင် - အေဓာတ်ပါဝင်သော အဝါရောင်ရှိသော အသီးအမျိုးမျိုး ဥပမာ - ဖရုံသီး၊ မုန်လာဥနီ၊ ကန်ဇွန်းဥ၊ သဘော်သီးမှည့်၊ သရက်သီးမှည့်၊ နှင့် အစိမ်းရင့်ရောင်ရှိသော အရွက် အမျိုးမျိုး ဥပမာ - ဟင်းနုနယ်ရွက် (၁၁) အခြား အသီးအမျိုးမျိုးနှင့် အရွက်အမျိုးအမျိုး		
IF-8.	**မနေ့က သင့်ကလေး ဖြည့်စွက်အစာကို ဘယ်နှစ်ကြိမ် စားခဲ့ပါသလဲ။ (သက်ဆိုင်ရာအသက်အုပ်စုအလိုက် အဖြေကို ရေးရန်ဖြစ်ပါသည်။)**		
	☞ **အသက် ၆-လမှ ၇-လအတွင်းရှိ ကလေး၏ ပြုစုစောင့်ရှောက်သူအတွက်** ➲ အဖြေ ___ ကြိမ် **အကယ်၍ (၃ ကြိမ်နှင့်အထက်) ကိုဖြေပါက (၂) ကို ဝိုင်းပါ။** မဟုတ်လျှင် (၁) ကို ဝိုင်းပါ။	၁	၂
	☞ **အသက် ၈-လမှ ၉-လအတွင်းရှိ ကလေး၏ ပြုစုစောင့်ရှောက်သူအတွက်** ➲ အဖြေ ___ ကြိမ် **အကယ်၍ (၃-ကြိမ် မှ ၄ ကြိမ်နှင့်အထက်)ကိုဖြေပါက (၂)ကို ဝိုင်းပါ။**မဟုတ်လျှင် (၁) ကို ဝိုင်းပါ။		
	☞ **အသက် ၁၀-လမှ ၁၂-လအတွင်းရှိ ကလေး၏ ပြုစုစောင့်ရှောက်သူအတွက်** **အကယ်၍ (၄ ကြိမ်နှင့်အထက်) ကိုဖြေပါက (၂) ကို ဝိုင်းပါ။** မဟုတ်လျှင် (၁) ကို ဝိုင်းပါ။		

မေးခွန်းလွှာပြီးဆုံးပါပြီ။

APPENDIX F

ETHICAL CLEARANCE

Certificate of Approval
Ethical Review Committee for Human Research
Faculty of Public Health, Mahidol University

COA. No. MUPH 2015-085

Protocol Title :	INFANT FEEDING PRACTICE OF CARETAKERS IN HLAINGTHARYAR TOWNSHIP FROM YANGON REGION, MYANMAR
Protocol No. :	51/2558
Principal Investigator :	Mr. Nay Tun Kyaw
Affiliation :	Master of Public Health (International Program) Faculty of Public Health, Mahidol University
Approval Includes :	1. Project proposal 2. Information sheet 3. Informed consent form 4. Data collection form/Program or Activity plan
Date of Approval :	31 March 2015
Date of Expiration :	30 March 2016

The aforementioned project have been reviewed and approved according to the Declaration of Helsinki by Ethical Review Committee for Human Research, Faculty of Public Health, Mahidol University.

S. Natha

(Assoc. Prof. Dr. Sutham Nanthamongkolchai)
Chairman of Ethical Review Committee for Human Research

P. F.

(Assoc. Prof. Dr. Prayoon Fongsatitkul)
Dean of Faculty of Public Health

420/1 Rajvithi Road, Bangkok, Thailand 10400
Tel. (662) 3548543-9 ext. 1127, 7404 Fax. (662) 6409854

APPENDIX G
ETHICAL CLEARANCE

The Government of the Republic of the Union of Myanmar
Ministry of Health
Department of Medical Research
No. 5, Ziwaka Road, Dagon Township, Yangon 11191
Tel : 95-1-375447, 95-1-375457, 95-1-375459 Fax : 95-1-251514

Letter No. 28/ Ethics 2015
Dated: 22.4.2015

The Ethics Review Committee on Medical Research Involving Human Subjects, Department of Medical Research, approves to conduct the following proposed research project.

