INFANT FEEDING: REALITIES FROM HIV POSITIVE MOTHERS IN MANDALAY, MYANMAR

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INFANT FEEDING: REALITIES FROM HIV POSITIVE MOTHERS IN MANDALAY, MYANMAR

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ABSTRACT

Nowadays, in the world, HIV is still a social burden disease and infant feeding practices for the under six months olds are also one of the cultural practices. HIV and infant feeding issues are matters of social, cultural, economic and policy issue in HIV positive mothers and the health of babies born to HIV positive mothers.

This research was conducted in Mandalay, the third capital of Myanmar, for six months to explore various cultural issues of under six months infant feeding practices among HIV positive mothers, to find out which socio-cultural and political determinants were configuring those infant feeding patterns and to learn which understandings of under six months infant feeding HIV positive mothers were similar to or different from those of medical professionals. Field research was performed with in-depth interviews with 13 HIV positive mothers, 10 medical professionals and peer counselors, and focus group interviews with 16 HIV positive mothers while participant observations were conducted during interviews with a qualitative approach.

Twenty five out of total 29 HIV positive mothers were practicing various cultural mixed feedings to their under six months infants according to their cultural beliefs and practices related to infant health, growth and development, the local small babies' illnesses and disease diagnosis, treatment and prevention using foods, drinks and drugs; including traditional and western drugs for self medication purposes. HIV positive mothers were led to practice cultural mixed feeding, resulted from strong cultural beliefs as well as a result of policy structural function impacts and economics in the midst of cultural seniority, good motherhood and cultural learning perceptual concepts.

On the other hand, two out of three mothers practicing exclusive formula feeding, and one mother practicing exclusive breastfeeding, had a strong belief in the modern medical professional's suggestions concerning HIV and infant feeding practices and the good mother concept to prevent HIV transmission to their babies. Although both kinds of mothers who chose to practice exclusive breastfeeding or exclusive formula feeding, usually practiced mixed feeding, medical professionals assumed mothers who chose to practice exclusive formula feeding were less likely to practice mixed feeding, because those mothers were provided with medical professionals' counseling sessions for HIV and infant feeding.

KEY WORDS: HIV POSITIVE MOTHERS/ UNDER SIX MONTHS INFANT FEEDING/ SOCIO-CULTURAL DETERMINANTS/ LOCAL SMALL BABIES ILLNESSESS AND DISEASES

179 pages

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LIST OF ABBREVIATIONS

AFASS	Acceptable, feasible, affordable, sustainable and safe
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Anti-retroviral therapy
ARV	Anti Retroviral Drugs
CBO	Community based Organization
CHERG	Child Health Epidemiology Reference Group
EBF	Exclusive Breastfeeding
ECF	Early Complementary Feeding
EFF	Exclusive Formula Feeding
EIDs	Emerging Infectious Diseases
ERF	Exclusive Replacement Feeding
FGD	Focus Group Discussion
GIFA	The Geneva Infant Feeding Association
HIV	Human Immunodeficiency Virus
IBFAN	The International Baby Food Action Network
IEC	Information, Education and Communication
INGOs	International Non-government Organizations
MDG	Millennium Development Goals
MF	Mixed Feeding
MICS	Multiple indicator cluster surveys
MoH	Ministry of Health
MoNPED	Ministry of National Planning and Economic Development
NAP	National AIDS Programme
NGOs	Non-government Organizations
OPD	Out-patient Department
ParF	Partial Feeding

LIST OF ABBREVIATIONS (cont.)

PLHIV	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child HIV transmission
PreF	Predominant feeding
SEA	South East Asia
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations International Children's Emergency Fund
VCCT	Voluntary and Confidential Counseling and Testing of HIV
WHO	World Health Organization

CHAPTER I
INTRODUCTION

1.1 Justification

1.1.1 Why study HIV/AIDS?

1.1.1.1 Global profile of HIV/AIDS

Nowadays, HIV/AIDS occupies a top priority disease position among 'Emerging Infectious Diseases' (EIDs). Among 6000 millions of world population,

- 34 millions of people were infected with HIV/AIDS (0.6 % of total world population).
- 2.5 millions were annually infected with HIV (0.04 % of total world population).
- About 1.7 millions (0.03% of total world population) died of HIV related diseases annually, due to inaccessibility to ART (Anti-retroviral therapy) and terminal stages of AIDS.
- Only 8 million out of 22.8 millions ART eligible patients could access ART (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2011).

It was claimed that HIV prevalence and incidence rate were still high in the reproductive age (between 15 years and 49 years) of both man and woman, as a notorious leading cause of death and disease among fertile population of women (15-49 years) worldwide and women occupied the half portion of HIV patient population (UNAIDS, 2011).

According to World Health Organization [WHO] (2013a), in the first 22 prioritized countries with the highest prevalence rates of HIV, there were about 1,185,400 women living with HIV, delivering in 2010. Mother to child HIV

transmission rate was 25 % in average and there were cases of 304,800 new child HIV infection due to mother to child HIV transmission in those countries in 2010 (WHO, 2013a). Therefore, it is needed to consider the issue of pregnant women and HIV, the issue of 'Prevention of Mother to Child HIV transmission (PMTCT)' including ART for HIV positive pregnant women and mothers, ARV (antiretroviral drugs) prophylaxis during pregnancy and delivery, and ARV prophylaxis to the HIV exposed newborn, early diagnosis and appropriate ART treatment for HIV infected children, and infant feeding issue. Table 1.1 indicates global and South East Asia data of HIV/AIDS infection among children aged 0-14 years old, as of 2010.

Table 1.1 Global and South East Asia data of HIV/AIDS among children (0-14 years) in 2010

Region/ cases	Children living with HIV	Children newly infected with HIV	AIDS related death among children	<5year children mortality rate due to HIV/AIDS in WHO first prioritized 22 HIV high prevalence countries
Global	3,400,000	390,000	250,000	11.1%
South East Asia	140,000	17,000	12,000	

Source: WHO (2013a and 2013b): Annex 8. HIV and AIDS statistics, by WHO and UNICEF regions (2010)

1.1.1.2 Myanmar profile of HIV/AIDS

Myanmar is also one of the highest HIV prevalent countries, and has low ART coverage. National HIV profile, in 2011, stated that there was a prevalence estimation of about 216,000 while female had 36 percentages of total prevalence and about 18,000 of people died of AIDS-related illness. There was estimated incidence of more than 8,000 cases (National AIDS Programme [NAP], 2012, p.4). There was higher HIV prevalence rate in urban areas than rural areas, including pregnant women population (NAP, 2012). The following table indicates HIV/AIDS prevalence in adult population of Myanmar for 2011.

Table 1.2 HIV/AIDS prevalence of aged 15+ in Myanmar, 2011

Group (aged 15+)	Female population	Male population	general population
Percentage	0.38%	0.65%	0.53 %

Source: NAP (2012)

Additionally, United Nations International Children's Emergency Fund [UNICEF] (2013c) claimed that there was estimated number of 81,000 women living with HIV (aged above 15 years) in 2009, Myanmar. And, HIV prevalence rate among pregnant women in 2011 was 0.9% and it was higher than general population's prevalence rate of HIV (0.53 %) (NAP, 2012)**.** Because of high HIV prevalence rate among pregnant women, it is needed to consider about 'Mother to Child HIV transmission' during pregnancy, delivery and, infant feeding and infant caring period.

NAP (2012) claimed that the trend of mother to child HIV transmission had not been reduced sharply downward as husband to wife HIV transmission trend, and sexual transmission trend (see Fig 1 in Appendices). Although ART was scaling up, for both treatment and prophylaxis, in PMTCT projects in Myanmar, HIV transmission trend of mother to child was not significantly reduced. Unfortunately, data of children HIV profile including prevalence rate and incidence rate in Myanmar are not available because of limitation of researches and data reports.

1.1.2 Why study Infant Feeding Practices?

Considering high HIV prevalence in pregnant women, high mother to child HIV transmission, high HIV prevalence in children and, high infant and under five children mortality rate in developing countries, biomedicine and public health professionals had the following epidemiology assumption and pathophysiology theories.

1.1.2.1 Association between mother to child HIV transmission and infant feeding practices

HIV virus was transmitted to infants from their HIV positive mothers with approximated rate of about 35% during mother to child transmission high risk periods such as pregnancy, delivery and breastfeeding. Fifteen to twenty five

percent of mother to child HIV transmission accounted for pregnancy and delivery period while breastfeeding was responsible for 15% of vertical HIV transmission, claimed UNICEF (2013a).

UNICEF (2013b) confirmed other factors that could increase HIV transmission to the infant born to HIV positive mother, such as mother's high HIV viral load count, window period, the duration of breastfeeding, which was directly proportional to the vertical transmission rate, and pathologies of breast such as mastitis and sore breasts. It was also claimed that infant feeding patterns were also associated with HIV transmission risk through breast milk. Myint, Phyu, and Oo (2009, p.6) had reported that there was strong association between mixed infant feeding practice and HIV test reactive results while exclusive breastfeeding and replacement feeding practices showed low HIV positive tests.

1.1.2.2 Association among infant and under five year children mortality, morbidity and infant feeding patterns

Ministry of National Planning and Economic Development [MoNPED] and Ministry of Health [MoH] (2011): UNICEF (2013b) reported that mothers, with or without HIV, could prevent their children from childhood infections such as pneumonia, diarrhea, malnutrition and childhood infection related deaths in under five years of age, especially in under one year of age by practicing exclusive breastfeeding which provided essential nutrients for infants' health and also for economically cost effectiveness. It was stated that mixed feeding had the same risk for the occurrence of diarrhea in infants as formula milk feeding did and it reduced "chances of survival" (UNICEF, 2013a, HIV and Infant Feeding: Breastfeeding and HIV transmission section, para. 4).

Furthermore, for the HIV exposed infants born to HIV infected mothers, the risk of HIV infection [due to exclusive breastfeeding] needed to be compared with the risk of disease burden and deaths due to not [exclusive] breastfeeding (UNICEF, 2013b). It was needed to weigh the risks of vertical HIV transmission in infant born to HIV positive mother, infant and under five mortality rates due to HIV/AIDS, and the risks of morbidity and mortality due to not breastfeeding related childhood diseases. By comparing exclusive breastfed infants between the age of 0 to 5 months with other types pattern fed infants of the same age,

it was found that the mortality rate of predominant breastfed, partial breastfed, and not breastfed children were at the higher times of 1.5, 2.9 and 14.4 respectively than exclusively breastfed infant (Black et al., 2008).

Although there was limited available data regarding the likelihood that exclusive breastfeeding could directly prevent infant mortality in Myanmar, according to WHO/ Child Health Epidemiology Reference Group [CHERG] (2011), the percentage of global and Myanmar significance of neonatal deaths and under five deaths was claimed as infections such as diarrhea, pneumonia, measles and meningitis accounted for 27%, which could be preventable by immunoglobulin, factors and nutrients gained from exclusive breastfeeding practices while other unidentifiable deaths accounted for 20 % and HIV/AIDS only 1 % (see also Fig 2 and Fig 3 in Appendices). According to above evidences and 2010 WHO Infant Feeding Guidelines (See also Table 1 in Appendices), the following table can be constructed for exclusive breastfeeding (EBF), exclusive replacement/formula feeding (ERF/EFF) and mixed feeding (MF) relating with mother to child HIV transmission, and with infant and under five mortality rates.

Table 1.3 Recommendation for infant feeding practices relating with aims of infant feeding intervention

Objectives/ Recommendation	Recommendation	NO recommendation
To reduce mother to child HIV transmission	ERF (EFF)/EBF	Mixed feeding
To reduce infant and under five mortality	EBF	ERF (EFF)/ Mixed feeding

And the following literatures indicated current infant feeding practices: low exclusive breastfeeding, high mixed feeding, high infant and children malnutrition rate and mortality rate.

1.1.2.3 Infant feeding practices, and malnutrition rate (Global and Myanmar profiles)

The following figure from MoNPED and MoH (2011) showed various patterns of infant feeding in all mothers, both HIV negative and HIV positive mothers, at various ages of months of infants with percentage of each feeding practices in Myanmar.

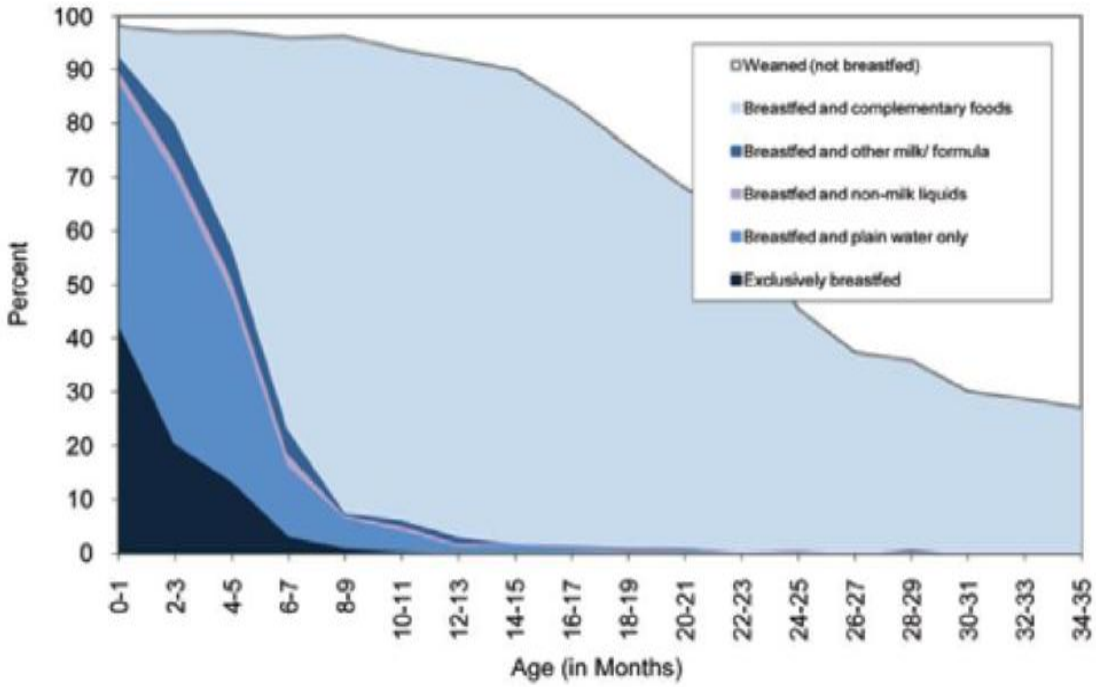

Figure 1.1 Infant feeding patterns by age: Percent distribution of children aged under 3 years by feeding pattern by age group, Myanmar (2009-2010)

Source: MoNPED and MoH: Multiple indicator cluster surveys (MICS) (2011, p. 19)

Exclusive breastfeeding rate of all mothers including both HIV negative and HIV positive mothers in Myanmar was only 23.6 percent of all feeding practices: exclusive breastfeeding, mixed feeding and exclusive replacement feeding. And exclusive breastfeeding was less practiced in urban areas than rural areas (MoNPED and MoH, 2011).Furthermore, Black et al. (2008) claimed that in Africa, Asia, and Latin America and the Caribbean, only half of mothers exclusively breastfed their babies younger than 2 months and exclusive breastfeeding rate for the children 2-5 months was only 25-31% and for children between 6 and11 months, breastfeeding rate was only 6% (Africa), 10% (Asia) and 32% (Latin America and the Caribbean)**.**

Simultaneously with low exclusive breastfeeding rate in Myanmar, UNICEF (2013c) stated about under-nutrition and stunting rate of under five children in 2010 that 23% of children were suffering moderate underweight problem and 6% were suffering severe underweight problem while 8 % of children were suffering moderate and severe wasting and 35% of children were suffering severe and moderate stunting. MoNPED and MoH (2011) also mentioned that "low levels of adequate feeding of infants is mainly due to the low prevalence of exclusive

breastfeeding up to six months" (p. xii). Unfortunately, infant feeding practices, child health and mortality profile among Myanmar HIV positive mothers only is not available until now and it can be shown only with general population data of mothers including HIV positive mothers.

1.1.2.4 Infant and under five year children Mortality (Global and Myanmar profiles)

WHO (2013c) pointed out that after the neonatal life, pneumonia, diarrhea, malaria, measles and HIV/AIDS were notorious for the deaths of children up to five years of age with malnutrition or under-nutrition as an underlying contributing factor. Children from poor families in urban area of Africa, America and Asia had higher risk than those from rich families, to die during their infancy (WHO, 2013c). UNICEF (2013c) mentioned that Myanmar had the highest 45th rank of under five children mortality rate in 2010 in the world. The World Bank (2013a: 2013b) stated the infant mortality rate and under five year children mortality rate of 2011 for the following regions.

Table 1.4 Infant mortality rate and under five year children mortality rate (2011)

Region	**World**		**East Asia and Pacific (all income level)**		**East Asia and Pacific (developing countries)**		**Myanmar**	
Infant/ under-5	Infant	<5	Infant	<5	infant	<5	infant	<5
Percentage per 1,000 live births	36.9	51.4	16.17	19.73	17	20.7	47.9	62.4

Source: The World Bank (2013): SH.DYN.MORT_Indicator_MetaData_en_EXCEL (Ed.), Microsoft Excel and SP.DYN.IMRT.IN_Indicator_MetaData_en_EXCEL (Ed.), Microsoft Excel

By linking low exclusive breastfeeding rate, high malnutrition rate and, high infant and under five children mortality rates, it was concluded that there was an association between exclusive breastfeeding rate and, infant and under five children mortality rate (MoNPED and MoH, 2011) (see also table 2 in Appendices).

1.1.3 Why apply Cultural Interpretive Medical Anthropology with Critical approach?

Aung San Su Kyi (Myanmar Democracy Leader and Statesman, Nobel prize winner, UNAIDS Global Advocate for Zero Discrimination) and Michel Sidibe (UNAIDS Executive Director) claimed that people living with HIV/AIDS have been marginalized, stigmatized and excluded in the world until now, in world AIDS day report (UNAIDS, 2012).

However, there have been limited available research articles in Myanmar, that consider socio-cultural influences on under six months infant feeding practices among both HIV positive mothers and general population of mothers. Thin (2003, p. 35) endeavored that early complementary feeding (ECF) or mixed feeding practices were multidimensional problems, but mainly driven by the cultural beliefs and practices, and argued, "Water and food besides breast milk are usually introduced due to the influences of socio-cultural condition". UNICEF (2013a) stated that mixed breastfeeding were still being practiced as a cultural and social norm for under six months infant feeding in many high HIV prevalent countries and exclusive breastfeeding rate in those countries was lower than recommended, e.g. only 33% of exclusive breastfeeding rate could be achieved in Sub-Sahara Africa, the most HIV prevalent area.

Thin (2003) stated that Myanmar cultural and social factors were influencing the beliefs and practices of breastfeeding. Breastfeeding mothers had the traditional beliefs that mixed feeding practices could make their baby's muscle tolerant to insect's bite. Thairu et al. (2005) argued to provide culturally appropriate support for the infant feeding decision of HIV positive mothers. Furthermore, Moland (2004, p. 83) claimed that critical interpretive point of view was needed to analyze HIV and breastfeeding in terms of social and cultural issue.