Infant feeding practices of caretakers in Hlaingtharyar Township in Yangon Region, Myanmar

Principal Investigator: Dr. Nay Tun Kyaw

22.4.15

Dr. Myint Htwe
Chairperson
Ethics Review Committee
Department of Medical Research
(Lower Myanmar)

(*** Approval of the research is for the period of one year from the date mentioned)

APPENDIX H

INFORMATION SHEET

EC-3 Form

Information Sheet

1.Title of project: Infant Feeding Practice of caretakers in Hlaingtharyar Township from Yangon Region, Myanmar

2.Study site:
Hlaingtharyar Township, Yangon Region, Myanmar

3.This project is conducted by …Nay Tun Kyaw ……..
under supervision of Major Advisor as follows:
Asst.Prof. Dr. Rewadee Chongsuwat

4.Brief Background, Rationale: (use simple word, understandable by volunteer participant)
According to findings of Multiple Indicators Cluster Survey (MICS) 2009 – 2010 in Myanmar jointly carried out by Myanmar Government and UNICEF, stunting and underweight are more common in Myanmar and stunting is the commonest and markedly increase in the ages between 6 – 24 months. This is due to feeding practice of caretakers is not appropriate. This study will find out the underlying reasons of why caretakers do not practice proper feeding. The study findings will help nutrition implementers to develop appropriate nutrition promotion and prevention strategies.

5.Objectives:

To determine the feeding practice among the caretakers of the children among 6 months to 12 months in Hlaingtharyar township

To explore contributing factors (socio-economic-demographic factors, nutrition knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy) to different infant feeding practices

6.You are invited to be a volunteer/subject to participate in the project:
Infant Feeding Practice of caretakers in Hlaingtharyar Township from Yangon Region, Myanmar. Your participation in this study is important because some of children with malnutrition are due to improper infant feeding practice of their caretakers and the interview with you is finding out why the caretakers cannot practice proper infant feeding practice to prevent their children from malnutrition.

The findings from the study will help health manager/Township Health Department to develop strategies for nutrition promotion and prevention and as a result, nutritional status of society in general will becomes increased and malnutrition cases will be brought down.

7. Research activities which involving you when you volunteer to participate in this research project will be as following: (focus on the parts that involve volunteers/subjects)

Caretakers (volunteers/subjects) will be first introduced to interviewers and explained about the purpose and benefits (to the caretakers as well as for the society of Myanmar) of the study, no risk to answer the interview questions, and keeping confidentiality. Then, informed consent from the caretakers will be obtained. After that, the interview will be carried out in caretaker's accommodation.

8. Period of time that you will be involved in this research activities (Treatment/data collection):

The interview will be expected to be last for 20 – 30 minutes per caretaker.

9. Expected benefits of the project to you and to others:

Caretakers (subjects) will have a chance to learn proper infant feeding practice. After the end of the survey, health staff from the Township Health Department who participate in the survey as interviewers will explain proper infant feeding practice to the caretakers who volunteer in the survey. After the individual interview, every participant will also receive a soap as hygiene promotion incentive since personal hygiene also plays an important role in proper infant feeding practice.

The findings from the study will be useful for the Nutrition programme manager to develop strategies for nutrition promotion and prevention which will serve the Myanmar community to promote and prevent malnutrition.

10. Risks or any undesirable that may occur to you caused by this research and measure or prevention and risk reclusion method which will be provided during participation in the project.

The activity of the study in the community/with the volunteers is face-to-face interview with pretested questions which assess the infant feeding practice knowledge, perceptions, and practice of caretaker, and caretaker is free to answer these questions according to her best knowledge, perceptions and practice. Caretaker does not need to worry for any wrong answers since every interview information will be kept confidential. Moreover, health education session is also planned after the interview, and she will learn from this session to become clearer on what is right and what is wrong about her knowledge, perception and practice of proper infant feeding. Furthermore, the information will be kept confidential and volunteer's name will not be recorded and a code will be used instead of the name. The information from the interview will be used only in the "Infant Feeding Practice of caretakers in Hlaingtharyar Township from Yangon Region, Myanmar" thematic paper which is a requirement for Master of Public Health degree, and the study findings will share only

to Township Health Department and Nutrition manager without mentioning information of any participants.
Interview duration will be last about 20 – 30 minutes. Caretaker will be explained that she is free to decline to participate in the interview furthermore at any time if she unexpectedly has any personal business. It will be also emphasized that her declination will not be disclosed to any authority.