In conclusion, mixed feeding practices are still being practiced in Myanmar by mothers including HIV positive mothers as a cultural and social norm in the context of traditional mother life, daily household job, housewife job and paid job within contemporary globalizing environment. So, to design and implement culturally appropriate and acceptable behavioral change PMTCT programs, it is essential to explore and understand HIV positive mothers' under six months infant feeding

practices, their cultural beliefs and explanatory model related to childhood diseases and prevention, and mother to child HIV transmission prevention. Cultural medical anthropology with complementary critical model will be used to investigate and analyze the links among individual cultural infant feeding beliefs and practices, intermediate level of society and community's structures, forces and power relationship driving to more mixed feeding practices, macro level structure's policy needed to improve, and how explanatory model of HIV positive mothers concerning under six months infant feeding practices is similar to or different from that of public health professional sector medical systems, and moreover, that model will be used to achieve exploratory in depth information and facts for under six months infant feeding sector of PMTCT program implementation.

1.2 Research Questions:

Main Research Question: What are under six months infant feeding practices, cultural beliefs and explanatory model among HIV positive mothers and why they are practicing those infant feeding patterns?

Specific Research Questions:

1. What are HIV positive mothers' under six months infant feeding practices, and, cultural beliefs and explanatory model behind those infant feeding patterns?
2. What are social determinants of HIV positive mothers' under six months infant feeding practices and how do those socio-cultural determinants influence those practices?
3. How explanatory model of HIV positive mothers concerning under six months infant feeding practices is similar to or different from that of Public Health sector?

1.3 Research Objectives:

1. to explore and understand various under six months infant feeding patterns among HIV positive mothers, and their cultural beliefs and explanatory model behind those infant feeding patterns,

2. to identify and analyze the socio-cultural determinants figuring the under six months infant feeding practices among HIV positive mothers, and how those determinants are figuring those under six months infant feeding beliefs, patterns and practices,

3. to explore how explanatory model of HIV positive mothers concerning under six months infant feeding practices is different from or similar to that of Public Health sector.

1.4 Terminology and Definitions

1. Exclusive breastfeeding **(EBF)**: feeding infant with only mother breast milk ["and vitamins, mineral supplements, or medicine" (MoNPED and MoH, 2011, p. 18)] up to six months of age followed by complementary feeding and then weaning diet at the age of one year for HIV exposed infant born to HIV positive mother, and it does not allow to feed even water (WHO, 2010) (See also table 1 in Appendices).

2. Exclusive replacement feeding **(ERF)** or Exclusive formula feeding **(EFF)**: feeding infant with only formula milk up to six months of age and then followed by complementary feeding, (WHO, 2010) (See also table 1 in Appendices).

3. Mixed feeding (**MF**)/ early complementary feeding (**ECF**): feeding infant with breast milk as well as with formula milk and/or other locally practiced foods, drinks and water at early months of age before six months. [Mixed feeding= predominant breastfeeding or partial breastfeeding or early complementary feeding] (WHO/UNICEF, 1989, as cited in Thairu et al, 2005).

4. Predominant feeding (**PreF**): feeding infant with only "water or teas in additional to breast-milk" at early months of age (Black et al., 2008, p.12).

5. Partial feeding (**ParF**): feeding infant with "other liquids or solids in addition to breast-milk" (Black et al., 2008, p.12).

6. Early Complementary feeding (**ECF**): feeding infant with other kinds of food in early months of age before four months of age [now, which are advised to start only after six months of age] (Thin, 2003).

CHAPTER II
LITERATURE REVIEW & CONCEPTUAL FRAMEWORK

This chapter was focused on systematic literature review in order to achieve explicit understanding on medical anthropology perspectives and theories, critical understanding of published research articles, reports and related accessible literatures to construct an applicable conceptual framework for field research guidelines to fulfill the objectives of the research.

2.1 Overview of Infant Feeding guidelines and recommendations, and related articles considering the infant's HIV- free survival

It was assumed that not breastfeeding or early discontinue of breastfeeding was appropriate to reduce HIV transmission to the infant born to HIV positive mother, in the past. But, many studies approved that non breastfed children suffered high diarrhea, malnutrition and other diseases resulting in high mortality rate. "2010 recommendations are based on evidence of positive outcomes for HIV-free survival through provision of ARVs to breastfed HIV-exposed infants. Thus the focus is now firmly on ensuring HIV-free survival**,** not just on preventing transmission" (UNICEF, 2013a, HIV and infant feeding: Breastfeeding and HIV transmission section, para. 1).

WHO and UNICEF set up '2010 infant feeding guidelines' for encouraging mothers without HIV or mothers who do not know their HIV status to exclusively breastfeed their infant until six months of age, followed by safe and nutritious complementary foods and to continue breastfeeding up to two years of age or more. It also recommended feeding complementary food twice daily to the infants of 6-8 months of age and thrice daily to the infants of 9-11 months of age (MoNPED and MoH, 2011).

Additionally, for HIV positive mother, it was recommended that during the era of ARVs, if either HIV positive mother or infants took ARVs for PMTCT, the mother can exclusively breastfeed to her infant safely. National health policy makers should set up PMTCT strategies in national maternal and child health policy whether to apply [exclusive] breastfeeding with anti retroviral therapy (ART) or with ARV prophylaxis, or to avoid all breastfeeding [to apply exclusive replacement feeding] according to 'WHO 2010 HIV and Infant Feeding Guidelines' (UNICEF, 2013b). When the national health policy makers set up the policy of ARV and exclusive breastfeeding regime, the national guidelines suggested HIV positive mother breastfeed her infants until at least 12 months of age, with the first six months duration of exclusive breastfeeding. Either the mother or the infant should continue taking ARVs depending on PMTCT protocol the country had set up, until one week after all breastfeeding was discontinued (UNICEF, 2013b)**.** In additional to this, UNICEF (2013a) claimed exclusive replacement feeding:

> Recommendation that replacement feeding should not be used unless is it acceptable, feasible, affordable, sustainable and safe (AFASS) remains…It was believed that more carefully defining the environmental conditions that make replacement feeding a safe or unsafe option for HIV-exposed infants will enhance mothers' understanding and practices and improve HIV-free survival of infants. (HIV and Infant Feeding: The 2010 UN Guidelines on HIV and Infant Feeding section, para. 6)

And UNICEF (2013b) recommended the health policy makers and field level implementers to promote exclusive breastfeeding as an appropriate feeding practice in respective setting even if the ARVs had not been available and accessible. It was also needed to prevent misunderstanding of HIV infected mothers, and misconception like it is only to exclusively breastfeed their HIV exposed infants only when they were taking ARVs. Even in the condition where both mothers and infants were infected with HIV, it was recommended to continue breastfeeding to achieve advantages of immunoglobulin, factors, nutrients and antibodies that could prevent childhood diseases even as the breast milk was from mother living with HIV (WHO, 2010). (See also in table 1 in Appendices).

Furthermore, it was found that exclusive breastfed child for the first six months of age had 3-4 times lower risk of mother to child HIV transmission due to breastfeeding compared with mixed breastfed child. HIV was transmitted to only about 4% of exclusively breastfed infants between 6 weeks and 6 months, even the mother and infant could not take ARV (Anti retroviral drugs) as treatment or prophylaxis (WHO, 2007 as cited in UNICEF, 2013b). Exclusive breastfeeding had been proved to be as effective as exclusive replacement feeding in preventing mother to child HIV transmissions (Coutsoudis et al., 1999, as cited in Thairu, Pelto, Rollins, Bland and Ntshangase, 2005).

A prospective study was conducted on 14,110 mothers with or without HIV who enrolled in post partum vitamin A supplement project. After they had received infant feeding counseling and education, the information about infant feeding practices were collected. Association between infant mortality and morbidity of various childhood infections was examined. The study found that "EBF [Exclusive breastfeeding] may substantially reduce breastfeeding-associated HIV transmission" (Iliffa et al., 2005, p. 699).

UNICEF (2013a) also explained the patho-physiology of HIV transmission through mixed feeding practices that mixed feeding to the infants under six months of age resulted in increased mother to child HIV transmission because foods and liquids fed to the infant irritated and ulcerated the sensitive and soft infant's gut walls and HIV virus easily entered ulcerated and abraded gut wall of infants (HIV and Infant Feeding: Breastfeeding and HIV transmission section, para. 4). According to WHO new guideline (see Table 1 in Appendices), it was said that even if ARV taking mother practiced mixed feeding to her infant, there might be a higher rate of HIV transmission compared with a ARV taking mother who practiced exclusive breastfeeding only (WHO, 2010). HIV transmission rate was decreasing for mothers who were practicing exclusive breastfeeding. But, mixed feeding mothers took the higher risk of HIV transmission to their infant. Therefore, it was needed to discourage mixed feeding to the first six months age of infant (UNICEF, 2013b). And Slater, EM. Stringer and JS. Stringer (2010) found out that "Exclusive breastfeeding is much safer than mixed feeding (the supplementation of breastfeeding with other foods), and should be

encouraged even in settings where ART for either the mother or infant is not readily available" (p. 1).

Concerning exclusive breastfeeding and exclusive formula feeding, Kuhn and Aldrovandi (2010) analyzed the epidemiologic facts and data for balancing the positive and negative impacts of various infant feeding practices among HIV positive mothers with different socio-economic conditions. It was found that formula feeding could prevent mother to child HIV transmissions, but it was notorious for the association with increased child death in both HIV infected and HIV non-infected children populations. Antiretroviral drugs (ARV) could prevent and reduce mother to child HIV transmission during pregnancy, delivery and breastfeeding. It was concluded that exclusive breastfeeding practices provided more advantages for the child health and survival rate than HIV transmission risks, with the help of ARV in the developing world of resource limited setting.

2.2 Medical Anthropology

Pool and Geissler (2005) stated that anthropology was the study of humans and society in widest sense with the heart of culture and that it lies between the poles of humanities and science. In American anthropology classification, there were four major fields such as physical anthropology, archeology, linguistics, and cultural anthropology. Sobo (2004) claimed that since the first days of anthropology, health field had been interested by anthropologists. But, the specialized field, so called medical anthropology, had been systematized and organized only decades ago. Medical anthropology had focused on the issue of applied and theoretical, ethnological (cross cultural) and ethnography (mono-cultural), and comparative cross cultural perspective and contemporary ethnography.

Hardon et al. (2001) defined medical anthropology as "the study of medical phenomena as culture" (p.6). Baer, Singer and Susser (2003) argued that medical anthropology functioned to explore and analyze attributing factors to disease and illness and to understand patterns and process of human society's cultural ongoing process to those disease and illness because of human body's nature as output of biological and socio-cultural relationship. Moreover, medical anthropology served as a

link and connection between physical anthropology and socio-cultural anthropology. McElroy and Townsend (2009) mentioned four perspectives: medical ecological theories, interpretive theories, political economy or critical theories, and political ecological theories. Whatever it was the classifications of medical anthropology; theoretical perspectives of medical anthropology had been adopted and adjusted from various concepts of anthropology and social science field (Baer et al., 2003).

Relating to general theoretical concepts of medical anthropology, Baer et al. (2003) explained medical ecological theory that human survival and health was entirely dependent upon behavioral and biological adaptive behaviors at micro individual and intermediate society level in the changing environment and changing social context at a specific time. And, health and illness were seen as natural issue, for example, gene mutation and adaptation resulting in hemoglobin pattern changes resulting in resistance to malaria disease in malaria endemic area.

Regarding political ecological theories, Baer et al. (2003) stated that the term political ecology was used to emphasize "the complex interaction of political economy and environment, particularly under capitalism" (p.73-74). And, Baer et al. (2003) claimed that political ecology approach made humans realize and understand the complex reality of social behavior. It also made humans able to terminate the social relationship structure that were leading people to diseases and unfavorable conditions by alienating, eliminating, and that were destroying ecosystem of local society.

2.3 Cultural Interpretive Medical Anthropology and Infant Feeding

Byron J. Good (1994) explained that diseases were classified, diagnosed and treated according to various cultural medical systems (as cited in Baer et al., 2003). Hardon et al. (2001) argued that health care system was classified according to "various levels of organization. Starting from the household. . . organize their ideas and activities to maintain or restore health, one may move to higher levels such as the local community, the district, the region, the national level and finally the international

level" (p. 27). Baer et al. (2003); Hardon et al. (2001) mentioned Chrisman and Kleinman's health system:

1. popular sector composed of self medication, self care, family and social network's various therapies from social counseling to self use of antibiotics,
2. folk sector composed of herbalists, bonesetters, etc, and
3. professional sector composed of western medicine as well as other professionalized heterodox medical systems such as Ayurvedic and Unani medicine professional sectors.

And it was claimed that medical system was composed of traditional values, norms and values of treatment satisfaction and assessment of treatment given by practitioners, local understanding of disease and illness causation, social role, status, interactions within the context of power relationship and medical system was altering with the flow of context and situation changes. Through a systematic structure of interpretation, interaction of biological events, social practices and culturally systematized structure of meaning leaded to local etiological diagnosis and treatment. And also, it was explained about western medicine as a kind of cultural medicine practices (Byron J. Good, 1994, as cited in Baer et al., 2003). Furthermore, concerning with food, preparing food and feeding infant, McElroy & Townsend (2009) stated that anthropologists were also concerned with the symbolic meaning of foods in different cultures and with the ways in which foods were combined as culturally acceptable meals.

2.3.1 Cultural and local beliefs, practices and explanatory model concerning infant feeding

General population of mothers' context

Cultural mixed feeding practices related to infant health and growth

In the context of culture, infant feeding beliefs and practices were influenced by local cultural practices and it was found that mixed feeding or early complementary feeding (ECF) practices were concerned with intense cultural beliefs and worries about infants' health (Thin, 2003). And, most of the mothers who

practiced early complementary or mixed feeding assumed that mixed feeding was needed for their infants' health and development. For an example, they believed that *Hta min* (steamed soft rice) was suitable to their infants for healthy development and if it was fed, infant could stand the bite of insects (Thin, 2003). Moreover**,** Davies. A and Anita (1997) argued that community believed that the new born infants needed water for the relief of thirst, their growth and development and the community fed watery maize paste as the main complementary food.

Cultural mixed feeding practice related to customary practice

In addition to local beliefs about infant health, Davis, Tagoe-Darko and Mukuria (2003) stated that as a cultural welcoming behavior to the new born infant or as the belief that the infants felt too tired from struggling to come out during delivery, the infants were fed with water and glucose solutions even in the early months of life.

Cultural beliefs about exclusive breastfeeding, breast milk and infant health

Davies. A and Anita (1997) claimed that the community assumed that exclusive breastfeeding alone was dangerous for infants' health. And also, for colostrums of mother, the society assumed that it was dirty because of pus appearance of colostrums and so, it could harm to the infants. They also suspected expressed milk as a contaminated and poisonous food to the infants. Therefore, they usually introduced other foods as complementary foods usually at the age of two months because they thought that breastfeeding alone was not enough. But, for breast milk, they assumed that breast milk could pass contaminants and harmful substances to the infant via breastfeeding. And it was argued that the community had the local understandings of infant feeding practices opposite to the WHO/UNICEF recommendations and guidelines for infant feeding.

Cultural beliefs about confinement period, breast milk and mixed feeding

Furthermore, Helman (1990) said about Tann and Wheller's (1980) study on London Chinese mothers from the origin of Hong Kong concerning with infant feeding practices. Those mothers had the assumption of mother

confinement meals, during one month after delivery, were positively related with the quality of breast milk. In London, they did not achieve such brilliant confinement meal and convenient confinement period. They thought that their breast milk did not have the good quality to nourish the infants, and so, they decided to feed complementary food and weaned the baby early, together with the reasons for jobs and household chores.

HIV positive mothers' context

Cultural mixed feeding, infant health and growth

Moland (2004) claimed that infants' illness accounted for 2.3 times more likely to practice mixed feeding (MF). But, "mothers who had positive attitude towards infant feeding were 69% less likely to practice mixed feeding than those who didn't have such attitude" (Maru and Haidar, 2009, p. 113) argued. Moreover, Horwitz and Thairu (2000) stated that mothers replied that if they were HIV positive, they would not breastfeed the infant because they thought that water could solve infant's stomach problems and could promote digestion when diluted with milk, could make their infants' feces soft and other foods could make infants develop and grow.

Cultural beliefs about breast milk and breastfeeding leading to mixed feeding

Furthermore, Moland (2004) claimed both semen and milk were as powerful life creator and nurturer as well as evil and sickness transmitter, perceived by the society**.** Breast milk was similar to the women blood to feed her infant after delivery. In the HIV/AIDS era, both semen and milk were assumed as transmitting media for HIV transmission**.**

Horwitz and Thairu (2000) pointed out in their study (with the target of mothers with unknown status of HIV, to study local understanding and local choices for infant feeding practices if the mother were HIV positive) that one of the mothers believed that HIV viruses in the infant's body were too weak to survive if the HIV positive mother did not continue breastfeeding, the viruses would disappear soon. But, if the mother continued breastfeeding, more viruses were entering into the infant's body and the infant would die finally. And in that study, it was found that

most of the informants did not want to choose heat treated expressed breast milk because they believed that HIV virus was so strong enough to resist heating and the virus could survive even after heated. And almost all of mothers did not wish the feeding options of milk banks and wet nursing due to being strange in their culture, disease transmission and concepts that infants should be fed with their own mother's breast milk.

Abiona et al. (2006) studied in Nigeria about local opinions and understanding of infant feeding choices among HIV positive mothers by designing the research with the target groups of mothers, fathers and grandmothers, with unknown HIV status and that study claimed that water was given to the infant because breast milk was assumed as food and so, water must be given to the infant. And breast milk was not enough for needed nutrition for infants and so, other foods such as **"**pap made from maize and sorghum mixed with cow's milk or grounded crayfish, soya milk (made from soybeans), plain water, infant formula, glucose water and herbs" (p. 139) were given to infants. Additionally, Abiona et al. (2006) admitted, for heated expressed breast feeding, the informants assumed it was not practical according their resources and high fuel expenses and storage problems.

Moreover, Abiona et al. (2006) argued some informants thought that mothers should not breastfeed because HIV virus could be transmitted via breast milk, and HIV could weaken the body of mother and so, weak mother should not breastfeed her child for her and the child's health status. But, one father said that mother could breastfeed her child according to her health status and immune status destroyed by HIV/AIDS. In the same way, Thairu, Pelto, Rollins, Bland, and Ntshangase et al. (2005) responded that mothers' worries were explicitly and reasonably associated with the fear of transmitting HIV to their infant via their breast milk. But, on the other side, it was argued that most of women living with HIV who [exclusively] breastfed their children said that breast milk protected and prevented infant against childhood diseases. And they insisted that the baby fed with formula milk always felt sick (Thairu et al., 2005).

Cultural beliefs about formula milk and animal milk

For infant formula milk feeding option, some worried about expired dates of formula milk packages and some believed that formula milk

contained unsuitable things for infants (Horwitz and Thairu, 2000). For animal milk substitution options like goat's milk and cow's milk, cow's milk was more preferred because of easy availability in their area and concepts that cow's milk was seemed fresh and more nutritious than formula (Horwitz and Thairu, 2000).

However, Abiona et al. (2006) argued for alternative feeding for HIV exposed infant, mothers preferred formula milk over animal milk, contrary to Horwitz and Thairu (2000) because they worried that animal's characters would pass to the infants who were fed with animal milk.

Cultural diagnosis tool for mother's HIV status

In the sense of theoretical perspective, Arthur Kleinman claimed that disease was not essentially natural, but an explanatory model (EM) in cultural medical anthropology (as cited in Baer et al., 2003). Kleinman's explanatory model concept took a crucial part of cultural medical anthropology field. Hardon et al. (2001) emphasized that EM has two parts:

1. lay explanatory model of illness according to local etiology of illness and
2. practitioner's explanatory model of disease according to professional medical etiology of disease, leading to diagnosis, treatment and management of illness and disease.