11. How can you securely store the data and keep them confidential? (such as how to take care data, where are data storage who will access, and how to destroy data and when)
The questionnaire will be coded by ID number instead of Caretaker's name. This coding and respective name will be known only by researcher. During the data entry for the analysis, Record ID number & Cluster number will be used instead of names. This data will be accessed only by the researcher and the University. After the thematic paper is recognized as "Passed", the questionnaire hardcopy will be destroyed by paper destroyer and pieces will be properly packed and disposed.

12. The right of the subject (he/she) to withdraw from the project.
The subject has the right to stop participating in the research at any time that she wish to do so and this will not impose her any loss of her rights including receiving heath care services.

13. Contact address of authorized persons in case of emergency.
…….(1) 521/3-4 Soi Sriayuthaya 2-4 Sriayuthaya Road, Prayatai Distric, Tajthavee, Bangkok 10400. Tel: 0948274603 ……
…….(2) 14. Myint Hmo Street, Sanchaung, Yangon, Myanmar. Tel: +95 9 5080 917……

This research project be approved by the Ethical Review Committee for Human Research, Faculty of Public Health, Mahidol University. Office address at Building 1, 4th Floor, 420/1 Rajvithi Road, Rajthevi, Bangkok 10400, Telephone: 0-2354-8543-9 Ext. 1127, 7404 Fax: 0-2640-9854

EC-3 Form

သုတေသနဆိုင်ရာသတင်းအချက်အလက်

၁။ သုတေသနခေါင်းစဉ် - မြန်မာနိုင်ငံ၊ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်အတွင်းရှိ ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့၏ အဟာရကျွေးခြင်းဆိုင်ရာ အလေ့အထကို လေ့လာခြင်း

၂။ သုတေသနပြုလုပ်မည့်နေရာ - မြန်မာနိုင်ငံ၊ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်

၃။ သုတေသနကို အဓိကဆောင်ရွက်မည့်သူမှာ - ဒေါက်တာနေထွန်းကျော်ဖြစ်ပြီး၊ လက်ထောက် ပါမောက္ခ ဒေါက်တာ ရီဝါဒီ ချောင်ဆူဝတ်၏ ကြီးကြပ်မှုဖြင့် ဆောင်ရွက်မည်ဖြစ်ပါသည်။

၄။ သုတေသနပြုလုပ်ရခြင်းအကြောင်း

၂၀၀၉ - ၂၀၁၀ ခုနှစ်တွင် မြန်မာနိုင်ငံအစိုးရနှင့် ယူနီဆက်တို့ ပူးပေါင်းဆောင်ရွက်ခဲ့သော စစ်တမ်းအရ နိုင်ငံအတွင်းတွင် အရပ်မထွက်သောကလေးများ၊ ကိုယ်အလေးချိန်မပြည့်သော ကလေးများကို ရှာဖွေတွေ့ရှိနေရဆဲဖြစ်ပြီး၊ အသက် ၆-လမှ အသက် ၂၄-လ အတွင်းတွင် ပိုပြီး အဖြစ်များသည်ကို တွေ့ရ ပါသည်။ ဤကဲ့သို့ဖြစ်ရခြင်း၏ အကြောင်းတစ်ရပ်မှာ ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့၏ အဟာရ ကျွေးခြင်းဆိုင်ရာ အလေ့အထသည် ကလေးငယ်တို့အတွက် အဟာရဖြစ်ထွန်းအောင် စနစ်တကျ ကျွေးမွေးနိုင်မှု မရှိခြင်းကြောင့်ဖြစ်သည်ကို တွေ့ရှိရပါသည်။
ဤသုတေသနသည် ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့ ဘယ်အတွက်ကြောင့် စနစ်တကျ ကျွေးမွေးနိုင်မှု မရှိသည်ကို လေ့လာမည်ဖြစ်ပါသည်။ ဤကဲ့သို့လေ့လာခြင်း ဖြင့် ကျန်းမာရေးဆိုင်ရာ တာဝန်ရှိသူများက ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့အတွက် ၎င်းတို့၏ကလေးငယ်များ အာဟာရ ဖြစ်ထွန်းအောင် စနစ်တကျ ကျွေးမွေးနိုင်မည့်နည်းလမ်းများကို ဖော်ထုတ်နိုင်မည်ဖြစ်ပါသည်။