And some etiologies of diseases and illness were explained: Young's (1983) internalizing and externalizing model and Foster's (1998) personalistic and naturalistic model, etc. In additional to response to illness and disease, it was explained concerning preventive measures that local or professional understanding of illness and disease etiology led to diagnostic and preventive methods, if one knew about causation of illness, he or she would avoid or protect or prevent from that causal agents according to etiology, for instance: vaccination in biomedicine and preventive medicine, and offering or donating things to the spirits to avoid misfortune that could cause illness in some cultures, (Hardon et al., 2001), so, culture also serves as an essential part in studying diagnostic, curative, palliative and preventive aspect of illness and disease.

Moland (2004) claimed that the cultural assumption about infant development and mother's milk quality relationship could serve as a diagnostic

tool for mother's HIV status by seeing infant growth as a cultural diagnostic tool of HIV status with infant growth and health status**.**

Both contexts

Cultural mixed feeding as a kind of traditional preventive drugs

Davies. A and Anita (1997); Thairu et al. (2005); Maru and Haidar, (2009) had claimed that infants were fed with semisolid foods, teas and other kinds of liquid due to traditional beliefs and practices how mothers and relatives should feed for the infant's health, before medical professionals' recommended time to feed complementary food to the infants. Davies. A and Anita (1997); Desclaux, and Alfieri (2010) stated that even during the early days of life of infant, water and herbal teas were given to the infants as a cleaning and preventive liquids as an 'indigenous vaccine', as a preventive measure for infant health rather than as nutrients.

2.3.2 Infant Feeding practices, motherhood and mother health status

General population of mothers' context

Cultural good mother, mother's health, infant's health and breastfeeding

Johnson. S, Williamson, Lyttle, and Leeming (2009) wrote that mothers had to express breast milk to feed their infants because of severe breast problems, by balancing between the moral interpretation of 'good mother' and 'breast milk is the best' and by managing the breast pain due to improper infant sucking. Another point for expressing breast milk and feeding expressed breast milk was to know how much mothers' bodies could produce breast milk, and whether to know infants achieved adequate breast milk and nutrition to overcome and avoid the 'bad mother' discourse because of poor infant development and growth. Furthermore, in the relation of mother's health and exclusive breastfeeding practice, Nkala and Msuya (2011) found that women who had experienced their breast pathology problems such as mastitis, cracked nipples and engorged breast during post partum period were less

likely to have enough EBF knowledge and less likely to exclusively breastfeed to their infants than mothers who did not have their breast problems.

Infant feeding for customary family bonding

Johnson. S, Williamson, Lyttle, and Leeming (2009) claimed that mothers also assumed that feeding expressed breast milk to the infant could increase father or partners and family members' involvement and so, it could increase family bonding as well as fathering process. But, some mothers thought that feeding expressed breast milk could not provide bonding process as exclusive breastfeeding. In addition to this, mothers applied feeding expressed breast milk as a strategy to avoid breastfeeding their infants in public in which they felt still shameful to breastfeed their infants.

HIV positive mothers' context

Breastfeeding as a part of cultural good motherhood

Moland (2004) endeavored that after child birth, unable mothers to breastfeed their infants could not achieve respect, appreciation and recognition as a good mother in the community. Moland (2004) also stated that the complex matters and structures to decide whether breastfeed or not breastfeed to their children and feeding practices must be taken into the accounts of cultural issue about of female body and motherhood cultural concepts.

Additionally, Abiona et al. (2006) said that community had the perception that the mother was useless and foolish if she did not breastfeed her infant and the society commented that she should not marry and conceive pregnancy if she did not want to breastfeed her child.

2.3.3 Food and Culture

Hardon et al. (2001, p. 3) claimed "culture is for the human being what water is for fish" and explained Herskovits' (1955) definition of culture as a structure or combinations of all things related to humans, including from mental, conceptual or rational thinking, and logic of concepts, etc., to tangible infrastructure such as cultural foods, traditional clothes, and transportation systems, etc.

Hardon et al. (2001) mentioned Kessing's (1981) shared meanings among humans within societies, in which the people saw the world with their own traditional heritage of cultural window and described the anthropologists' focus and eager in the field of ideas, beliefs and, meanings and practices resulted from cultural beliefs. And, it was needed to try to understand the meanings of symbols, interactions, and practices of societies with insider's point of view in the studied society's context and circumstances by abandoning 'ethnocentrism': judging others with outsider's own cultural norms and ideas, but by applying 'cultural relativism': understanding others with insider view of others, according others' cultural context and circumstances. Hardon et al. (2001) argued that each society had their own beliefs and practices in response to illness and health as crucial parts of society's culture.

Helman (1990) endeavored that food meant more than the purpose of nutrition in daily life of people. It took all aspects of socio- cultural, economic and religion. It explored the society shared meaning of kinds of foods, ways of growing, producing, eating, feeding and offering foods and moreover, the ways of cooking resulting in culture (Hardon, 2001; Helman, 1990). In addition, the common five classifications of food were based on cultures and they explained that people made diet according to their cultural assumptions, rather than biomedical nutritional data. Five classifications were: "1. Food versus non-food. 2. Sacred versus profane foods. 3. Parallel food classifications. 4. Food used as medicine, and medicine as food. 5. Social foods (which signal relationships, status, occupation, gender or group identity)" (Helman, 1990, p. 32).

Food versus non food classification was usually based on the cultural definition whether which was edible or not. But, all cultures did not classify only on the basic of edible criteria; some were based on historical assumptions. Scared versus profane food classifications were usually associated with religious beliefs. But, in modern life, it was also based on assumptions of 'natural' and 'artificial'. Parallel food classifications classified foods into two groups, 'hot' and 'cold' mostly based on the traditional medical etiology of 'balance' of the body: 'hot and cold' (Helman, 1990) . People diagnosed illness and diseases on the basic of 'hot diseases' or 'cold diseases' and they balanced the disturbance state of body with the use of foods origin of 'hot and cold' to achieve 'hot and cold balance' of body as food as medicine and medicine

as food (Helman, 1990; Hardon et al., 2001). And the assumption of 'food as medicine' was also taken by profit making food businesses in globalization context to attract consumers by mentioning percentage of nutrition data required for daily energy consumption and requirements (Hardon et al., 2001).

2.4 Critical Medical Anthropology and Infant Feeding

Winkelman (2009) argued that political decision, economic institutions and businesses created and they were responsible for social conditions and status from which disease prevalence and incidence, risky conditions such as working conditions and working exposures to occupational health hazards, unequal opportunity to access health care services and resources resulting in physical, psychological and social illness were affected.

Furthermore, Singer (2004) pointed out that while interpretive and ecological medical anthropologists prioritized detail insights into the culture and nature of the local medical systems' terms and functions, critical medical anthropology studied "wider causes and determinants of human decision-making and action [related to health and political issue that can impact on the health of human]" (p. 24). And in 2004, Singer (p. 24) stated, "Mullings (1987) has called the 'vertical links' that connect the social group under study to the larger regional, national, and global human society and to the configuration of social relationships that contribute to the patterning of human behavior, belief, attitude, and emotion". Wolf (1992) explained that the most important primary determinants of health were 'social inequality and inequality of power in the society and from this concept, critical medical anthropology uncovered the structures of economic, power and social relationships (as cited in Singer, 2004). Moreover, Singer (2004) stated Morsy's (1996) argument that the purpose of critical medical anthropology was needed not to ignore the micro analytical concepts, illness and healing, and needed also to go beyond this and, to link with "power, control, resistance, and defiance associated with health, illness, and healing" (p.26).

Concerning infant feeding practices among HIV positive mothers, infant feeding was not occurring in the structure of HIV positive mother and their infant only. Moland (2004) admitted that infant feeding practices, cultural beliefs relating

with motherhood, mother body, infant health, infant development, HIV and childhood diseases preventive and curative measures were driven in the structure in which levels from individual micro level, intermediate family, society and, health institutions level to macro health policy level were interacting and interconnecting one another in a power relationship derived from political economy perspective and cultural interpretive perspectives.

2.4.1 Infant Feeding in social structure and power relationship context

General population of mothers' context

Social institutions and infant feeding practices

Thin (2003) explored that breastfeeding and mixed feeding practices had many underlying reasons and, in addition to traditional cultural beliefs and practices, influencing factors such as neighbors' advice and social factors that could make mothers led to early complementary feeding (ECF) or mixed feeding to their infants.

Also for EBF knowledge, according to Nkala and Msuya (2011), it was found that several socio- demographic factors such as age, education, income, marital status, parity and employment did not have relationship with EBF knowledge in the EBF determinants research. But, for practice of EBF, if the women had job, sound EBF knowledge, had delivered at a clinic or hospitals and if their husbands had secondary or higher education, they practiced more EBF. So, Nkala and Msuya (2011) claimed that if the mother had high EBF knowledge, they would practice more EBF.

But, Sika- bright (2010) stated that older mothers seemed to exclusively breastfeed their children than younger mothers who were more likely to mixed feed their children while mothers living together with their partners were more likely to exclusive breastfeed to their children than unmarried single mothers who were more likely to mixed feed their babies. And, it was found that mother's school education level was negatively associated with exclusive breastfeeding practices and positively related with formula feeding. Most of the mothers who mixed fed their

infants had jobs and almost all of the mothers who could exclusive breastfeed were jobless. Families' and friend's advice and feeding practices had direct positive impact on the mothers' infant feeding practices. In order mother could exclusively breastfeed their infant, partners' and husbands' support occupied the important part.

Moreover, Jones and Belsey (1977) cited in Helman (1990) studied 265 mothers with 12-week-old infants in the London borough of Lambeth and found that ethnicity and breastfeeding as a social norm had influenced on breastfeeding practices. It was also found that ones who had friends who were successful to exclusively breastfeed and who had high socioeconomic status were likely to breastfeed their infants, but, medical advice had unlikely influenced on infant feeding practices.

HIV positive mothers' context

Social institutions, power relationship and infant feeding practices

In Maru and Haidar's (2009) research, it was found that for mixed feeding practices (MF)**,** neighbor's advice accounted for 40%, followed by insufficient breast milk and husband imposition, mother's illness and both mother's and infant's illness**.** [Successful] HIV status disclosure "to spouse made mother 89% less likely to practice mixed feeding than those who didn't" (p. 113) and for exclusive replacement feeding (ERF)**,** mode of delivery, caesarian section delivery (CS), was 4.1 times more likely to practice ERF, and high income (2 times), and successful disclosure HIV status to the spouses (3.8 times) were more likely to do so. For exclusive breastfeeding (EBF), mode of delivery, CS was 80% less likely to practice EBF (Maru and Haidar, 2009)**.** And that research found out that the important reasons for practicing mixed feeding among targeted populations were neighbor's influences and insufficient breast milk production (Maru and Haidar, 2009)**.** "ERF practice was significantly associated with HIV disclosure status of subjects to spouse, household income and mode of delivery whereas EBF practice was significantly associated only with mode of delivery" (Maru and Haidar, 2009, p. 113)**.**

Thairu et al. (2005, p. 6) stated that an 18-year-old mother said, "at home they [family members] say breast-milk is not enough for the baby, they

say I must give him other foods so that he can grow. They feel it's a burden [for] me to give only breast-milk". And the younger HIV positive mothers had social dependence on the family and so, they were most influenced by family members' decisions and suggestions. Furthermore, Thairu et al. (2005) said that the family members wanted baby eating the whole time and they thought the baby wanted to eat and they should give baby something to eat if the baby was crying. And younger HIV positive mothers did not usually disclose their HIV and health status (Thairu et al, 2005).

In addition, the role of socio economic status was also one of determinants for infant feeding choices and practices among HIV positive mothers (Thairu et al, 2005). The most difficult things to implement exclusive breastfeeding practices among younger HIV positive mothers were due to advices and pressures from their families to practice mixed feeding. Even the advices and suggestions were refused by the adolescent mothers; families fed the infants according to their preferences of mixed feeding patterns (Thairu et al, 2005).

Desclaux, and Alfieri (2010) stated that in resource limited settings of underdeveloped countries like West Africa, the new feeding practices, of PMTCT projects, such as exclusive formula feeding, or exclusive breastfeeding with avoidance of mixed feeding during first six months of age of infants and rapid weaning after six month of age was strange strategies in the community where mixed feeding and prolonged breastfeeding were social and cultural norms. Due to these PMTCT projects' strategies, HIV positive mothers faced two opposing sub cultures of breastfeeding. Baby's father, family and neighbors were at one side and on the other side were health service professionals. Women had to cope with their own strategies to survive between the two sub cultures: between good infant feeding and good mothering cultural concepts of her family and neighbors, and medical discourse of professional sector, while fearing social stigma due to exposing HIV status, due to applying exclusive breastfeeding or exclusive formula feeding or refusing cultural mixed feeding practices and also fearing HIV transmission to their new born infants (Maru and Haidar, 2009; Desclaux, and Alfieri, 2010). Women were suffering those feelings due to lack of social authority and due to economic dependence to their family (Moland, 2004; Desclaux, and Alfieri, 2010; Roxby, John-Stewart, and Behrens, 2012) stated. Most of HIV positive mothers faced the greatest difficulty to avoid mixed

feeding to her infants because of unequal power relationships to elder women in the household. But, spouse support and disclosure to spouse issue were controversial issue for mothers. Some mothers replied that if they disclosed their HIV status, fathers gave mutual understanding to them and gave more support for infant feeding while others were facing social stigma and father's adverse reactions (Desclaux, and Alfieri, 2010).

Concerning with power relationship, Moland (2004); Horwitz and Thairu (2000) claimed that after delivery and during post natal period, HIV positive mother, daughter in law, was under the influence of mother in law's power, management and advice. In the culture and social context, mothers were assumed to give delivery, to look after the baby and absolutely needed to breastfeed the baby. Women's sexuality and reproductive capacity were under the control and influence of political, social and cultural systems of the society. Moland (2004) argued that not following and not practicing medical professional's recommendation for infant feeding was not a resistance to medicalization concerning with western medicine advice, but it was due to power relationship and problem being afraid of losing social status and afraid of sanction by the family and society due to individual women's lack of agency and power.

Both contexts

Social support health program and infant feeding practices

Bland et al. (2008) stated that in their nonrandomized intervention cohort study to increase exclusive breastfeeding rates among both HIV positive and HIV negative women in KwaZulu-Natal, South Africa, by home visit care support by lay counselors up to six months, with the sample size of 1219 infants of HIV-negative and 1217 infants of HIV-positive women, the project could achieve "exclusive breast-feeding rates at 3 and 5 months were 83.1 and 76.5%, respectively, in HIV-negative women and 72.5 and 66.7%, respectively, in HIV-positive women" (p. 883). But, up to six months, only 45% of HIV-negative and 40% of HIV-positive women could practice exclusive breastfeeding. And it was concluded that it could be implemented to promote and sustain exclusive breastfeeding with home visit care and social support with well trained lay counselors in both HIV negative and positive mother sample.

2.4.2 Impacts of globalization and political economy on mothers' daily life and infant feeding

Globalization

Concerning with the definition of globalization, Mcgrew (2010) argued that globalization was the long term process or 'inter-connectedness' or 'interdependence' among countries all over the world or being shrinkage of the world. "The cumulative scale, scope, velocity and depth of contemporary interconnectedness is dissolving the significance of the borders and boundaries that separate the world into its many constituent states or national economic and political spaces" (Rasenau, 1997 cited in Mcgrew, 2010, p.18).

Lee. K (2003) explained that it was difficult to define the globalization in all agreeable concepts because all perspectives defined the word 'globalization' with their own interests and their own respective principles. But, for health social science and public health point of view, it was needed to review the advantages and disadvantages of globalization on daily activities of people with health concepts in additional to market orientation (Lee. K, 2003). Absolutely, globalization would impact on the society with both positive and negative effects in all disciplines such as policy, economic, technology and health, etc.

Globalization: women and job

For the relationship of women and globalization, Gray, Kittilson, and Sandholtz (2006) stated that women were exploited and subordinated with low pay jobs, exploited overtime jobs as well as unpaid household jobs in critical economic point of view of globalization. But, on the other side, it was mentioned that the economic positive impacts would draw women to the paid job, whatever it was low paid, from being exploited as unpaid household chores (Gray et al., 2006). Gladden (1993); Afshar (1998); Afshar and Barrientos (1999) cited in Gray et al. (2006) said that if the women could earn income, power balance would occur between man and women because women's dependence to man was reduced because of women's income.

But, Bacchus (2005) stated in the study of 'The Effects of Globalization on Women in Developing Nations' that globalization caused more negative effects on women in developing countries. Although Foreign Direct

Investment (FDI) provided more job opportunities to women, jobs were low paid and high position well paid job were not for women in multilateral and bilateral organizations. Men achieved more opportunities to well paid job, while women had responsibilities for house chores and child care activities because of culture, traditions and motherhoods. So, it was argued that globalization affected women with more negative outcomes than positive outcomes.

Globalization: women, job and infant feeding

Concerning with mothers' daily life, job and practicing infant feeding, Thin (2003); Johnson. S et al. (2009); Sethuraman et al. (2011) argued that mothers had to do house works and so; they practiced early complementary feeding practices (mixed feeding) and could not follow medical professional's advice to exclusively breastfeed the infants. One of advantages of applying mixed feeding was that mother could save time and early complementary feeding (ECF) could make their life more convenient to manage their daily job. Johnson. S et al. (2009) stated that mothers had to feed expressed breast milk to their infants to return their paid job environment from unpaid mother jobs and as a break from motherhood life balancing moral good motherhood and modern job behaviors. Mothers had to play in a role to avoid bad motherhood concepts of society, working in the devastating modern job environment. Sethuraman et al. (2011) stated that there had been more mothers who could not practice exclusive breastfeeding because of increased women working.

Helman (1990) stated that infant feeding practices varied according to context, place and situations, and moreover, it was pointed out that breastfeeding rate was continuously declining, especially in globalized parts of the world, in spite of 'breast milk is the best' policy. It was affected by globalization and increased female jobs outside home, intensive formula milk companies' advertisement, but, in some developed world, it was seen that the trend was going to breastfeeding again.

Globalization: maternity leave and maternal benefits in the context of political economy

Bentley, Dee, and Jensen (2003) claimed the socialist feminist point of view that mothers were being exploited, abused and alienated for the maternal leave, the most difficult barrier to implement exclusive breastfeeding, by the capitalist

patriarchy employment. Moreover, IBFAN-GIFA[The International Baby Food Action Network-The Geneva Infant Feeding Association] (2012) stated the relationship between mothers' job, Myanmar country laws and breastfeeding practice barriers: there was only total of 12 weeks maternity leave, 6 weeks before delivery and 6 weeks after delivery a child. There was no paternity leave for father to help their wife for delivery, infant feeding and breastfeeding to the infant. And also it was stated the employers did not provide the health benefits and health protection for the pregnant women and breastfeeding mothers and, did not allow time break and did not arrange place for the mothers to breastfeed to their infants. McElroy & Townsend (2009) also mentioned that women were forced to industrial works without legislating policy, regulations and laws to support breastfeeding in many countries.