၅။ သုတေသနပြုလုပ်ရခြင်း၏ရည်ရွယ်ချက်

လှိုင်သာယာမြို့နယ်အတွင်းရှိ မွေးကင်းစမှ အသက် ၁၂-လအတွင်းရှိ ကလေးသူငယ် ပြုစုစောင့် ရှောက်သူတို့၏ အဟာရကျွေးခြင်းဆိုင်ရာ အလေ့အထများကို လေ့လာဆန်းစစ်ပြီး မည်သည့်အကြောင်းအရာ များက ထိုကဲ့သို့ ကျွေးမွေးပြုစုစေသည်ကို ရှာဖွေဖော်ထုတ်လေ့လာမည် ဖြစ်ပါသည်။

၆။ သို့ဖြစ်ပါ၍ ဤသုတေသနတွင် စေတနာ့ဝန်ထမ်း ပါဝင်အကူအညီပေးရန်အတွက် ညီမငယ်ကို ဖိတ်ခေါ် အပ်ပါသည်။ ဤသုတေသနသည် အလွန်အရေးကြီးသော သုတေသနဖြစ်ပါသည်။ အဘယ်ကြောင့်ဆိုသော် ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့၏ အာဟာရ ကျွေးခြင်းဆိုင်ရာ အလေ့အထသည် ကလေးငယ်တို့အတွက် အဟာရဖြစ်ထွန်းအောင် စနစ်တကျ ကျွေးမွေးနိုင်မှု မရှိခြင်းကြောင့် ကလေးငယ်တို့ အာဟာရချို့ တဲ့ရပြီး၊ ဤသုတေသနသည် ကလေးသူငယ် ပြုစု စောင့်ရှောက်သူတို့ ဘယ်အတွက်ကြောင့် စနစ်တကျ ကျွေးမွေးနိုင်မှု မရှိသည်ကို လေ့လာမည် ဖြစ်ပါသည်။
ဤကဲ့သို့လေ့လာခြင်းဖြင့် ကျန်းမာရေးဆိုင်ရာတာဝန် ရှိသူများက ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့အတွက် ၎င်းတို့၏ ကလေးငယ်များ အဟာရဖြစ်ထွန်းအောင် စနစ်တကျ ကျွေးမွေးနိုင်မည့် နည်းလမ်းများကို ဖော်ထုတ်နိုင်မည်ဖြစ်ပါသည်။

၇။ ဤသုတေသနတွင် စေတနာ့ဝန်ထမ်း ပါဝင်အကူအညီပေးပါက ကြုံတွေ့ရမည့်လုပ်ငန်းစဉ်များ

သင့်ကို ပထမဦးစွာ သုတေသနပြုလုပ်မည့်သူ တွေ့ဆုံဆွေးနွေးမည့်သူတို့နှင့် မိတ်ဆက်ပေးပါ မည်။ သင့်ကို တွေ့ဆုံဆွေးနွေးမည့်သူတို့က သင့်ကိုယ်ရေးရာဇဝင်၊ အဟာရကျွေးခြင်းဆိုင်ရာ ဗဟုသုတ၊ ခံယူချက်၊ အလေ့အထများ စသည်တို့ကို ဆွေးနွေးမေးမြန်းပါမည်။ ဤသို့ ဆွေးနွေးမေးမြန်းခြင်းဖြင့် သင့်အတွက်လည်း ကလေးသူငယ် ပြုစုစောင့်ရှောက် အဟာရကျွေးခြင်းဆိုင်ရာ ဗဟု