Globalization: formula milk advertisements, market and infant feeding in the context of political economy

Bentley, Dee, and Jensen (2003) argued that capitalist formula milk market exploited mothers again when mothers had to buy formula milk for their infants when their maternity leaves were over. And, Sethuraman et al. (2011) claimed that intense formula milk advertisements could influence the infant feeding practices of mothers and could reduce exclusive breastfeeding mother population. McElroy & Townsend (2009) also mentioned that changing from breastfeeding to bottle feeding was significant in industrial time. In Europe, babies were fed with cooked cereal, cow milk, canned and dried milk. Most of babies suffered and died of illness and diseases because of these feeding practices. But, breastfeeding rate was being reduced until 1966. Then, the trend was being reversed in educated and upper class, while it was still declining in lower income, younger mothers and African American mother population. Along with industrialization and capitalism, formula milk and bottle feeding invaded into poor countries in 1960s and 1970s by using intensive advertisements and persuasions as a "modern and high standard way" to feed babies and by distributing free samples in hospitals (p.207). McElroy & Townsend (2009) concluded that diet and feeding patterns were affected by economic reasons as well as cultural and ecological rationality.

2.5 Impact of PMTCT projects on the local HIV positive mothers' Infant Feeding practices

Local Assumption about relation between formula milk feeding and mother's HIV status

Maru and Haidar (2009) had the assumption that the benefits of life saving effects and some risks for HIV transmission to infant through breastfeeding made the community with high HIV prevalence confuse and complex in infant feeding practices. In the society in which breastfeeding had the strong cultural belief as a normative behavior, choosing and practicing replacement feeding were assumed and concluded as abnormal behavior before HIV epidemic era. Thairu et al. (2005, p 5) argued, "There has been sufficient public discussion about transmission of the virus through breast milk that choosing to bottle feed is tantamount announcing that one is HIV positive." The community had negative attitudes toward the HIV victims and so, many people living with HIV (PLHIV) decided not to disclose and discuss their HIV and health status, even to their families.

Mothers' surviving and feeding infants between two structural forces

Desclaux and Alfieri (2010) claimed that although the health care persons discussed about informed choices, mothers with HIV felt dilemma about choices for exclusive formula feeding, because of high cost. Even if the projects provided formula milk, they had to find good reasons to give their family and their neighbors why they were feeding expensive formula milk to their infants although they were poor, in order that they could avoid social stigma resulted from being suspected as HIV positive by lay man's HIV diagnostic method because of not breastfeeding. Even they practiced exclusive breastfeeding, because of not mixed feeding, they feared of social risks of local HIV diagnosis method and so, they had to invent new infant feeding practices, which had not discussed during infant feeding counseling sessions and, had not practiced in the past.

Desclaux and Alfieri (2010, p. 8) stated that some mothers breastfed their infants for a short time to achieve recognition as a good mother from their community

and family, and to avoid being exposed as HIV positive status due to exclusive formula feeding. But, after a few days or weeks, mothers changed to formula feeding to prevent HIV transmission to their infants. But, they breastfed their infants again when shortage of formula milk occurred. Furthermore, due to forced breastfeeding encouragement to HIV positive mothers in maternity wards, Desclaux and Alfieri (2010, p. 10) stated that HIV positive mothers sometimes used some methods which could danger to themselves or their infants, and mentioned that one mother fed her infant only with water and pretended that she breastfed her baby, because of being afraid of transmitting HIV to her infant through breastfeeding and being afraid of exposing her HIV status if she fed formula milk to her baby.

Even in PMTCT projects and hospitals, contradictory messages to breastfeed the infant as long as and as much as possible, and to discontinue breastfeeding and early weaning to infant made mothers confused. Desclaux and Alfieri (2010) stated the PMTCT projects' behavior change promotion of infant feeding practices required the multiple perspectives and approaches such as public health, social and cultural perspectives to fight the micro and macro consequences of untoward effects of project implementation and to achieve cultural sensitive and applicable exclusive breast feeding implementation.

2.6 Conceptual Framework

After reviewing and analyzing accessible and reliable literatures, to fulfill this paper's objectives, conceptual framework had been designed to explore and analyze:

- -various under six months infant feeding practices among HIV positive mothers and their explanatory model behind those practices,
- -local preventive infant feeding practices among HIV positive mothers for the prevention of local infant diseases, mother to child HIV transmission, and for infant growth and development (by applying food as preventive medicine or prophylactic drugs concepts),
- -local infant diseases which were seemed by HIV positive mothers, family and community as preventable diseases by feeding various kinds of foods and

by infant feeding practices, etiology of those local infant diseases and local concepts of mother to child HIV transmission (to link their cultural beliefs of local infant diseases and mother to child HIV transmission with their preventive infant feeding practices, by applying the cultural concepts of food as preventive medicine or prophylactic medicine),

- -cultural and social factors that promoted exclusive breastfeeding, exclusive replacement feeding and mixed feeding practices including both cultural mixed feeding and newly invented mixed feeding patterns by HIV positive mothers due to power relationship between medical professionals' infant feeding advices and cultural infant feeding practices, and between HIV positive mothers and family, relatives and neighbors (by applying Desclaux and Alfieri's (2010) finding),
- -HIV positive mothers' explanation about their daily life in all aspects of economic, job, social, cultural and health sectors in relation with exclusive breastfeeding, exclusive replacement feeding and mixed feeding practices including cultural mixed feeding and newly adapted infant feeding practices. (infant feeding in the context of HIV positive mothers' daily life),
- -health professionals' explanation about HIV and infant feeding, and their HIV and infant feeding project implementation in the context of HIV positive mothers' daily life,
- -health professionals' concepts and perceptions about recent HIV positive mothers' infant feeding practices, and about barrier factors for HIV positive mothers to practice exclusive breastfeeding, and
- -finally, how the explanatory model of HIV positive mothers concerning with under six months infant feeding practices was similar to or different from that of health professionals.

According to Myanmar, Mandalay context of under six months infant feeding practices among HIV positive mothers, first, this research had explored, at individual micro level, various under six months infant feeding patterns to know what patterns were currently being practiced. And then, this paper had explored and described the local and cultural beliefs and explanation about infant feeding patterns and infant foods including mother breast-milk, animal milk and formula milk, etc., relating with mother to child HIV transmission and prevention, local childhood

diseases etiology and local preventive measures with the use of food as preventive drugs and as foods for infant development and growth. And moreover, this paper studied whether there was social food feeding patterns or practices for the newborn infants among HIV positive mothers. At micro level, the association between biomedical knowledge relating infant feeding practices and infant foods, and socio demographic characteristics of HIV positive mothers, and infant feeding practices had been aware although literature evidences said that the association between infant feeding practices and these determinants was controversial. Moreover, the association between mothers' and infants' health status, daily life in globalization context and cultural concepts and role about mother, and infant feeding beliefs, practices and explanation of HIV positive mothers were investigated qualitatively. In addition, this paper investigated association between contemporary working behaviors of HIV positive mothers, household works and infant care and feeding practices and also in relation with their family members' support and economic status.

At intermediate level, this research focused on the insider point of views of HIV positive mothers' in depth feeling about social interaction and relationship such as family, society and peers' pressure and support, stigma and discrimination, seniority, and infant feeding practices among HIV positive mothers to know which determinants could lead to which kind of infant feeding practices. This research also explored the effects of formula milk or infant feeding substitutes' availability and accessibility on HIV positive mothers' infant feeding patterns. And effects of health institutions and NGOs projects implementation on infant feeding practices among HIV positive mothers were considered and aware. And also, biomedical disease theory and concepts, medical hegemony and hierarchy issue were kept in mind at macro level of analysis during research process. In conclusion, this research studied and analyzed whether and how under six months infant feeding practice explanatory model of HIV positive mothers was different from or similar to that of Biomedicine and Public Health professionals in order that this research could provide some valuable inputs for implementing cultural appropriate and sensitive PMTCT's under six months infant feeding projects in the contemporary globalization context. First, this paper set up the following conceptual framework to create field research questions and to design field works. But, some idea and concepts did not match with the context of HIV positive

mothers in Mandalay, Myanmar and some new idea and concepts were found out. Therefore, that issue will be discussed and presented through findings and discussions chapters.

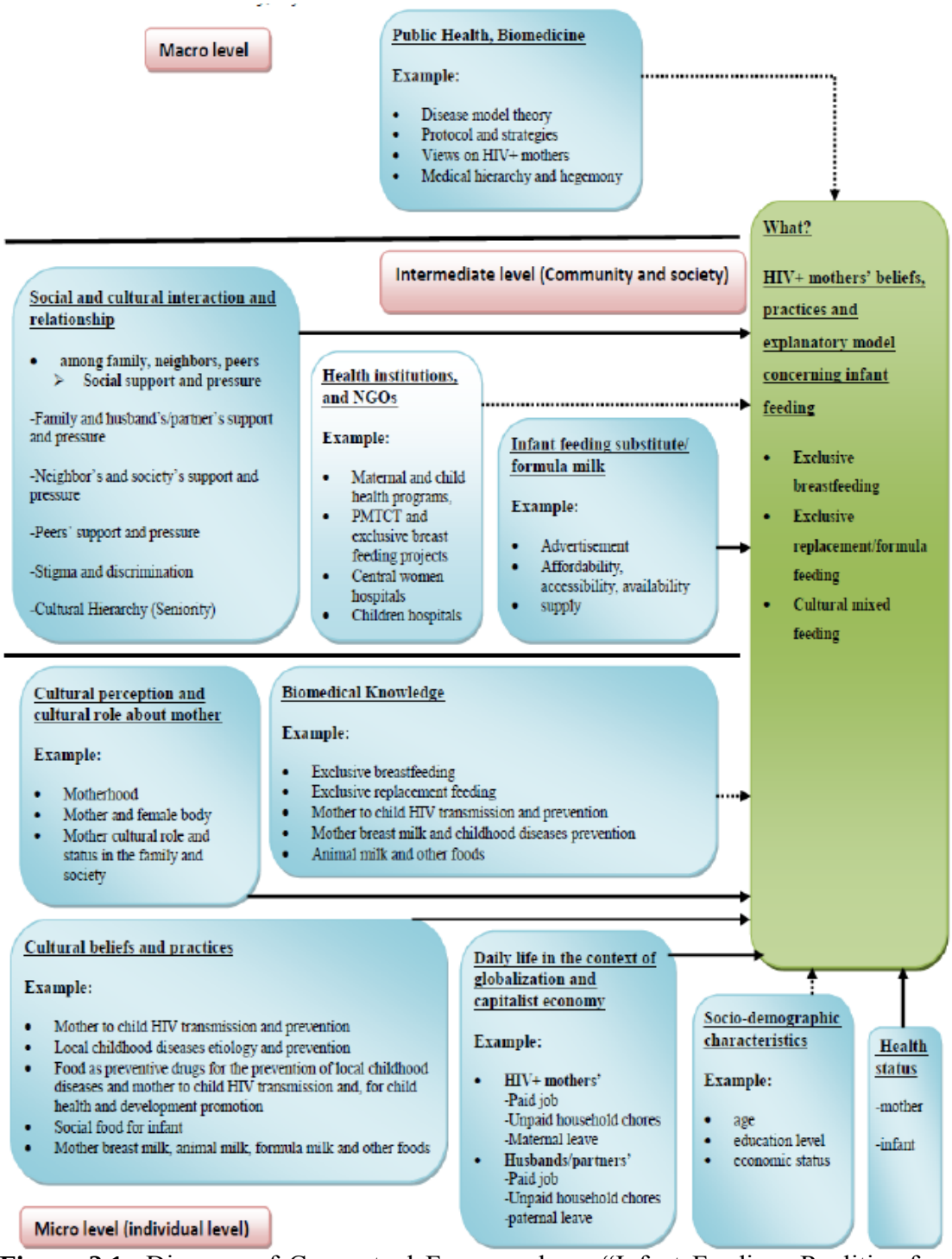

Figure 2.1 Diagram of Conceptual Framework on "Infant Feeding: Realities from HIV positive mothers in Mandalay, Myanmar"

CHAPTER III
RESEARCH METHODOLOGY

This research chapter had focused to achieve well preparedness for field research data collection and to achieve feasible communication with informants, key informants, local authorities and health authorities. Moreover, this research portion intended to achieve a research tool as an anthropologist's lens in order that the researcher could note, understand and analyze what was observed, what was heard and what was learned from the field, within the cultural interpretive medical anthropology perspective with the support of critical medical anthropology model.

3.1 Research Site

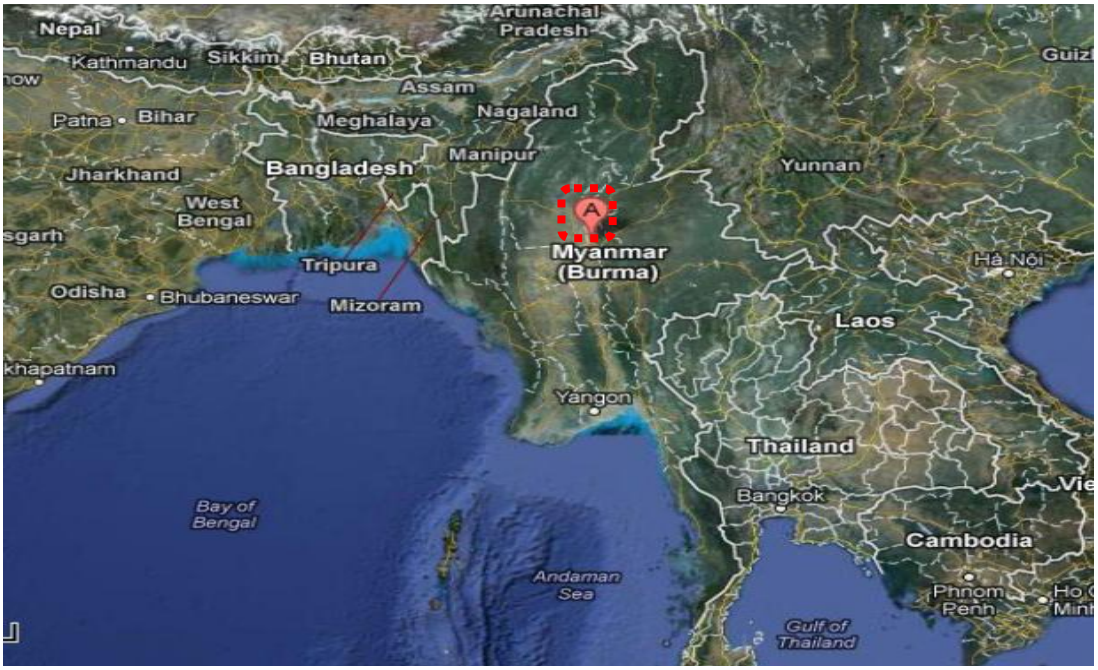

Figure 3.1 Location of Myanmar and Mandalay city

Source: Google Maps (2013)

Figure 3.2 Location of Mandalay city in Myanmar

Source: Google Maps (2013)

This research chose Mandalay city as the research site, because of its characteristic of trading and business city, but still having Myanmar cultural concepts and traditional practices in almost all sectors such as health, business and social affairs, etc. and because HIV prevalence rate in general population, in reproductive aged male and female, and in pregnant women population, were still high in Mandalay. And, "among pregnant women attending ANC [antenatal care], HIV prevalence was highest in Yangon at 4% followed by Mandalay at 2.5%" (NAP, 2010 as cited in HIV and AIDS Datahub for Asia Pacific, Evidence to Action, 2011, p. 5). ART coverage was still low. HIV transmission knowledge among mothers was high, but exclusive breastfeeding practice was still low (MoNPED and MoH, 2011).

Geo-demographic and health profile of Mandalay

In terms of geo-characteristics, "Mandalay is located in the central dry zone of Burma [Myanmar] by the Irrawaddy river at 21.98° North, 96.08° East, 64 metres (210 feet) above sea level" (Wikipedia, 2013) mentioned. Mandalay city is located in Mandalay region and Mandalay District. Ethnics of residence are Burmese, Shan, and some other ethnic minorities such as Kachin, Kayin, Chin and Mon, etc. Other majority of residence are legal citizens and illegal migrant's ethnicity of

Chinese, Indian and Bangladeshi. Everybody can pray Buddhism, Christian, Hinduism or Islam freely.

Mandalay is the last royal capital of Myanmar Dynasty and, the second largest city as well as the third capital of Myanmar. It is the major point for Myanmar-China, Myanmar-India, and Myanmar-Bangladesh international trading, and also for upper Myanmar- lower Myanmar domestic trading. Mandalay is still serving as the cultural, economic and educational centre for upper Myanmar. And, the climate of Mandalay shows the hotter temperatures in April and May, and the cooler temperatures in January of the years. Mandalay district has 7 townships such as Amarapura, Aungmyaythasan, Chanayethasan, Chanmyathazi, Mahaaungmyay, Patheingyi and Pyigyidagun townships, but, Mandalay city has only five townships except Amarapura and Patheingyi townships. Mandalay has air transportation with one international airport for domestic and international flights, and river, railway, highway and bus transportation, but there is no local railway transportation system (Wikipedia, 2013).

Mandalay had 209 square kilometers, total population was 910711 in 2012 and the population density was 4357 per square kilometer. The city area was composed of total 87 wards, and it had one tertiary hospital(800 bedded), one teaching hospital (300 bedded), one Central Women Hospital (300 bedded), two Children Hospitals (300 bedded and 550 bedded), one district hospital (100 bedded), one infectious disease hospital (25 bedded), one station hospital, six maternal and child health centers, three Urban Health Centers, ten Sub Health Centers, five School Health Centers and 571 private clinics and maternity homes. There were about 5 NGOs: Myanmar Mother and Child Welfare association, Red Cross Association, Mandalay Medical Association, Nurse Association and Health Assistant Association, other many CBOs, and INGOs were supporting in delivering health services (Department of Health, Mandalay[DOH, MDL], 2012).

Moreover, Mandalay showed 22% of under-weight children among under one year aged infants, the average number of attendance for both ante-natal and post natal care was about four, and ante natal care coverage in five townships was about 84 percentages in 2012. And It had infant mortality rate of six per 1000 live births and percentages of under five children diarrhea cases with severe dehydration, percentage

of under five children with cough and difficult breathing and percentage of under five children with severe pneumonia was 22%, 1% and 0.1% respectively in 2012 (Department of Health, Mandalay[DOH, MDL], 2012).

3.2 Research Design

This research explored the various patterns of under six months infant feeding among HIV positive mothers and analyzed why they were practicing those practices to understand their cultural beliefs about foods as prophylactic drugs, and as social food, and cultural beliefs about local infant illnesses and mother to child HIV transmission in relation with food and infant feeding practices. Moreover, this research explored which social and cultural forces were pushing HIV positive mothers to practice those infant feeding patterns and studied how HIV positive mothers' explanatory model concerning infant feeding practices was different from or similar to that of health professionals in the context of implementation. So, it was an exploratory and qualitative research design with cultural relativism lens.

Hardon et al. (2001); Kothari (2004) stated that exploratory study could be implemented in a time limited situation to achieve more knowledge of a problem when limited knowledge of that problem was known. Kothari (2004) mentioned about exploratory research to be flexible to achieve broader and various aspects of problems with formulative approach. Qualitative research was more appropriate when the research needed to achieve detail information about the problem and to know how and why of the problems and situations (Hardon et al., 2001; Kothari, 2004).

3.3 Preparation to enter the Field and Field works

3.3.1 Field Preparation

Networking and requesting for permission to do research

First, the researcher contacted with one of non-government organizations (NGOs) implementing PMTCT infant feeding project and one of community based organizations (CBOs) that had links with HIV positive mothers and PLHIVs peer groups in Mandalay, Myanmar in May, 2013 in person to request the permission to do research jointly with the organization and discussed for the data needed for research and for the entry point into the target field by using project's or HIV positive mothers'/ PLHIVs peer group's network information. Finally, the researcher contacted one of CBOs which had networking and links with HIV positive mothers and then, the researcher recruited one research assistant according to the following criteria for choosing research assistant.