သုတများ ရရှိမည်ဖြစ်ပါသည်။ ဤသို့ ဆွေးနွေးမေးမြန်းခြင်းကို သင့်ဆန္ဒအလျောက် ပါဝင်ဖြေဆိုမည် ဆိုပါက ဝမ်းမြောက်ဝမ်းသာစွာဖြင့်ကြိုဆိုပြီး၊ သင်၏ဆွေးနွေးချက်များကိုလည်း အခြားသူများကို အသိ ပေး ပေါက်ကြားစေမည် မဟုတ်ပါ။ သင့်အနေဖြင့် ဤဆွေးနွေးမေးမြန်းခြင်းတွင် သင့်ဆန္ဒ အလျောက် စေတနာ့ဝန်ထမ်း ပါဝင်ဆွေးနွေးခြင်းဖြစ်ကြောင်း အသိပေးလွှာတွင် လက်မှတ်ထိုးပေး စေလိုပါသည်။ တွေ့ဆုံဆွေးနွေးခြင်းကို သင်၏အိမ် သို့မဟုတ် သင့်အတွက် အဆင်ပြေမည့်နေရာတွင် ပြုလုပ်မည် ဖြစ်ပါသည်။

၈။ တွေ့ဆုံဆွေးနွေးခြင်း ကြာမြင့်မည့်အချိန်

တွေ့ဆုံဆွေးနွေးခြင်းသည် မိနစ် ၂၀-ခန့်မှ အများဆုံး မိနစ် ၃၀-ခန့်အထိ ကြာမြင့်မည် ဖြစ်ပါသည်။

၉။ ဤသုတေသနမှ သင်နှင့် အခြားသူများ ရရှိမည့် အကျိုးကျေးဇူးများ

တွေ့ဆုံဆွေးနွေးပွဲပြီးသည့်အခါ ကျန်းမာရေးဝန်ထမ်းများက သင့်ကို တစ်နှစ်အောက် ကလေးသူငယ်တို့ကို စနစ်တကျ အဟာရကျွေးခြင်းဆိုင်ရာဗဟုသုတများကို ဟောပြောရှင်းလင်း ပညာ ပေးမည် ဖြစ်ပါသည်။ သင်တို့ကိုလည်း တစ်ဦးလျင် ဆပ်ပြာတစ်တုံးကို တစ်ကိုယ်ရည်သန့်ရှင်းရေး လက်ဆောင်မွန်အဖြစ် ပေးမည်ဖြစ်ပါသည်၊ အဘယ်ကြောင့်ဆိုသော် တစ်ကိုယ်ရည်သန့်ရှင်းရေးသည် အစားအစာသန့်ရှင်းရေး၏ အစိတ်အပိုင်းတစ်ခုဖြစ်ပြီး တစ်နှစ်အောက် ကလေးသူငယ်တို့ကို စနစ်တကျ အဟာရကျွေးခြင်း၏ အရေးကြီးသော ကဏ္ဍတစ်ရပ်လည်းဖြစ်ပါသည်။

သင်နှင့် ကျွန်ုပ်တို့၏ဆွေးနွေးပွဲမှ ရရှိသည့် အချက်အလက်များကို ခွဲခြမ်းစိတ်ဖြာပြီး၊ ရရှိ လာသည့် အချက်အလက်များပေါ်တွင်မူတည်ကာ ကလေးငယ်များ အဟာရဖြစ်ထွန်းအောင် စနစ်တ ကျ ကျွေးမွေးနိုင်မည့် နည်းလမ်းများကို ဖော်ထုတ်နိုင်မည်ဖြစ်ပါသည်။

၁၀။ ဤသုတေသနတွင်ပါဝင်ခြင်းဆွေးနွေးခြင်းကြောင့် စွန့်စားရခြင်း၊ မမျှော်လင့်ထားသော အကြောင်းအရာများ ဖြစ်လာနိုင်ခြင်းရှိ မရှိနှင့် ဤကိစ္စရပ်များအတွက် ကျွန်ုပ်တို့မည်ကဲ့သို့ စီစဉ် ဆောင်ရွက်ထားကြောင်းကို သင်သိလိုမည်ဟု ထင်ပါသည်။

ဤသုတေသနတွင်အသုံးပြုသော မေးခွန်းများသည် သင်၏ တစ်နှစ်အောက် ကလေး သူငယ်များကို အာဟာရပြုစုကျွေးမွေးခြင်းဆိုင်ရာ ဗဟုသုတ၊ သဘောထား၊ အလေ့အကျင့်များကို မေးမြန်းခြင်းဖြစ်ပြီး အဖြေမှားမည်ကို စိုးရိမ်ရန်မလိုပါ။ တွေ့ဆုံမေးမြန်းခြင်း အစီအစဉ်ပြီးသည့်အခါ ကျန်းမာရေးဝန်ထမ်းများက တစ်နှစ်အောက် ကလေးသူငယ်များကို အာဟာရပြုစုကျွေးမွေးခြင်းဆိုင်ရာ ဗဟုသုတများကို ဟောပြောမည်ဖြစ် သဖြင့် သင်မသိသည်များကို ရှင်းလင်းအောင် မေးမြန်းလေ့လာ နိုင်မည်ဖြစ်ပါသည်။