Ethical clearance matter

This research proposal had passed Mahidol University's Institutional Review Board (IRB) for health social science research conduction.

Recruiting one female research assistant (only as a communicator to assist the researcher to contact with informants)

The researcher recruited one female research assistant from above mentioned CBO by selecting one from HIV positive mother peers in order that the researcher could easily enter into the research field and contact easily with informants because the informants population was hidden in nature. The criteria for recruiting research assistant were:

- HIV positive mother with at least one child, regardless of age of child, born after the mother was infected with HIV.
- Must have at least middle school education level (in order that she could help the researcher with some research paper works, with scheduled appointment with informants, and could help in focus group discussion arrangement, etc),
- Must have smooth communication with informants,

- Can initiate and run independently, under the supervision of the researcher, to appoint HIV positive mothers with following selection criteria,
- Must respect the rights of informants and must keep confidentiality and privacy of informants.

For focus group discussion (FGD), the researcher trained the research assistant as a note taker in FGD how and what to note down the key points of interview.

Then, the researcher applied the following sampling methods and data collection methods with the help of research assistant.

Research Instruments

Research instruments were:

1) The researcher as a research instrument
2) In depth interview guidelines, protocol and questions,
3) FGD guidelines, protocol and topics,
4) Participant observation guidelines,
5) Diary, book, pen, pencil, and eraser for note taking,
6) A voice recorder,
7) A digital camera,
8) A laptop computer.

The researcher, although the researcher was a medical doctor and public health professional, was used as a research tool to achieve more insider point of views of HIV positive mothers for the research's questions and objectives. Abandoning the perspectives of medical and public health point of view and the stand point as a medical doctor, the researcher tried to be homogenous with informants and key informants during interviewing and participant observing by applying reflective listening skill, two ways interactive discussion interviewing skill and by providing interview places with privacy. The researcher stood on neutral point for field data collection research methods such as in depth interview, focus group discussion and participant observations. The researcher did not judge and argue about any perceived realities from both sides of interviewees: informants and key informants by using cultural relativism lens.

The guidelines, protocols and questions were clearly stated in simple and short English in order to avoid confusion and misunderstanding. Guidelines, protocols and questions were produced by minimizing harms to the informants and maximizing the validity and reliability of research data and facts as (Hardon et al., 2001) stated. Questions were translated into simple, short and precise Myanmar language. To note down the short points and important quotations, diary, book, pen and pencil provided the advantages while recorder and camera were essential for detail recording the interviews and data collection processes. But, the researcher gave first priority to the informants' benefits and not to harm the respondents due to research processes. So, all data collections were carried out only after the informed consent, verbal or written informed consent. And the laptop was useful for data entry, summarization and interpretation.

3.3.2 Sampling methods, and approaching to informants and key informants

The researcher used 'purposively selective sampling method' as an entry point into the informant field for in-depth interview, to achieve information rich informants. Information rich informants were selected with the help of research assistant through HIV peer networking through CBOs' network to achieve informants with inclusion criteria. With this method, six HIV positive mothers (for in-depth interview) and eight HIV positive mothers (for FGD) who had more than one child, including one infant of age up to six months, were selected purposively and then, the researcher applied 'snow ball sampling', used most commonly in qualitative research, to achieve further informants: seven HIV positive mothers (for in-depth interview) and eight HIV positive mothers (for FGD), because of marginalized and vulnerable characteristic of informants. (See informants'/key informants' inclusion criteria in each following data collection method.)

3.3.2.1 Overview of recruiting informants and data collection processes of In Depth Interview and Focus Group Discussion with informants

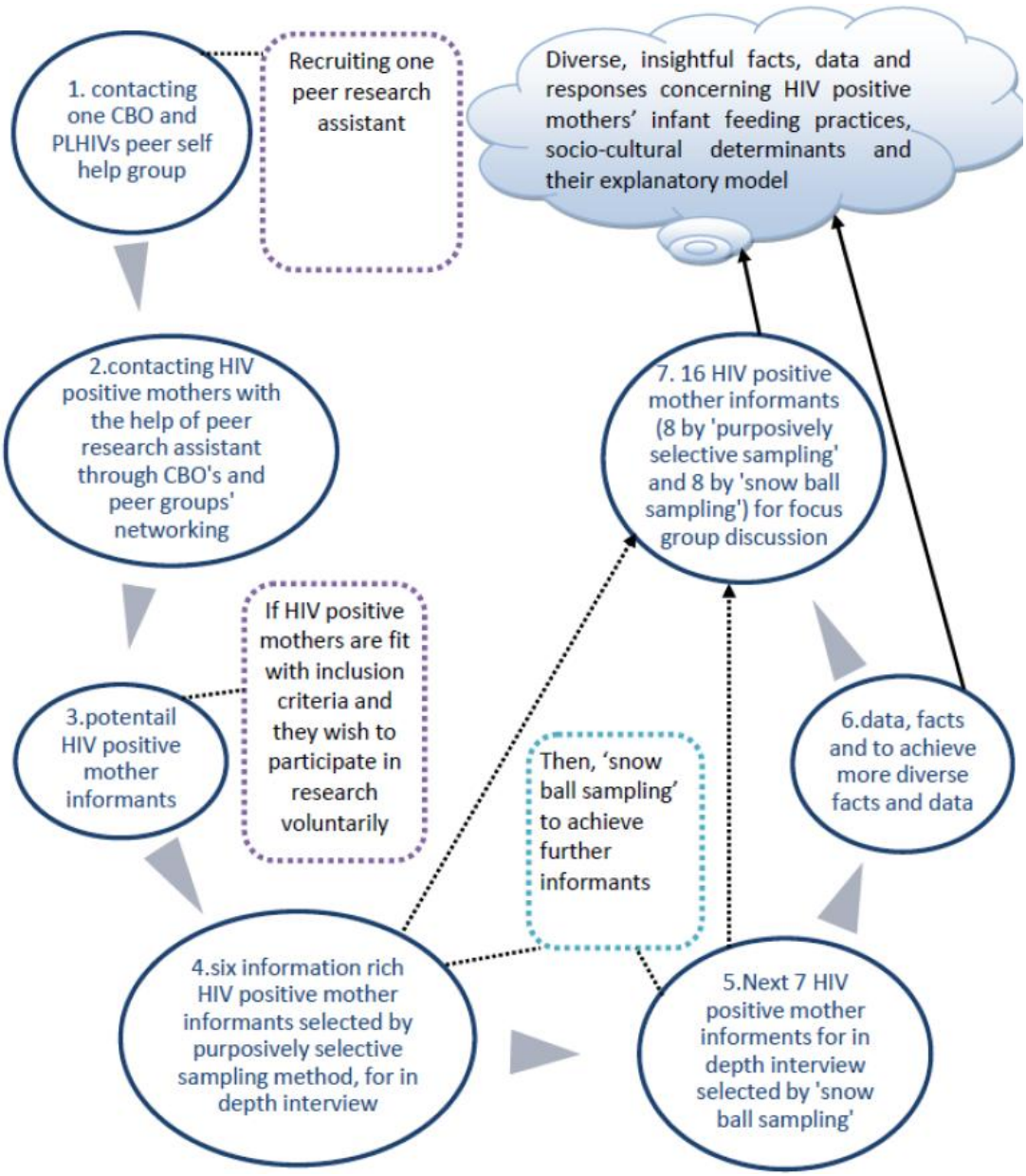

Figure 3.3 Diagram of overview of recruiting informants

According to the researcher's experience as a non-profit organization's medical doctor in the field of HIV/AIDS and as a Mandalay native, the researcher had known the stigma and discrimination matter in Mandalay in which

stigma and discrimination still occupied the place as a social barrier for PLHIVs, but it should be appreciated that stigma and discrimination were decreasing compared with past time. However, HIV positive mothers were vulnerable and marginalized population, so, the researcher considered their confidentiality, privacy and beneficence since preparation of field work. To achieve informants, the researcher tried with the help of the research assistant through her networking and via three PLHIVs self help groups.

Before approaching the informants, the researcher approached key informants such as medical doctors and nurse from INGOs, government hospitals and formula milk company, and HIV and Infant Feeding peer counselors with inclusion criteria mentioned in in-depth interviewing data collection method section, for in-depth interview, with the help of the research assistant for contacting peer counselors and with the help of three medical doctor friends to contact medical professionals from government service sector, INGO and private formula milk company.

3.3.3 Data collection Methods

3.3.3.1 In depth interviewing

In depth interviewing was the crucial and essential part of this research to achieve insight information for this research's objectives. Mouton and Marais (1996) stated that before in depth interviewing, it was needed to explain the procedure of interviewing, objectives of the research and the ways with which the results and finding would be used and was also needed to build rapport communication with the informants to achieve informant's open response. Therefore, before starting in depth interview, the researcher built trust, transparency and familiarity with informants to avoid the loss of important information from the informants by introducing each other friendly and explaining about the aims and procedures of research and interview process. Moreover, according to Hardon et al. (2001), the researcher applied 'high degree of flexibility with semi-structured interviews approach', and so, some additional questions were added to achieve more detail and new knowledge for the research objectives according to conversation with respondents.

The researcher performed in depth interviewing with key informants as well as informants to achieve in depth understanding of HIV positive mothers' cultural beliefs and practices of under six months infant feeding, explanatory model of HIV positive mothers' under six months infant feeding, food as preventive medicine for local infant illnesses and mother to child HIV transmission and individual perceptions about social factors for various infant feeding practices and to know health professionals' perceptions about HIV and Infant Feeding issue. And the inclusion criteria for key informants and informants are as follows:

Inclusion criteria for key informants and informants

I Key informants

- eight medical professionals: six medical doctors and one nurse who had worked in the PMTCT programs with infant feeding project or, who had worked in Obstetrics and Gynecology ward or children hospital and one medical doctor who had worked for formula milk and infant breast milk substitute Products Company.
- Two HIV positive mothers' infant feeding peer counselors: who had volunteered in PMTCT program with infant feeding project.

II Informants

- HIV positive mothers (at least 18 years of age) who were beneficiaries of PMTCT projects or were not those of projects.
- Must have at least one child of age up to six months at the time of research field work processing and the child was delivered only after the mother had been infected with HIV. (The researcher prioritized to select HIV positive mothers with more than one child, including one infant of age up to six months, to achieve broad and deep information about infant feeding practices.)
- Total 13 HIV positive mothers were interviewed for in depth interviewing, and they were not selected again for Focus Group Discussion. According to Hardon et al. (2001), the number of HIV positive mothers was adjusted to stop for in depth interview according to the saturation of knowledge of responses.

All key informants and HIV positive mother informants communicated and answered well. i.e., informants did not have communication difficulties such as hearing loss, inability to speak, inability to speak Burmese

language and informants did not have mental disorder. And the researcher selected key informants and informants who were willing to participate in this research voluntarily with the help of the research assistant and three medical doctor friends of the researcher. Then, the researcher conducted in depth interviews as follows:

Before in depth interviewing:

- The researcher himself appointed with key informants such as seven medical doctors and one nurse in order that the researcher could interview them when they found convenient time for in depth interview. But for in depth interviewing with two peer counselors for HIV and infant feeding, and informants, 13 HIV positive mothers with above mentioned criteria, the research assistant appointed with them.
- For the privacy, the interview places were chosen according to key informants'/informants' desire and choices. Generally, the interview places were informant's home, the researcher's home and two CBOs' offices for interview with informants, and key informant's home, office, hospitals' wards and cold drinks restaurants for interview with key informants with full privacy.
- Research assistant helped informants for the transportation to the interview place.
- The researcher was the only responsible person to take research tools to the scene of interview.

During in depth interviewing:

- The researcher introduced himself as a medical doctor in Myanmar and a student from Mahidol University, Thailand with medical professional key informants. Although the researcher introduced himself as a medical doctor to achieve smooth communication with medical professionals, rapport communication with trust building, transparency and non argumentative, supportive, and sympathetic behaviors were built to achieve in sight information about research. But, in introducing with non medical key informants and informants, HIV positive mothers, the researcher introduced himself only as a student from Mahidol University to build more familiarity and to achieve more open response about local concepts of infant health and diseases, and infant feeding practices.

- After introducing each other, the researcher explained or showed the aims of the research, the process of interview, and explained about privacy, confidentiality and beneficence for the key informants/informants in Burmese language. And the researcher requested for the informed consent, verbally or written informed consent. Then, the researcher requested the key informants/informants to permit tape recording in depth interview for day to day field note taking and expansion, data entry and data analysis. The researcher did explain that the voice recording and all related field notes and information would be destroyed after proper data entry and data analysis.

After in depth interviewing:

- After having a conversation, saying thanks, the researcher offered incentive presents to the key informants/informants for giving precious time and information to the researcher.
- Then, the researcher did expanding data and field notes, translating data into English, organizing, analyzing and entering data.

Concerning in depth interviewing, after contacting with one CBO and one INGO in July, 2013 again, in depth interviews were started with three key informants by the end of August, 2013 by networking through three medical doctor friends of the researcher. Thus, total 10 key informants in depth interviews and 13 informants in depth interviews were conducted by the end of August, 2013 to early January, 2014. Each in depth interview with key informants lasted for one hour to two hours approximately and one to three times of in depth interviewing were conducted to key informants according to the response of the key informants for the information needed to fulfill the research's objectives. In addition to in depth interviewing with 10 key informants, the researcher had the chance to interview with two mid-wives during participant observations at health education sessions, for about one hour to inquire about AN care, delivery care and post natal care services to the pregnant mothers and to the infants at community level. And, each of in depth interviews with HIV positive mothers lasted for one and half hours to three hours.

3.3.3.2 Focus Group discussion (FGD)

Hardon et al. (2001) stated that focus group discussion model was invented by sociologists in 1940s with purposes for military morale fostering issue. And it was stated that focus group discussion could be used as a starting point or beginning procedure to attain more knowledge or insight understanding for further research investigation processes, to apply for more precise questions and to modify tentative research processes and field research questions, etc. Babbie (2008) mentioned that focus group discussion was one of essential qualitative research methods and it allowed the researcher to achieve systematic various responses from several informants by using structured or open interview questions.

In this research, FGDs were conducted to gain more precise and diverse cultural beliefs and practices concerning with under six months infant feeding practices, of HIV positive mothers, relating to prevention of local infant illnesses and mother to child HIV transmission with the cultural beliefs of food as prophylactic drug, moreover, to achieve more information on socio cultural factors underlying, predisposing and trigging for various feeding practices.

Inclusion criteria for informants

- 16 HIV positive mothers with above mentioned criteria in in-depth interviewing session, but not chosen for in-depth interviewing.

Total three focus group discussions with 16 HIV positive mothers, 6 mothers in first group discussion, five mothers in second and third group discussions each, were conducted in early January of 2014 on three public official holidays at one CBO office. Each session lasted about two to three hours. And the researcher conducted focus group discussions as follow:

Before focus group discussion:

- The research assistant appointed with informants in order that the researcher could conduct FGDs when informants found convenient time for focus group discussion.
- For the privacy, interview places were one CBO's office on Myanmar official holidays and weekends, with full privacy.
- Research assistant arranged informants for the transportation to the interview place.

- The researcher as a facilitator and the research assistant as a key note taker were responsible persons to take research tools to the scene of focus group discussion.

During focus group discussion:

- The researcher introduced himself as a student from Mahidol University, Thailand. And the rapport communication with trust building, transparency and non argumentative, supportive, and sympathetic behaviors were built to achieve in sight information about research.
- After introducing one another, the researcher explained the aims of the research, the process of focus group discussion, and explained about privacy, confidentiality and beneficence for the informants in Burmese language. And the researcher requested for the informed consent, verbally or written informed consent. Then, the researcher requested the informants to permit tape recording focus group discussion for day to day field note taking and data expansion, data entry and data analysis. The researcher did explain that the voice recording and all related field notes and information would be destroyed after proper data entry and data analysis.
- And the researcher as a facilitator created discussion environment in which every informant had equal chances to take part, to expose their opinion, their knowledge and no one dominated the focus group discussion.

After focus group discussion:

- After having a conversation, saying thanks, the researcher offered incentive presents to the informants for giving precious time and information to the researcher.
- The researcher did expanding data and field notes, translating data into English, organizing, analyzing and entering data.

In every in depth interviews and focus group discussions with HIV positive mothers with above mentioned criteria, socio demographic data such as name (used pseudonym in thesis), age, education level, occupation, ethnicity, age of infant, and if HIV positive mothers practiced mixed feeding, the estimated age of infant when mixed feeding was started were collected and kept in mind about ethnicity and age of infant relating with infant feeding practices among HIV positive mothers.

3.3.3.3 Participant observation

Hardon et al. (2001) stated that participant observation was needed to fill the blanks of data gained from other types of data collection and it was necessary to apply with insider point of view to interpret what the researcher saw. For this method, 'moderate level type of high involvement participation' approach, in which the researcher or ethnographer interact a little with respondents, was applied for HIV positive mothers' infant feeding practices observation while doing in depth interviewing with HIV positive mothers simultaneously.

This kind of participant observations were done during in depth interviewing with HIV positive mother informants who had already disclosed their health status to their husbands/partners and their family members and when in depth interviews could be done at informants' (HIV positive mothers') house. For HIV positive mothers who had not disclosed their health status to their husbands/partners and their family members, the interview place was the researcher's house and two CBOs' offices. The researcher informed the informants that they could take their baby and infant feeding utilities to the interview place for their convenience to feed their infant if they wished. Then, when HIV positive mothers fed their infants, the researcher did observation about infant feeding patterns although the researcher could not see the relationship and communication concerning infant feeding practices between HIV positive mothers and their family members.

But, for the procedure of observations about infant feeding health education process during peer gathering, although the researcher intent to do 'complete participation' approach in which the researcher acts as an infant feeding health educator to attain more 'cultural relativism', the researcher could participate only in two episodes of one CBO's 'Pregnancy and Infant care' health education session for general population of mothers because there was no project and program aimed to HIV pregnant mothers only by CBOs. Here, the researcher requested informed consent verbally from only key gate-keepers, most responsible person, to avoid 'Hawthorne effect', effect on the data collection processes or responses/replies of informants or key informants due to the presence of researcher or informant's/ key informant's knowing that they were being observed or investigated by the researcher, for the sake of public health advantages.

3.3.4 Process or Road Map for field research data collection

The researcher implemented the field research processes and data collection as the following steps:

1) There were in depth interviews with seven medical professionals who were working in the PMTCT program with infant feeding project or, in Obstetrics and Gynecology ward or children hospital.

2) Then, there were in depth interviews with two infant feeding practice peer counselors for HIV positive mothers.

3) In depth interviews with 13 HIV positive mothers with above criteria.

4) Three FGDs with 16 HIV positive mothers with above criteria. *[1]

5) In depth interview with one medical doctor from formula milk or infant feeding substitutes Product Company.

6) Active complete participant observation (two times) in "Pregnancy and Infant Care" health education session to mothers with or without HIV. (Verbal informed consents from the most responsible person only to avoid 'Hawthorne effect') and

7) Observations for under six months infant feeding practices throughout every in depth interview with informants.

3.4 Data processing and analysis

Hardon et al. (2001) stated that plan for data processing and analysis was needed because the researcher would collect all data piles which were needed to analyze and were not needed to be used or analyzed. After each in depth interviews, FGDs and observations, the jotted notes, memorized events and answers of respondents and the recordings were expanded, translated into English and summarized into data master sheet. Then, the researcher sorted the data according to patterns of under six months infant feeding practices among HIV positive mothers and described, summarized and interpreted according thematic and chronological analysis and of research findings using data master sheet. The researcher analyzed the findings

*[1]this was intended to achieve detail or important facts that could be missed during in depth interview or to confirm in depth interview's responses.

whether they fulfilled the research objectives or not. When the process of translation, data entry and interpretation were completed, all recordings and jotted notes were destroyed for the confidentiality and privacy of the respondents.