သင့်အဖြေများကို အခြားသူများကို အသိပေးမည်မဟုတ်ပဲ သင့်အမည်ကိုလည်း လျို့ဝှက်သင်္ကေတဖြင့်သာ မှတ်သားထားမည်ဖြစ်သည်။ ကွန်ပြူတာအတွင်းသို့ သတင်းအချက်အလက် သိမ်းဆည်းသည့် အခါတွင် လျို့ဝှက်သင်္ကေတတစ်ခုတည်းသာ မှတ်တမ်းတင်မည်ဖြစ်ပြီး အိမ်အမှတ်၊ လမ်းအမည် စသည်တို့ကို မှတ်တမ်းတင်မည် မဟုတ်ပါ။ ရရှိလာသောသတင်းအချက်များကိုလည်း မြန်မာနိုင်ငံ၊ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်အတွင်းရှိ တစ်နှစ်အောက် ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့၏ အာဟာရကျွေးခြင်း ဆိုင်ရာ အလေ့အထကိုလေ့လာခြင်း စာတမ်းတွင်သာ အသုံးပြုမည်ဖြစ်ပါသည်။ ဤသုတေသနမှ လေ့လာတွေ့ ရှိချက်များကို ကျန်းမာရေးဦးစီးဌာနနှင့် အာဟာရစီမံချက်မန်နေဂျာတို့ကိုသာ ဖြန့်ဝေမည်ဖြစ်ပြီး ထိုသို့ဖြန့်ဝေရာတွင် သင်၏သတင်းအချက် အလက်တို့ကို သင်၏အမည်ဖြင့် ဖြန့်ဝေခြင်းပြုမည် မဟုတ်ပါ။

၁၁။ သတင်းအချက်အလက်များကို လုံခြုံစိတ်ချစွာ စနစ်တကျ ထိမ်းသိမ်းခြင်း

သင်နှင့်တွေ့ဆုံဆွေးနွေးသည့် မေးခွန်းလွှာတွင် သင့်အမည်အစား သင်္ကေတဖြင့်သာ မှတ်တမ်းတင်ပြီး၊ ထိုသင်္ကေတိုလည်း ကျွန်တော်တစ်ဦးတည်းသာ သိမည်ဖြစ်ပါသည်။ ကွန်ပြူတာ အတွင်းသို့ သတင်းအချက်အလက် သိမ်းဆည်းသည့်အခါတွင် လျို့ဝှက်သင်္ကေတတစ်ခုတည်းသာ မှတ်တမ်းတင်မည်ဖြစ်ပြီး အိမ်အမှတ်၊ လမ်းအမည် စသည်တို့ကို မှတ်တမ်းတင်မည် မဟုတ်ပါ။ မေးခွန်းလွှာများကို ဘွဲ့ယူစစ်တမ်း ပြီးဆုံးသည့်အခါတွင် စက္ကူဖြတ်စက်ဖြင့် ဖျက်ဆီးမည်ဖြစ်ပါသည်။ ကွန်ပြူတာအတွင်းရှိသတင်းအချက်များကို မဟာဒေါတက္ကသိုလ်ကိုသာလျင် တောင်းဆိုလာပါက ဝေမျှမည်ဖြစ်ပါသည်။

၁၂။ ဤသုတေသနတွင်ပါဝင်ခြင်းဆွေးနွေးခြင်းတွင် သင့်အနေဖြင့် ဖြေဆိုရန်ငြင်းဆိုခြင်း၊ ရပ်ဆိုင်းနိုင်ခွင့်ရှိခြင်း