3.5 Data Quality

Babbie (2008) stated that triangulation was the valuable research method to test the same research issue by using various research methods because of respective positive and negative effects of each data collection method. Moreover, Hardon et al. (2001) stated that the triangulation, the skillful combination of various data collection methods could produce the quality of data and could maximize the validity and reliability of data. And, the researcher used above mentioned three data collection methods: in depth interviewing, focus group discussion and participant observation to achieve precise, detail and various infant feeding practices, cultural beliefs concerning with infant health, prevention of infant illnesses, food for infants, and cultural concepts about motherhood, other socio-economic determinants figuring under six months infant feeding practices among HIV positive mothers. And another point was to avoid Hawthorne effect; the researcher explained the informants and key informants well about the objectives of the study and procedures of data collection methods and built rapport relationship between the researcher and respondents. The researcher tried to behave the behavior and style of interviewing in the manner of cultural appropriateness and familiarity by cultural appropriate dressing and communicating.

3.6 Ethical consideration

Babbie (2008) mentioned that ethic was also a crucial and essential part in conducting social research. Furthermore, Hardon et al. (2001) mentioned about the three basic principles of research ethic issue: “principle of respects for persons, the principle of beneficence and the principle of justice” (p. 281). So, the researcher tried not to break any physical, mental and social wellbeing of the respondents. The

researcher did keep in mind and strictly obeyed not to harm the informants since the preparation phase of research to the publication phase of research.

3.6.1 Informed consent

All data collection procedures in this research were only conducted after complete and precise explanation to the informants and only after achieving informed consent: verbal or written. The researcher explained or showed the explanation of research objectives and interview procedures paper written in Myanmar Language. And the researcher collected respondent's signature if the respondent agreed to sign in the informed consent and if not, the researcher requested only verbal consent. But, for the participant observation method, the researcher requested permission verbally from key gate-keepers only in order to achieve actual behaviors of HIV positive mothers' under six months infant feeding for the sake of public health knowledge. But, the researcher prioritized the privacy of informants.

3.6.2 Privacy

In conducting interview process of both in depth interview and group interview, and during observation process, the researcher prioritized the privacy of informants. The place of interview was chosen according to the desire of informants to achieve informants' privacy. And the researcher fully recognized and obeyed the rights of informants to stop and quit interview and data collection procedures at any time when the respondents wished to quit. But, no one including both key informants and informants did quit from the interview process.

3.6.3 Confidentiality

This research may contain any policy matter or structural issues that can harm the existence of respondents and so, the researcher used only pseudonyms. If the researcher would like to use direct quotation from respondents' answers, the researcher used only after the permission of respondents. After data entry and proper data analysis, all notes, and recordings were destroyed. And the researcher took the photos only if the respondents allowed taking photos. And only after permission from

the correspondent informants for the use of photo, the researcher used only after disfiguring the face parts of informants' photos.

3.6.4 Beneficence

After the research conduction, the research could find important factors and socio-cultural determinants that were casting under six months infant feeding practices among HIV positive mothers. The research findings from individual cultural explanatory model of under six months infant feeding practices, society driven structural patterns for under six months infant feeding patterns and to the level of health policy that needed to be adjusted and reformed for HIV and Infant Feeding practices according to national guidelines will be distributed and shared to the health policy makers. It can also provide valuable facts, inputs and recommendations for nonprofit organizations to achieve aimed targets and outcomes. Moreover, structural adjustment and health policy reform for infant feeding practices among HIV positive mothers can impact positively the economic, social and physical wellbeing of HIV positive mothers as well as HIV exposed infants born to mothers living with HIV/AIDS.

3.7 Study period and Research Schedule

Table 3.1 Time table

No.	Tasks	Jan 2013	Feb 2013	Mar 2013	April 2013	May 2013	June 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	Dec 2013	Jan 2014	Feb 2014	Mar 2014	April 2014
Proposal Process and Defense																	
1.	Proposal writing																
2.	Travelling to Myanmar for networking and communicating with NGOs ad CBOs																
3.	Networking and communicating with NGOs and CBOs																
4.	Proposal Defense																
Data Collection and Field works																	
5.	Travelling to Myanmar for field research tasks and data collection																
6.	Staffing and Training for staff																
7.	In depth interview with key informants																
8.	In depth interview with informants																
9.	Participant observation																
10.	FGD (with informants)																
11.	Data Validity																
12.	Data Analysis, Data expanding and entry																
13.	Travelling back to Home University																
Thesis Development and Defense																	
14.	Thesis Writing																
15.	Thesis Defense																

CHAPTER IV
RESEARCH FINDINGS

The researcher interviewed 10 key informants: two of them were peer educators, one was nurse and the others were medical doctors from public hospitals, from one of international non government organizations, and from one of formula milk pharmaceutical companies. Moreover, the researcher had the chance to interview two mid-wives, who had experiences about ante-natal, delivery and post-natal health care services to the pregnant women and mothers, during participant observations on health education sessions. The researcher interviewed 13 HIV positive mothers for in-depth interview and 16 HIV positive mothers for three focus group discussions.

4.1 Health Care Delivery Service setting concerning infant feeding practices

According to interviews and analysis of data collected during field works, most of the mothers went to hospital or non government pregnancy and delivery care service centers or urban health centers to receive ante-natal care [AN care], at four to seven months of pregnancy, to receive delivery service and to receive post-natal health care services including family planning, by asking neighbors or family members who had already delivered a baby while some mothers gave birth at home with trained birth attendant although they received AN care services from those health care institutions. Most of mothers who had experiences about taking pregnancy and delivery health care services at those health care institutions went directly to those health care delivery institutions while mothers who did not have those experiences asked their family members or neighbors first and then they were referred and/or accompanied by their family members or neighbors who were usually well experienced mothers.

If the pregnant women with unknown HIV status were provided AN care at urban health centers or non government pregnancy and delivery health care service

centers, and if the pregnant women agreed and wished to test HIV for their AN care and delivery care, they were tested HIV at those centers or were referred to international non-government health service centers according to VCCT (Voluntary and Confidential Counseling and Testing [of HIV]) project's availability of those centers. The pregnant women were tested HIV after VCCT at those health care centers, and then, if they had positive result of HIV, they were referred to central women hospital to provide AN care including infant feeding counseling, blood tests again after VCCT, hospital delivery service with PMTCT : normal spontaneous delivery or lower segment caesarian section according to conditions of mothers and fetus, along with ARV prophylaxis to the infant and/or mothers, and post natal care for HIV positive mothers and their exposed babies.

Most of the pregnant mothers, who had already known their HIV status before pregnancy in informant population, went central women hospital directly because they learnt and knew about procedure and process to access AN care, delivery care and post-natal care at central women hospital by peer support and networking.

If the pregnant women were referred or went to the central women hospital, they had to give name list to the nurse at the reception counter and they had to wait to see the doctors after being measured of blood pressure, height and body weight. Then, according to their list number, they were seen by obstetric and gynecologists or post graduate doctors and medical doctors for abdominal examination and physical examination for the health of the pregnant mother and the fetus. Then, they were referred to phlebotomy room for the blood tests after pre test counseling. Sometimes, it was group counseling after health education session for pregnancy, delivery and infant feeding care, according to the numbers of pregnant mothers needed to be given health education and counseling. After the test, the pregnant mothers must sit post test counseling session to discuss about the blood test result of HIV and other tests. Usually, post test counseling was done by a nurse or a doctor with the pregnant mother only or with her relative or her spouse who accompanied her to the hospital. Then, she was referred back to another public clinic to test CD4, viral load and further management for her HIV infection. If she needed to take ART, ART was introduced by the physician from that clinic, and if she did not need to be on ART treatment, ARV prophylaxis was given according to PMTCT procedures. If the pregnant mother

had been taking ART or she was an old HIV infected women who did not need to take ART, she was counseled for infant feeding practices, immediately.

At the next clinic appointment or immediately, according to workload of the doctors and the number of HIV positive pregnant mothers to be counseled, when the CD4 results, viral load results would not be issued and ready, the mother only or with her relative or her spouse were counseled about HIV and infant feeding practices. According to in depth interviews with key informants, four among 8 medical professional key informants said that after HIV positive mother was counseled for post-test HIV counseling, she alone or with her accompany were counseled about infant feeding practices and HIV immediately or at the next appointment. The information rich key informant medical doctor said, *"First, medical doctors explain about HIV transmission from mother to child: during pregnancy, during delivery and during breastfeeding in order that the mother can understand that the mother can transmit her HIV virus even if she does not breastfeed her baby. Second, HIV positive mother is counseled about advantages and disadvantages of infant feeding practices: exclusive breastfeeding, exclusive formula feeding and mixed feeding."*

Doctors explained, *"Although exclusive breastfeeding has more risk to transmit HIV to the baby, the baby can get good immune factors via exclusive breastfeeding. And colostrums is really good for the baby, on the other hand, although exclusive formula feeding has no risk for HIV transmission to the baby, it may cause diarrhea frequently that might make the baby hospitalized if the mother cannot feed cleanly to the baby."* Moreover, medical doctors explained and counseled about mixed feeding practices: mixed feedings with breastfeeding and mixed feedings with formula feeding and mixed feeding in additional to breastfeeding was more associated with HIV transmission to the baby because feeding various kinds of foods made the baby's gut abraded and ulcerated and then, abraded gut allowed HIV virus to enter into the blood stream through abraded area while mixed feeding during formula feeding was associated with high rate of infantile diarrhea, and high rate of mortality and morbidity. But, medical doctors said, *"they worry more about mixed feeding with breastfeeding than mixed feeding with formula feeding, for HIV transmission to the baby although medical theories say that mixed feeding with formula feeding has more morbidity and mortality rate than mixed feeding with breastfeeding."*

Third, during counseling, medical doctors assessed the socio-economic condition of the mother whether she could afford to buy needed formula milk apart from formula milk supply provided by the hospital because doctors kept in consideration about shortage of formula milk during infant feeding and one doctor said *"total 20 kg of formula milk will be needed to feed the baby for six months and it costs about 500,000 to 600,000 Myanmar kyats and it is needed to feed the baby about 8 times a day."*

Finally, medical doctors allowed mothers to choose infant feeding practice from two options: exclusive formula feeding and exclusive breastfeeding. But, one medical doctor said that it was needed to guide and convince the mothers in order that they could choose appropriate infant feeding practice according to their HIV/ AIDS status, health and economic condition. If HIV positive mothers did not decide infant feeding before delivery, or if the mothers who had not taken AN care, if she came the hospital before just delivery, if her HIV test result was positive and she was undergone LSCS, the doctor had to counsel her spouse if available or had to counsel her relative or patient attendant about her health status and had to support to choose one feeding practice because HIV positive mother was in the operation theater.

And one medical doctor said, *"Most of the HIV positive mothers wish to choose exclusive replacement feeding."* Most of key informants and informants said, *"At that time for infant feeding decision, the matter to prevent HIV transmission to the baby is the first priority, and so, HIV positive mothers choose to practice exclusive formula feeding without considering any other things so much."* Most of the HIV positive mothers were provided with only one time of infant feeding counseling and they needed to choose infant feeding practices immediately. But, some of HIV positive mothers were provided about two times of infant feeding counseling and they could decide infant feeding practices with appropriate time or they could change their infant feeding choices. One of doctors said, *"it is actually needed to do HIV and infant feeding counseling at least two to three times on every AN care visits, it is ideal type for infant feeding counseling, we know, we should do, but, due to our workload and other duties and responsibilities, we have to manage very hardly even to give infant feeding counseling even for one time."* And he said that it was also needed to assess

the HIV positive mothers' infant feeding patterns even after delivery, at post-partum clinic appointments.

After delivery, the baby was fed according to HIV positive mother's infant feeding decision, exclusive breastfeeding or exclusive formula replacement feeding. For exclusive breastfed babies, it was needed to start breastfeeding as soon as the baby was delivered and to feed colostrums to provide maternal immunity to the baby, most of key informants said, and it was also needed to breastfeed the baby according to the baby's demand, it should not be time strict and rigid breastfeeding and breastfeeding must be exclusive up to six months of age of infant: even no water should be fed to the baby. And the exclusive formula milk fed babies were fed two hourly by the patient attendant or the HIV positive mother or her relatives or her spouse during hospitalization in front of nurses, to prevent chocking of new born baby due to feeding. Replacement feeding was also needed to be exclusive up to six months of age of infant, all medical doctors and nurse said. And the baby was prescribed to be on ARV prophylaxis up to 42 days of infant if the baby was fed with formula milk. But, if the baby was breastfed and then, the baby was prescribed to be on ARV prophylaxis up to one week after all breastfeeding was stopped, if the mother chose to practice exclusive breastfeeding. In contrary, one of two HIV positive peers replied, *"If a HIV positive mothers choose EFF, she can feed other complementary foods to the baby at one and half month or two months of age of infant while the mother can feed breast milk only to the infant up to six months of age if the mother chooses to practice EBF."* Kyi Kyi[1]* said, *"I encourage the mothers to feed other foods such as Htamin, soft steamed rice, with bean and oil, and nutritious powder to the baby,"* because she thought that feeding formula milk only to the infant was not enough and feeding *Htamin* was good for the infant health and development.

Moreover, medical doctors could counsel HIV positive mothers for infant feeding only at medical follow-up appointments after delivery again. In additional to this, the doctor said that about 75% of HIV positive mothers among 150 HIV positive mothers delivering a year chose exclusive formula feeding while the rest of mothers chose to practice exclusive breastfeeding, then, more exclusive feeding was more

[1] *This symbol means that the names are pseudonyms for confidentiality and privacy of informants

prevalent in mothers who chose exclusive formula feeding. And, it was also needed to say the mothers to practice exclusive breastfeeding up to six months of age of infant and then, to stop breastfeeding and introduce weaning food feeding practices, with the help of formula feeding, to the baby if the mother chose to practice EBF because of low accessibility of ART and viral load test and CD_4 investigations according to Myanmar health care setting. And if the mother chose exclusive formula feeding, it was also needed to feed step one formula milk up to six months of age of infant exclusively and then, to feed step two and three according to mother's wishes and affordability. Two medical doctors of the rest four medical professionals said, *"Some medical doctors counsel HIV positive mothers with so eager motivation to convince the mothers to choose EFF in order that HIV cannot be transmitted to the baby and some do not counsel well HIV positive mothers about HIV and infant feeding."* But other two medical professionals could not reply about the procedure about infant feeding counseling for HIV positive mothers because one was from private medical business and one was not so much interested in this issue.

After discharge from the hospital, HIV positive mothers and infants were appointed for clinic follow up treatment and to test HIV viral load at 45 days of age of infant and HIV anti-body test on six months, nine months and one and half years of age of infant. Between these times, clinic follow up appointments were made according to HIV positive mother's and infant's health status, and formula milk supplied by the hospital. Most of doctors said, *"On every visit of post-partum clinic appointments, infant feeding practices are counseled and assessed again and if needed, some suggestions are provided."*

4.2 HIV positive mothers' infant feeding practices and realities in their perception

4.2.1 Characteristics of informants

During field works, the researcher interviewed 13 HIV positive mothers for in-depth interview and 16 HIV positive mothers for focus group discussion. The

youngest HIV positive mother was 20 years old and the eldest one was 40 years of age, the average age of HIV positive mothers was 32 years for in-depth interviewing while 20 years, 44 years, and 30 years of age were the age of the youngest HIV positive mother, the oldest HIV positive mother and the average age respectively for focus group discussion.

The education levels of all 29 HIV positive mothers ranged from illiteracy to graduated level. Nine, eight and seven of HIV positive mothers had primary, middle and high school level respectively while three were graduated and two were illiterate out of total 29 HIV positive mothers. The informants were composed one Christian, one Hindu, two Muslims and others were Buddhists while they were three Indian, two Chin, one Shan and others were Burmese. And most of the mothers were in the midst of low economic status while some could survive with fair economic situation.

Most of the mothers were taking ART and some were not taking ART because they did not need to take ART because of their good CD_4 count, above 350 cells/mm^3, while only one mother had not tested CD_4 because of financial problem for living and economic barriers for transportation to the health services. One mother was taking second line ART due to first line ART drugs failure because of poor drug compliance.

10 mothers out of 29 HIV positive mothers had already known their HIV status before the recent pregnancy and nine mothers out of 10 had been taking ART already while one mother had received ARV prophylaxis for the delivery because of her high CD_4 count. Nine infants out of 10 infants born to those 10 HIV positive mothers had been provided ARV prophylaxis while one infant had not been provided ARV prophylaxis because one mother had delivered the baby at home because her husband could not send her to the hospital in time due to his overtime night job and financial difficulty for transportation to the hospital when the mother suffered urgent labor pain and then, she quickly delivered at home by trained birth attendant.

During AN care, 18 out of the rest 19 HIV positive mothers had known their HIV status, and 11 mothers had been taking ART while 7 mothers had received ARV prophylaxis for the delivery according to their CD_4 status. 18 infants out of 19 infants born to those 18 mothers (one mother delivered twin babies) were provided ARV prophylaxis completely while one infant was not provided ARV prophylaxis

completely because his breastfeeding mother could not go to hospital due to transportation fares problem and economic status. The last mother had delivered at home with a trained birth attendant and was diagnosed with HIV during hospitalization, at about three months after delivery, due to her frequent illness and sufferings such as prolonged cough, breathlessness, lethargy, loss of appetite and loss of weight. Both breastfeeding mother and her baby had not received HIV test and ARV prophylaxis because she delivered at home.

And the mothers had one to four children and they delivered one to two babies after HIV infection. Five mothers out of total 29 mothers delivered two babies after HIV infection: one mother delivered twins after HIV infection. The two children prior the infants of two mothers were healthy and HIV negative, one child of one mother had died of HIV related diseases and one child of one mother was taking ART while the twins of one mother were healthy. And, the recently born HIV exposed babies were from 19 days to six months while the twins were 12 months old.

Concerning with infant feeding choices, most of mothers studied in this research chose to practice exclusive formula feeding, while only three mothers chose to exclusively breastfeed their babies and one mother who had known her HIV status at three months only after delivery had breastfed her infant. But, only four mothers had been practicing infant feeding patterns exclusively as they had chosen. Among those four mothers, three mothers had chosen exclusive formula feeding and they had infants aged of two months, three months and six months each, but, the mother who had two months aged infant was considering to feed *Htamin*, soft steamed rice coming days while one mother who had two months old infant was exclusively breastfeeding her infant although she complained the researcher that she could not produce breast milk enough to feed her baby.

Table 4.1 Characteristics of HIV positive mothers interviewed for in-depth interviewing

No.	Age	Ethnicity	Religion	Marital Status	Education	job	Economic status	Spouse's HIV	Disclosure to spouse	No. of children	Age if infant (months)
1	37	Indian	Islam	Second	Primary	No	Low	NR	No	4	4
2	20	Burmese	Buddhist	Separated	High	No	Low	NR	Yes	1	2
3	29	Burmese	Buddhist	Married	Illiterate	Family business	Low	NR	Yes	4	4
4	35	Burmese	Buddhist	Married	High	Sewing	Middle	R	Yes	2	6
5	33	Burmese	Buddhist	Married	Primary	No	Low	R	Yes	2	6
6	40	Burmese	Buddhist	Married	Middle	Sewing	Low	NR	Yes	3	3
7	24	Burmese	Buddhist	Widowed	High	No	Low	R	Yes	1	2
8	34	Burmese	Buddhist	Second	Primary	No	Low	NR	Yes	1	5
9	27	Burmese	Buddhist	Married	High	No	Low	R	Yes	2	2
10	38	Shan	Buddhist	Married	Graduate	Government	Middle	NR	Yes	2[a]	12[b]
11	30	Burmese	Buddhist	Second	Graduate	At private company	Middle	R	Yes	1	2
12	34	Burmese	Islam	Married	High	Family business	Middle	R	Yes	4	5
13	36	Indian	Hindu	Married	Primary	No	Low	NR	Yes	3	5

Note: Second means second marriage. NR means non-reactive. R means reactive.