သင်နှင့်တွေ့ဆုံဆွေးနွေးနေစဉ်အတွင်း သင့်အနေဖြင့် အချိန်မရွေး မည်သည့်အကြောင်းကြောင့် မဆို ဖြေဆို ရန်ငြင်းဆိုခြင်း၊ ဤသုတေသနတွင်ပါဝင်ခြင်းမှရပ်ဆိုင်းနိုင်ခွင့်ရှိခြင်းတို့ရှိကြောင်း အသိပေးလိုပါသည်။ ဤသို့ ဖြေဆိုရန်ငြင်းဆိုခြင်း၊ ဤသုတေသနတွင် ပါဝင်ခြင်းမှ ရပ်ဆိုင်းခြင်းတို့ကြောင့် သင့်အပေါ်တွင် ကျန်းမာရေး စောင့်ရှောက်မှုပေးခြင်းအပါအဝင် အခြားသော အခွင့်အရေးများ ရပ်ဆိုင်းခြင်းတို့ရှိမည် မဟုတ်ကြောင်း အသိပေးလိုပါသည်။

၁၃။ အရေးကိစ္စရှိပါက ဆက်သွယ်ရန်လိပ်စာ

ဒေါက်တာနေထွန်းကျော်

အမှတ် ၅၂၁၊ ၃-၄ စရီအယုဒ္ဓယလမ်း၊ ဖရာထိုင်းခရိုင်၊ ရာသာဘီ

ဘန်ကောက်။ စာတိုက်သေတ္တာအမှတ် ၁၀၄၀၀။

ဖုန်းနံပါတ် - ၀၉၄၈၂၇၄၆၀၃

၁၄၊မြင့်မိုရ်လမ်း၊စမ်းချောင်း၊ရန်ကုန်မြို့။

ဖုန်းနံပါတ် - ၀၉၅၀၈၀၉၁၇

ဤသုတေသနကို လူသားများနှင့်ပတ်သက်သောသုတေသနကျင့်ဝတ်ကော်မတီ၊
ပြည်သူလူထုကျန်းမာရေးဌာန၊ မဟီဒေါတက္ကသိုလ်မှ အတည်ပြုပေးပြီး ဖြစ်ပါသည်။ ရုံးလိပ်စာမှာ တိုက်အမှတ်(၁)၊ ၄-လွှာ၊ အမှတ် ၄၂၀/၁ ရာဝီသီလမ်း၊ ရာသီဗီ၊ ဘန်ကောက် ၁၀၄၀၀၊ ဖုန်း ၀-၂၃၅၄-၈၅၃၀၉ လိုင်းခွဲ ၁၁၂၇၊ ၇၄၀၄။ ကြေးနန်း ၀-၂၆၄၀-၉၈၅၄ ဖြစ်ပါသည်။

APPENDIX I

INFORMED CONSENT FORM

EC-4 Form

Project Title: Infant Feeding Practices of Caretakers in Hlaingtharyar Township in Yangon Region, Myanmar

Responsible person(s) and institute: …. Nay Tun Kyaw, MPH 2014 International Programme Student, Faculty of Public Health, Mahidol University, Bangkok, Thailand….

Date ……...……
(day/month/year)

I (Mr./Mrs./Ms.)…….……..…..……...……
Home address……..…… Street……..…… Village number……
Sub district……. District…...…… Province……..…Postal code…….

I have read and understood all statements in the **information sheet**. I have also been explained the objectives and methods of the study, as well as possible risks and benefits that may happen to myself upon the participation in the study. I understand that the information will be kept confidential and my name will not be declared in any case. I shall be given a copy of the signed **informed consent form**.

I have the right to withdraw from the project at any time without any adverse effects upon myself.

Signature…..……..… (Respondent/informant)
(…….……..)
Signature…… (Researcher)
(…Nay Tun Kyaw…....)

I cannot read but before having finger print on this **informed consent form**, the investigator/interviewer has read and explained to me in detail about the study, the information sheet and the **informed consent form** until I completely understood.

Signature……..… (Respondent/informant)
(…….)
Signature……..… (Researcher)
(..…Nay Tun Kyaw ……..)