[a] That mother had delivered twin babies. [b] To achieve government staff in the informant population

Table 4.2 Characteristics of HIV positive mothers interviewed for focus group discussion

No.	Age	Ethnicity	Religion	Marital Status	Education	job	Economic status	Spouse's HIV	Disclosure to spouse	No. of children	Age if infant (months)
1	37	Burmese	Buddhist	Married	Primary	No	Low	NR	Yes	3	5
2	39	Burmese	Buddhist	Married	Middle	No	Low	NR	Yes	3	5
3	28	Chin	Buddhist	Married	High	No	Low	Not	No	1	4
4	27	Burmese	Buddhist	Married	Graduate	Private worker	Middle	R	Yes	2	4
5	33	Burmese	Buddhist	Married	High	sewing	Middle	R	Yes	2	3
6	28	Burmese	Buddhist	Married	Middle	No	Middle	NR	Yes	2	2
7	20	Chin	Christian	Married	Middle	No	Low	R	Yes	2	3
8	29	Burmese	Buddhist	Second	Primary	Manual worker	Middle	R	Yes	2	6
9	44	Burmese	Buddhist	Divorced	Primary	Manual worker	Low	Not	Yes	4	6
10	27	Burmese	Buddhist	Married	Primary	No	Middle	NR	Yes	2	3
11	20	Burmese	Buddhist	Married	Can read	No	Low	NR	Yes	1	19D[a]
12	33	Indian	Buddhist	Separated	Middle	No	Middle	R	Yes	2	3
13	34	Burmese	Buddhist	Married	Middle	No	Middle	NR	Yes	3	4
14	22	Burmese	Buddhist	Second	Illiterate	No	Middle	Not	Yes	2	1
15	21	Burmese	Buddhist	Married	Middle	No	Middle	NR	Yes	1	4
16	39	Burmese	Buddhist	Second	Middle	No	Middle	NR	Yes	2	4

Note: Second means second marriage. NR means non-reactive. Not means not-tested. R means reactive.

19D[a] means 19 days of age of infant.

4.2.1.1 Family structure, relationship and living arrangement

HIV positive mothers had the size of family ranging from three family members to 12 family members. They were living with their husband, their

children and infant, other siblings and siblings' families, their parents or parents in law according to the type of family.

Nuclear type of family

In this type of family, HIV positive mothers were living with their husband, children and infant. Although decision making and practicing behaviors of infant feeding were embedded in the mutual understanding and mutual relationship resulted from discussion for infant feeding practices between wife and husband, they usually took suggestions from their surrounding mothers who had delivered the baby or had cared many children from neighbors or from relatives and it was more serious if the baby was their first baby.

Wooden small house or small illegal tenant hut belonged to mothers with this type of family, some of them lived in a rental house or in the house owned by their parents or parents in law in the same compound or not very far. Although they lived in a separated house, most of them lived near or besides their parents or parents in law house. Some of mothers were under the influence of their mother in law in the issues of infant feeding practices.

Joint or extended type of family

Joint or extended type of family was the most family type in which HIV positive informants lived in. They lived together with their parents or parents in law, their aunties or uncles, their siblings and siblings' families, who were blood related or socially related in a wooden compound house or brick house. They usually used common kitchen and many families lived under the same roof. They shared experiences and belongings for all living issues such as health, business and religious beliefs, etc. Concerning with infant feeding practices, senior mothers surrounding the HIV positive mother in the family and in the community shared their experiences and provided infant feeding suggestions that HIV positive mothers followed and practiced more than medical professionals' suggestions. Most of the male family members except HIV positive mother's husband did not involve so much in feeding infants. But, one mother said, *"My father said me to feed San Mhote, nutritious powder to my baby to make the baby healthier and more developed as well as to reduce formula milk consumption by the baby"*

Most of HIV positive mothers followed and practiced according to their mothers' infant feeding practices. But, after hearing the suggestions from their mother or senior mothers who had delivered a child or had cared many children in the family and in the community, HIV positive mothers thought whether that kind of infant feeding patterns could harm the baby or not. Then, if they thought that feeding patterns might not harm the baby's health, they started to introduce that kind of feeding patterns to the baby. But, before feeding the infant, they confirmed those feeding practices again with other well experienced mothers whether it could be introduced and practiced to the baby.

Three generation type of family

This type of family was also found related with HIV positive mothers' family structure. HIV positive mothers lived with their parents in law or parents, their husband and their children in the wooden or brick house. Infant feeding decision making and infant feeding patterns were born out from mutual understanding and discussion between HIV positive mother and their husband. Sometimes, infant feeding patterns were suggested by the HIV positive mother's mother or mother in law according to her past children care experiences.

Other types of family

Some HIV positive mothers were living in other family types in additional to common three types of family. One mother said, *"I go to and live in my mother house where so many siblings who are single, my children, my mother and aunty and uncle are living together, day time, I go to and cook for total eleven family members, my little brother takes care for the family expenses. I live in the separated rental house away from my mother house with my husband. But, I live in my mother house in day time to do cooking and house chores including caring my children."* Moreover, some mothers lived with their parents in law's family at night and went and lived with parent's family day time while other mothers lived together under the same roof with their house owner. And one mother showed unstable changing family type from nuclear type to extended type to again three generation type within six months of age of infant due to job and leaves allowance, and care giver problem.

In conclusion, generally, although various types of family were belonged to HIV positive mothers, concerning with infant feeding practices, most of

HIV positive mothers believed and practiced according to their mothers or their senior mothers who had delivered a baby first or who had experiences about infant caring and feeding, related with infant health and growth in the family as well as in the community. Most of HIV positive mothers said that medial doctors suggested infant feeding practices according to their knowledge and modern medicine, but, our mothers had delivered us and our siblings, and she had cared us for a long time and we were healthy and so, we believed my mother much more. But, some mothers were between the forces of doctor patient relationship and relationship in the family.

4.2.1.2 Residential neighborhood and relationship

Concerning with neighborhood relationship, most of HIV positive mothers were led in Myanmar cultural neighborhood context in which knowledge were shared and, practices and behaviors were inherited and shared according to own experiences and hear-says experiences. Cultural beliefs, practices and interactionalism were interacting and interrelating from community level to the HIV positive mothers' individual level through family level. Generally, there were supportive knowledge sharing and suggestions concerning infant feeding practices from neighbors to HIV positive mothers. Moreover, HIV positive mothers were living in the neighborhood context of cultural infant feeding knowledge and practices sharing.

There were three kinds of neighborhood life in which the HIV positive mothers were socialized and culturalized. One type was the context in which people communicated, interacted, helped, argued and quarreled very openly one another. In that type of neighborhood context, HIV positive mothers were living in the midst of many cultural infant feeding practices suggestions. Most of mothers followed the suggestions because they thought that those practices were supportive for infant health and development, and they also thought that those infant feeding practices were not harmful to the babies. But, some mothers who would like to practice infant feeding according to medical professionals' advice faced those traditional suggestions as pressures and nuisance from the community and one of mothers said, *"I would like to feed my baby according to what doctors suggested me to prevent HIV transmission to my baby, but, when my neighbors see me, they ask me why I feed formula milk to my baby…then, they said my mother that breast milk is the best and even medical doctors*

encourage mothers to breastfeed the baby. That makes me feel annoyed and feel tension about infant feeding between my family and me." That type of neighborhood context belonged to low socio-economic environment.

Another context was the type of relationship with neighbors in which HIV positive mothers and their family members communicated and interacted with their neighbors not friendly. In this type, cultural beliefs and practices related with infant feeding patterns were suggested to HIV positive mothers mainly from senior relatives or mothers or mothers in law with cultural seniority concept. If HIV positive mothers had disclosed their HIV status to those family members, they did not encourage HIV positive mothers so much to practice cultural infant feeding patterns. But, if HIV positive mothers had not disclosed their HIV status, HIV positive mothers felt unpleasant and stressful situation between suggestions given by family members and advices given by medical professionals if HIV positive mothers wished to feed their infant according to medical professionals' advice. But, if HIV positive mothers believed and practiced cultural infant feeding patterns suggested by their senior mothers of their family, it was not a problem. This type of neighborhood context was found among middle socio-economic class HIV positive mothers.

The last neighborhood context was seen in educated HIV positive mothers' environment setting. Although they had communication with neighbors: most of them were also educated, they were not suggested by neighbors concerning infant feeding practices so much. But, they were also advised by their senior mothers of their family for cultural infant feeding practices if they had not disclosed about their HIV status to the family members.

4.2.1.3 Daily house chores, jobs and economic status of HIV positive mothers' life

Concerning with daily house chores, almost all HIV positive mothers did house chores as a part of daily activities except two mothers who were very sick due to HIV related diseases and two mothers who were assumed by their family members or themselves that the mothers were in very fragile and illness risky period after delivery, *Mee Twin*. In Myanmar culture, daily house chores such as cooking, washing clothes of the whole family and cleaning house were assumed as cultural house works for family lady members while other man members helped in

cleaning house or cooking. For most of the HIV positive mothers, doing house chores as the mother and lady member of the family took the most time of daily life. They cooked for the whole family, cared and fed the baby, swept the whole house and washed the clothes of the whole family members just after *Mee Twin* period. But, if the family type was joint or three generations type, other lady family members shared and took responsibilities for those chores while the family was nuclear type, the mother was the most responsible person for house chores. But, some husbands and other man family members helped in doing house chores such as carrying water from a distant water source for washing clothes and dishes. But, mothers and family lady members were the symbols for doing house chores. Although most of HIV positive mothers were doing house chores, they did not neglect infant care and feeding.

In addition to doing house chores, some of the mothers worked for paid job at home or outside as manual worker or government staff or private staff or skill job workers at home like sewing or small business owner. Most of working HIV positive mothers worked to earn money because their husband could not work due to diseases, or their husband was jobless or the money that their husband earned was not enough for the whole family. One of mother said, *"I cook for all family members, I wash the clothes of elder family members, I clean the house and then, I run my very small home business, motorcycle cleaning service to earn money to support four children and my husband who was receiving treatment for his illness. It is very tired, but, I must do."* One mother who was the government staff said that, *"I returned my job after 42 days of maternity leave, it makes me very tired to do job and to prepare formula milk for my twin babies...if the meeting is at the same time to prepare and feed formula milk for my babies, I cannot concentrate what they are discussing and I wish to go back my home as soon as possible, my babies will cry and feel hungry at that time."* But, most of HIV positive mothers in this study did not work until six months of age of infant to care and feed their babies while some HIV positive mothers had to work because their husband was jobless or the money earned by their husband was not enough for the whole family or HIV positive mothers were government staff or private business staffs.

Most of HIV positive mothers' husbands worked as a highway car driver or sparer, or a motorcycle taxi driver or a trishaw driver or handicraft skill

worker or a dock worker or a manual worker or a garbage collector or a small vendor or a private business worker or a small business owner while one husband died, two husbands of two HIV positive mothers ejected and separated their HIV positive wives because of mothers' HIV status, one husband could not work because of his sickness and one husband was jobless. Although both husbands and wives worked, either a husband or a wife worked, some families were still in the midst of debt, some families had been surviving in very tight financial and job status although some families owned a fair economic status. Mothers' paid job working and economic status were also determinants to practice mixed feeding patterns to their babies.

In conclusion, the daily life of HIV positive mothers was composed of infant feeding and caring such as cleaning and boiling infant feeding materials, preparing and feeding formula milk to the infant or breastfeeding to the infant, luring the baby, etc, since waking up in early morning, doing house chores such as cooking, washing and cleaning, preparing food for the family members, caring old children and sending them to the school, doing paid job at home or outside and balancing between infant and children care and doing house job and paid job.

4.2.2 Events and illnesses leading to HIV testing, feeling and coping about HIV result and disclosure

After knowing the life contexts and institution structures in which HIV positive mothers were living, events, illnesses, feelings, perceptions and coping related to HIV testing and result disclosure came into the researcher mind to know the whole context of mothers how they became HIV positive mothers.

4.2.2.1 Why needed to test?

HIV positive mothers in this study, from both in-depth interview and focus group discussion, were tested HIV when they went to the hospital due to suffering illness or when they went to the hospital or NGO/INGO for AN care service or when applied job or when delivered the baby. Most of them (18 out of 29) had known their HIV status at AN care service and among 18 mothers, one mother was diagnosed only when she came the hospital for delivery when she suffered abdominal pain for delivery, 10 HIV positive mothers had known their HIV status during their hospitalization or out-patient department care [OPD] for illnesses such as

pulmonary tuberculosis, prolonged fever, prolonged diarrhea, weight loss, and severe thinness. Among those mothers, one knew her HIV status during job interview blood tests. One HIV positive mother was diagnosed with HIV only at three months after delivery at home (by a trained birth attendant) because of severe illnesses: loss of appetite, loss of weight, severe thinness, cough, and breathlessness, etc. Therefore, almost all mothers were tested and diagnosed HIV due to health reasons and one mother was tested HIV due to job application.

4.2.2.2 How HIV test was tested?

From in-depth interviewed group of HIV positive mothers, 7 out of 13 pregnant mothers were tested HIV for AN care services at the private hospital or public hospital or INGO and six mothers were provided group counseling and health education concerning HIV infection, signs and symptoms, transmission and prevention, living in positive life and receiving treatment. Only after that, they were tested HIV according to their wish to be tested. And after the result of HIV test was issued, mothers received post-test counseling for HIV test focusing on living as a people living with HIV/AIDS, receiving treatment and prevention, and if necessary, HIV pregnant mothers and health professionals discussed about HIV/AIDS again individually. It was also reinforced by HIV positive volunteer in public hospital. But, one mother who showed AN care just before delivery and who delivered at other regional public hospital, not in Mandalay area, said *"after examining my abdomen, she [the doctor] asked me to do blood tests. She did not explain me about the tests and did not counsel about HIV testing, the blood tests came out immediately. Then, she asked me to admit hospital immediately."* She was not been explained about pre-test counseling although she received post-test counseling for HIV testing, in 2013.

But, among five mothers who had been diagnosed HIV due to their sickness, one was diagnosed at one INGO's clinic, and four were diagnosed at public hospitals. Among those, one mother was tested and diagnosed HIV without receiving pre-test counseling during admission to public hospital due to accidental falling at seventh months of pregnancy in 2012. And one mother was tested and diagnosed HIV due to her and her husband's severe illness at one of tertiary hospital in other region, not in Mandalay, without counseling and moreover, her husband was dismissed from public government service. Then, she and her husband were ejected

also from staff house 12 years ago, without being provided proper treatment from medical professionals. But, other three mothers were tested and diagnosed HIV by being provided VCCT and they had received proper medical treatment and services from public hospitals.

The last mother, who was not pregnant at that time, knew her HIV status when she had to test HIV for her job application at one private business. She could not refuse HIV test for the job application because she wanted to achieve job. But, she was not provided VCCT and her result was sent to that private business from private specialist hospital without her consent. And moreover, she did not achieve the opportunity for job because of her self-stigma and self-discrimination due to her HIV status.

4.2.2.3 Feeling during the test and feeling and coping to result?

All mothers, except mothers who were tested HIV without being provided with pre-test counseling, felt excitement and they wished they might not be infected with HIV. Although they were received pre-test counseling, they were afraid of HIV infection because they believed that it was an incurable disease and felt shameful if they were infected with HIV because they thought that they would be stigmatized and discriminated by the family and the community. And they felt that most of people thought that it was due to sexual mal practice if he or she was infected with HIV.

After the test result of HIV was issued, 11 out of 13 mothers were provided pos-test counseling for HIV/ AIDS infection: signs and symptoms, prevention and transmission, receiving treatment regularly, and living as a people living with HIV/AIDS in positive way for the life. But, one mother who was diagnosed with HIV twelve years ago was not provided post-test counseling and was forced to discharge from the hospital. And one mother applying job was not provided with post-test counseling as well as was not been provided proper referral to the health care service.

When mothers had known their HIV status, they felt so sad and depressed as well as they felt afraid of their family whether their family scolded or stigmatized or abandoned them and they worried about stigma and discrimination by

the community because they thought that HIV was associated with bad woman [commercial sex worker]. Moreover, they worried for their children because of their HIV status and one mother said, *"I felt sad and worried for my children: my disease has been transmitted to my children? Because I was breastfeeding my last daughter at that time, she was about one and half year…I suffered serious feeling: my brain and head were burning out! Although I pretended that I did not have HIV in front of other people, I cried at home."*

In addition to this serious sadness and worries, one mother said, *"I felt so sad, depressed and felt angry to my first husband because he was a womanizer, he went beer station and Karaoke bars."*

As soon as the mothers knew their HIV status, their feelings ranged from serious depression and sadness, worries for their children or their fetus to suicidal tendency. But, mothers tried to escape from those feelings by disclosing others such as mother, father or husband or other relatives such as aunty or brothers or sisters and medical professionals to reduce their strong feeling and to achieve mutual discussion and counseling. For mothers who were diagnosed HIV at AN care, they survived again from those frustrating feelings by encouraging themselves for the sake of their fetus in their abdomen with the support from their husband or mother or father or other family relatives and from medical professionals. But, one HIV positive mothers was abandoned by her husband and parents in law because of her HIV status even while she was in the operation room for abdominal delivery. But, she could survive with the support of her mother, father and sister.

Among mothers who knew their HIV status during hospitalization or illness, two mothers did not have any children or pregnancy at that time and they tried to escape psychological feelings with the support of their family members and medical professionals. Three mothers built their collapsed mind again for the children. And one mother who knew her HIV status during her job application tried to overcome her depression and suicidal tendency by discussing and counseling with her family doctor, medical doctors and by attending health education sessions and disclosure sessions provided by self help groups and INGOs.

4.2.2.4 HIV status disclosure

Among HIV positive mothers in in-depth interview and in focus group discussion, 12 out of 13 and 15 out of 16 HIV positive mothers had disclosed their HIV status to their spouse. One mother from in-depth interview did not disclose her HIV status because she thought that it was not needed to tell her husband who was her second marriage and she married him after HIV infection. Her husband did not ask her about her HIV status although he heard it from neighbors. And one mother from focus group discussion did not disclose her HIV status because she was afraid of stigma and discrimination from her husband, she thought.

For mothers who knew their HIV status during AN care, post-test counseling was done immediately by a medical professional to the HIV positive mother and her relatives such as sister or mother or her spouse, who accompanied the HIV positive mothers for AN care visit. So, HIV positive mothers did not need to try to disclose their HIV status themselves to family members because the one who accompanied them disclosed her HIV status to other supportive family members if necessary. HIV positive mothers' husbands were disclosed by his HIV positive wives or his wives' relatives if the husbands were not counseled during post-test counseling. Moreover, HIV post-test counseling was approached with family counseling design in Myanmar, so, mothers who knew HIV status during hospitalization or illness or AN care were encouraged to call their husband to the hospital for post-test counseling and HIV testing for spouse. So, they could disclose their HIV status with the support of medical professionals. Thus, almost all husbands were counseled by medical doctors and they were convinced to test HIV for family planning and living in positive ways. HIV positive mothers disclosed their HIV status to their spouse or their family members whom HIV positive mothers seemed helpful and supportive to them, because HIV positive mothers wished to achieve mutual understanding, encouragement and support from them for their feelings and depression. One mother who knew her status of HIV during job application disclosed her family doctor first and then, with the help of doctor, she could disclose her aunty and her younger brother.