EC-4 Form

နားလည်သဘောတူညီမှု အကြောင်းကြားစာ

၁။ သုတေသနခေါင်းစဉ် - မြန်မာနိုင်ငံ၊ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်အတွင်းရှိ ကလေးသူငယ် ပြုစုစောင့်ရှောက်သူတို့၏ အာဟာရကျွေးခြင်းဆိုင်ရာ အလေ့အထကို လေ့လာခြင်း

တာဝန်ရှိသူ - ဒေါက်တာနေထွန်းကျော်
ကျောင်းသားအမှတ်စဉ် - ၅၇၃၇၀၄၅
လူထုကျန်းမာရေးမဟာဌာန၊ မဟီဒေါတက္ကသိုလ်
ဘန်ကောက်မြို့၊ထိုင်းနိုင်ငံ

နေ့စွဲ ..... (ရက်၊လ၊နှစ်)

အိမ်အမှတ် ..... လမ်း ..... ရပ်ကွက် ..... မြို့နယ် .....တွင် နေထိုင်သော ကျွန်တော်/ကျွန်မသည်

သုတေသနဆိုင်ရာသတင်းအချက်အလက်တွင် ပါရှိသော အကြောင်းအရာများအားလုံးကို ဖတ်ရှုနားလည်သဘော ပေါက်ပြီးဖြစ်ပါသည်။ ကျွန်တော်/ကျွန်မကို ဤသုတေသနနှင့်ပါတ်သက်သော ရည်ရွယ်ချက်၊ လုပ်ကိုင်ဆောင်ရွက် ရမည့်အလုပ်များနှင့်တကွ ဖြစ်ပေါ်လာနိုင်သော စွန့်စားရခြင်း၊ မမျှော်လင့်ထားသော အကြောင်းအရာများ ဖြစ်လာ နိုင်ခြင်း၊ ဤသုတေသနမှ ရရှိမည့် အကျိုးကျေးဇူးများကို ရှင်းပြထားပြီး ဖြစ်ပါသည်။ ရရှိလာသောသတင်းအချက်များ ကိုလည်း လုံခြုံစွာထားရှိမည့်အကြောင်းနှင့် ကျွန်တော်/ ကျွန်မ၏အမည်ကိုလည်း မည်သည့်အကြောင်းကြောင့်မဆို ထုတ်ဖော်မည်မဟုတ်ကြောင်းကိုလည်း နားလည်သိရှိပါသည်။ အထက်ပါအကြောင်းအရာများကို ကျွန်တော်/ကျွန်မသည် နားလည်သဘောတူ ကြောင်းကို ဤနားလည်သဘောတူညီမှု အကြောင်းကြားစာတွင် လက်မှတ်ရေးထိုးပါသည်။

တွေ့ဆုံဆွေးနွေးနေစဉ်အတွင်း ကျွန်တော်/ကျွန်မ့အနေဖြင့် အချိန်မရွေး မည်သည့်အကြောင်းကြောင့်မဆို ဖြေဆို ရန်ငြင်းဆိုခြင်း၊ ဤသုတေသနတွင်ပါဝင်ခြင်းမှရပ်ဆိုင်းနိုင်ခွင့်ရှိခြင်းတို့ရှိကြောင်း၊ ဤသုတေသနတွင်ပါဝင်ခြင်းမှ ရပ်ဆိုင်းခြင်းတို့ကြောင့် ကျွန်တော်/ကျွန်မကို ကျန်းမာရေး စောင့်ရှောက်မှုပေးခြင်း အပါအဝင် အခြားသောအခွင့် အရေးများ ရပ်ဆိုင်းခြင်းတို့ ရှိမည်မဟုတ်ကြောင်းကို သိနားလည်ပါသည်။

လက်မှတ် ..... (ဖြေဆိုသူ)

.....

လက်မှတ် ..... (သုတေသနပြုသူ)

.....ဒေါက်တာနေထွန်းကျော်.....

ကျွန်တော်/ကျွန်မသည်စာမဖတ်နိုင်သော်လည်း ဤနားလည်သဘောတူညီမှု အကြောင်းကြားစာတွင် ပါရှိသော သုတေသနဆိုင်ရာအချက်အလက်အားလုံးကို အသေးစိတ်နားလည် ရှင်းလင်းသည်အထိ ဖြောပြပါသဖြင့် ဤနားလည် သဘောတူညီမှု အကြောင်းကြားစာတွင် လက်ဗွေနှိပ်ပါသည်။

လက်မှတ် ..... (ဖြေဆိုသူ)

.....

လက်မှတ် ..... (သုတေသနပြုသူ)

.....ဒေါက်တာနေထွန်းကျော်.....

BIOGRAPHY

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