This type of counseling was helpful as well as destructive for some HIV positive mothers because one HIV positive mother from in depth interview group and one from focus group interview were ejected and divorced by their

husbands because of their HIV status. Usually, after knowing HIV test result, HIV positive mothers tried to explode, and discuss her intense and serious feeling about their HIV infection. The person who counseled and discussed them, individually or together with spouse or other family members, were medical doctors or peers. If the mothers were counseled alone, when they arrived home, they first disclosed to their mothers or husbands or aunty or father according to their dependence and attachment. After that, they felt better and tried to escape from serious sadness and depression with the support of medical professionals, peers and family members who they had disclosed HIV status.

4.2.3 HIV positive mothers' infant feeding decision

After exploring events and illnesses that pushed the mothers to undergo HIV blood testing, and knowing HIV positive mothers' context and situation concerning with HIV test result and disclosure, the decision making process for infant feeding practices by HIV positive mothers was interviewed.

4.2.3.1 HIV positive mothers' perception to medical professionals' and peers' explanation and recommendation for infant feeding

On the side of HIV positive mothers, only five among 29 HIV positive mothers had weak knowledge on HIV education and other mothers knew well about HIV: transmission and prevention including mother to child HIV transmission and prevention and five mothers could explain "Gut theory" of HIV transmission to the baby if the mother practiced mixed feeding with breastfeeding. But, only 20 mothers out of total 29 mother informants knew that exclusive feeding means feeding infant with only breast milk or formula milk only up to six months of age of infant. 9 mothers thought that they could feed other foods to their baby even if they had decided to feed EBF or EFF.

And moreover, all mothers who had been practicing EBF or EFF or mixed feedings had perceived that medical professionals who had counseled them about infant feeding preferred more EFF than EBF to recommend and explain them. One mother said, *"the doctor explained me much about formula feeding, the doctor said me that breastfeeding can transmit HIV to the baby and if the baby was fed with formula milk, the baby cannot be transmitted HIV due to breastfeeding. And if I*

choose formula feeding, it is also needed not to breastfeed my baby." Therefore, to prevent HIV transmission to the baby, 25 out of 29 HIV positive mothers chose to practice EFF and two mothers chose EBF due to economic reasons and one mother chose EBF due to economic reasons as well as her strong mother's spirit and wish to breastfeed her baby while one mother breastfed her child because she delivered at home.

4.2.3.2 Formula milk supply and family support for formula milk

Most of mothers (27 out of 29, except one mother who delivered at other regional hospital and one mother who delivered at home) knew about hospital formula milk supply and 25 mothers who chose to practice EFF said that formula milk supply heard from peers and explained by medical doctors was the support for them and it also made them to choose to practice EFF to the infant. And moreover, all mothers who practiced EFF were supported with two to three formula milk packages a month. And commitment by a family member such as mother or elder sister or aunty or the husband to support the needed formula milk was also encouraging the mothers to choose EFF.

4.2.3.3 Economic condition

Half of the total 29 mothers had low economic status and half had fair condition. Whatever the economic status of HIV positive mothers was, during infant feeding counseling, mothers gave priority to the issue not transmitting HIV to their baby. So, 25 out of 29 mothers chose to practice EFF. Kha Yay* said, *"whatever I am rich or poor, although I am poor, I decided to practice EFF to prevent HIV transmission to my baby, I will eat food without meat to save money and to buy formula milk to feed my baby."*

4.2.3.4 Cultural beliefs and practices of infant feeding

In this study, during infant feeding counseling and infant feeding decision making process, 25 out of 29 HIV positive mothers who chose to practice EFF said that they had not thought about other things except prevention of HIV transmission to the baby through breastfeeding. They thought about only economic status and prevention of HIV transmission to their fetus by practicing formula feeding. Two mothers chose EBF due to worry about affordability for EFF

and one mother chose EBF and was breastfeeding exclusively up to two months of age of infant due to her spirit and concepts about motherhood, mother and breastfeeding. The last one mother delivered at home and practiced cultural breastfeeding with other complementary foods until the baby was sent to child clinic.

4.2.3.5 Discussion with disclosed family members and spouse

Apart from one mother who delivered at home, among the rest 28 mothers, seven mothers decided themselves, five mothers discussed and decided with the help of family members such as their mothers, elder sisters or brothers and the rest discussed and decided with the help of their husbands after mutual discussion and negotiation about HIV and infant feeding and formula milk support with family members or/and spouse. At that time, as mention above, 25 mothers chose EFF to prevent HIV transmission to the infant who would be born. One mother chose EBF after discussing with her aunty and husband, and one mother chose EBF after discussing with her husband because of formula milk affordability problem while one mother herself decided to choose EBF due to motherhood concepts to breastfeed her baby and due to economic problem.

4.2.3.6 Prior learning and knowledge about biomedical infant feeding practices

As mentioned above, five mothers out of total 29 mothers delivered two babies after HIV infection: one mother delivered twins after HIV infection. The two children prior the infants of two mothers were healthy and HIV negative, one child of one mother had died of HIV related diseases and one child of one mother was taking ART while the twins of one mother were healthy. Therefore, infant feeding decision of three mothers was dependent upon the recent old child's infant feeding pattern and health, two mothers who practiced formula feeding and whose children were healthy and HIV negative, and one mother whose child was died of HIV related diseases due to breastfeeding resulted from late seeking to diagnosis chose EFF while one mother whose elder daughter was HIV positive and was taking ART still chose EBF because she believed that her daughter might be infected during pregnancy and delivery, not due to breastfeeding, and she believed and relied on

modern medicine, and moreover due to her motherhood concepts to breastfeed the baby and financial problem.

Moreover, all 8 mothers who had communication and high involvement in health education sessions provided by CBOs or INGOs and who had high knowledge HIV chose EFF. And other mothers who chose EFF said that they chose EFF according to health knowledge gained from infant feeding counseling during AN care.

In conclusion for infant feeding decision among HIV positive mothers, infant feeding decision making by HIV positive mothers was influenced by perception to medical professionals' and peers' recommendation and convincing counseling skill, formula milk supply by the hospital, HIV positive mothers' and family's economic status and financial support to buy formula milk, prior knowledge and patterns of infant feeding practiced in older children born after HIV infection.

4.2.4 Mixed feeding foods and patterns, and preparation

After exploring the life context of HIV positive mothers up to the level of infant feeding decision making, to fulfill the research's questions and objectives, the researcher tried to know various cultural infant feeding practices among HIV positive mothers because only three mothers (out of 25 HIV positive mothers who chose to practice EFF), with babies of two, three and six months of age respectively, were practicing formula milk feeding exclusively and only one mother (among one mother who had practiced cultural breastfeeding with other complementary food feeding due to home delivery and three mothers who chose to practice EBF at AN care's infant feeding counseling session) with two months old baby was practicing breastfeeding exclusively. Cultural mixed feeding practices explored by the researcher during in-depth interviewing with key informants and informants, and focus group interviewing with informants are listed in Table 4.3.

Among 25 mixed feeding practicing HIV positive mothers, 16 mothers practiced self medication to the baby by using local traditional medicine or western medicine with curative purpose or preventive purpose for local infant diseases such as *Ta Ngal Nar*, *Naute Kyawl Tet* and *Shar war*, and common infant illness such as fever and sneezing. The explanatory model of HIV positive mothers related to local illnesses

and diseases were discussed. Among all 29 HIV positive mother informants, 25 mothers responded about *Ta Ngal Nar* syndrome in infant and *Kyaw Pu Gaung Pu* illness mainly although they said about other common infant diseases and illness such as diarrhea, coughing, sneezing, polio and hepatitis with some western medical knowledge. And they used cultural foods, traditional drugs or western drugs to feed the babies as foods and drinks for prevention and cure of infant illnesses and diseases, by using [parallel] food classification's two groups, 'hot' and 'cold' mostly based on the traditional medical etiology of 'balance' of the body: 'hot and cold'. They diagnosed illness and diseases on the basic of 'hot diseases' or 'cold diseases' and they balanced the disturbance state of body with the use of foods origin of 'hot and cold' to achieve 'hot and cold balance' of body as food as medicine and medicine as food. And, food was used as preventive foods with religious beliefs for the baby's health and to prevent infants from being abused by bad spirits and ghosts, *Nat* and *Ta Yae*, *Ba Luu*.

Explanatory Model of local infant disease and treatment

***Ta Ngal Nar Yaw Gar* [Syndrome]**

They explained that *Ta Ngal Nar* in infant was caused by acrid fumes inhaled by mothers during pregnancy or inhaled by breastfeeding mothers, and then it was transmitted to the infant through breastfeeding or during pregnancy and the infant suffered *Ta Ngal Nar*. Moreover, the baby might suffer *Ta Ngal Tar* if he or she inhaled acrid fumes. If the baby was suffering *Ta Ngal Ngar*, the baby would show *Ta Yay Kya*, salivation, *Shar War*, chewing tongue, *Myat Lone Saung*, upward slanting of eye, *A Twin Tet*, fits and convulsions, *Chay Chaung Lat Chaung Cote*, intense flexion of upper and lower extremities, toes and fingers, and body of the baby, *Ee Sane Par*, passing greenish stool, and greenish mark between angle of nose and two eyebrows and *Ee tee*, continuous unpleasant behavior and crying of the baby.

Although none of all HIV positive mothers' babies had suffered all serious symptoms and signs mentioned above, if the baby suffered minor symptoms such as extension and flexion of fingers and toes, salivation or chewing tongue, the mothers fed one kind of drugs: *Shar Put Say, Shwe Ta Min, Gaw Mote Ta,* and *Ta Ngal Nar Paung Chote Say* to their babies to prevent more serious symptoms as well as to cure minor symptoms. Moreover, *Ta Nat Khar Myit A Nhit* was also fed

to the baby to push out acrid fumes from inside of the baby and it was also fed when the baby passed greenish stool, and when there was greenish mark in the angel between two eye browns and the nose on the forehead. And preventive measures for *Ta Ngal Nar* were keeping the baby away from acrid fumes, avoiding and not inhaling acrid fumes by mothers during pregnancy and breastfeeding, and feeding one kind of above mentioned drugs as early as possible and feeding *Ta Nat Khar Myit A Nhit'*.

Kyaw Pu Gaung Pu

Kyaw Pu Gaung Pu was also one kind of local infant diseases and it was caused by imbalance of heat and cold inside the baby's body resulted from improper taking the baby under direct sunlight or wrapping the baby with thin clothes or bathing the baby at wrong time especially at cold time. If the baby had that disease, the baby suffered warm head, forehead and back, and sweating although other areas of the body had normal or low heat and body temperature. It was cured by feeding *Shar Put Say or Gaw Mote Ta* to the baby. And *Ta Nat Khar Myit A Nhit* was also used to prevent that disease and to balance the heat and cold of the baby. But, sometimes, paracetamol was used to treat this illness.

***A Aye Meet Nhar See Chaung Soe,* Common cold**

This disease was also caused by imbalance of heat and cold inside the body of infant resulted from improper bathing the baby, and loose wrapping the baby with thin clothes. Then, the baby suffered cough, sneezing and tightness of chest. Burmeton and paracetamol, western medicine drugs were fed as self medication to the baby and some traditional medicine such as *Htet Lin* were applied on the throat, chest and back of the baby. *Pyar Yay,* honey was also used frequently to prevent tightness of chest.

***Wan Shaw Wan Pyat,* Diarrhea**

This disease was also assumed as a local disease because mothers assumed that heat and cold inside the baby's body were changing while the baby was growing, and so, sometimes, the baby would suffer diarrhea and felt better without giving any treatment. One out of 29 HIV positive mothers fed *Lat Phat Yay Gyan* to her baby to cure this kind of diarrhea suffered by her baby.

Table 4.3 Under six months infant feeding practices among HIV positive mothers in Mandalay

No	Foods and liquids	Perceptions by HIV positive mothers
1	*Htamin*, soft steamed rice	-to make the baby stronger, healthier and more developed -to make the baby's muscle stronger -to make the baby more resist to diseases and illness -to make the baby resist insect bite, mosquito bite, ant bite and bug bite -to reduce the baby's hunger, to provide satiety to the baby, to reduce formula milk consumption by the baby
2.	*Yay*, water (*Yay Sane*, natural water or *Yay Thant*, pure water, or *Yay Kyat Aye*, cold boiled water)	-to make the baby free of thirsty -to make the internal heat, viscera and liver of the baby cool down -to make the baby's heat and cold balanced before bathing the baby -to prevent food, fed to the baby, blocking in the baby's throat -to reduce formula milk consumption by the baby - to prevent infantile diarrhea (only for *Yay Kyat Aye)*
3.	*San Mhote*, nutritious powder	-to make the baby healthier, stronger, fattier and more develop -as a kind of supplementary food for the baby's health -to make the baby resist to the hunger and to provide satiety to the baby -to reduce formula milk consumption by the baby

Table 4.3 Under six months infant feeding practices among HIV positive mothers in Mandalay (Cont.)

No	Foods and liquids	Perceptions by HIV positive mothers
4.	*Htamin Yay,* boiled rice cooking water	-as a supplementary food for the baby's health - to make the baby healthier, stronger, fattier and more develop -to prevent illnesses and diseases of the baby by nutrients and vitamins from it -to make the baby resist to the hunger and to provide satiety to the baby -to reduce formula milk consumption by the baby
5.	*Noe Htamin,* soft steamed rice with cow milk	-to make the baby more stronger and developed -to provide nutrition and satiety to the baby -to reduce formula milk consumption by the baby
6.	*Ta Nat Khar Myit A Nhit,* a kind of paste made from the root of a plant: its' bark is used for cosmetic purpose to apply on face and body	-to push out dangerous acrid fumes from the baby's body -as a preventive drug for baby's illnesses and *Ta Ngal Nar* disease -to make the baby's inside heat and cold balanced -to make the baby get fair complexion
7.	*Pyar Yay,* honey	-to prevent infant illnesses -to promote digestion, to prevent and cure indigestion, to clear throat and chest -to prevent the baby suffering from cold -used to feed the baby in name giving ceremony by one Muslim mother
8.	Boiled or steamed soft *Pae Yar Zar,* lentil	-together with *Htamin,* oil and salt, to provide nutrition to the baby -to provide satiety to the baby and to reduce formula milk consumption of the baby

Table 4.3 Under six months infant feeding practices among HIV positive mothers in Mandalay (Cont.)

No	Foods and liquids	Perceptions by HIV positive mothers
9.	*Noe Mhote,* formula milk	-to substitute for breast milk to feed the baby to prevent HIV transmission to the baby -formula milk is not as good and nutrient as mother breast milk -all formula milk and nutrient are passed out when the baby urinates -feeding formula milk only is dangerous and is not enough for baby's health and development
10.	*Arr Luu Pyote,* boiled soft potato	-together with *Htamin,* oil and salt, to provide nutrition to the baby -to provide satiety to the baby and to reduce formula milk consumption of the baby
11.	*Phee Gyan Mee Phote,* a kind of baked banana	-sometimes, together with *Htamin* and oil -to make the baby stronger and healthier -to feed the baby as a traditional snack -to provide the baby satiety
12.	*Htan Nyat Khae,* toddy juice sweet	-together with *Htamin yay,* and salt -to provide nutrition to the baby -to make the baby healthier and developed
13.	*Kyat Ou A Nhit,* boiled or fried egg yolk	-sometimes together with *Htamin,* oil and salt -to make the baby healthy and resistant to infant illnesses
14.	*Paung Mote,* bread	-as a snack to feed various kinds of food to the baby as adult's eating of snacks
15.	*B Sa Cook,* biscuits	-as a snack to feed various kinds of food to the baby as adult's eating of snacks
16.	*Cake Mote,* cake	-as a snack to feed various kinds of food to the baby as adult's eating of snacks

Table 4.3 Under six months infant feeding practices among HIV positive mothers in Mandalay (Cont.)

No	Foods and liquids	Perceptions by HIV positive mothers
17.	*Ovaltine*	-as a snack and drink to feed various kinds of food and drinks to the baby as adult's eating of snacks and drinks
18	*Lat Phat Yay*, tea	- as a snack and drink to feed various kinds of food and drinks to the baby as adult's eating of snacks and drinks
19.	*Yay Mann*, holy water	-as Buddha, Dharma, and Sangha's medicine to prevent infant illnesses and to prevent infant from being abused by ghosts and bad spirits.
20.	*Lat Phat Yay Gyan*, boiled water mixed with green tea	-to treat infantile diarrhea

Table 4.3 Under six months infant feeding practices among HIV positive mothers in Mandalay (Cont.)

No	Traditional and western drugs (self medication by popular sector)	Perceptions by HIV positive mothers
1.	*Shar Put Say,* a kind of traditional drugs which was applied and rubbed onto the tongue of the baby or *Gaw Mote Ta,* a kind of traditional drugs for local infant diseases or *Ta Ngal Nar Paung Chote Say,* a kind of traditional drugs for local infant diseases or *Shwe Ta Min,* a kind of traditional drugs for local infant diseases *Pan Nyo Lay,* a kind of traditional drugs for local infant diseases	-to treat the baby's *Ta Ngal Nar Yaw Gar* diseases and sufferings, indigestions and chewing tongue
2.	*Burmeton,* chlorpheniramine [a kind of western medicine drug used to treat allergy, anaphylaxis and sneezing, rhinitis, etc]	-to treat baby's cold and sneezing, and fever

Table 4.3 Under six months infant feeding practices among HIV positive mothers in Mandalay (Cont.)

No	Traditional and western drugs (self medication by popular sector)	Perceptions by HIV positive mothers
3.	*Paracetamol* [a kind of western medicine drug: non-steroidal anti-inflammatory drug used to treat pain and fever]	-to treat baby's fever
4.	*Metro*, metronidazole [a western medicine drug used for anaerobic infections and tract infections, especially amoebic dysentery]	-to treat infantile diarrhea

A Foods and liquids

1 *Htamin*, soft steamed rice

Most of the mothers, 21 out 25 HIV positive mothers who practiced mixed feedings to the infant fed *Htamin*, soft steamed rice. It was made by cooking the rice with aluminum pot with fire or rice cooker, first, together with cooking steamed rice for other members of the family. When it was nearly cooked, some of steamed rice was put out in a clay or steel bowl and then it was crushed with a steel spoon in the bowl or over a small clothe with fine pores on it. Then, crushed and soft steamed rice was obtained. It was mixed with a little amount of warmed boiled water in the bowl. Finally, it was placed in the pot or rice cooker again to be warmed. It was usually introduced to the babies at the age ranged from one and half months to four months and it was fed two to three times a day.

2 *Yay,* water (*Yay Sane,* natural water or *Yay Thant,* pure water, or *Yay Kyat Aye,* cold boiled water)

Yay in Myanmar language means water. Feeding water to the baby ranged from feeding *Yay Sane* to feeding *Yay Kyat Aye*. Most of mothers (10 out of 21HIV positive mothers) fed *Yay Kyat Aye* to their babies while eight mothers fed pure water and the rest of three fed *Yay Sane* to their babies. *Yay Kyat Aye* was made by boiling the water with fire or with hot plate. After being boiled, it was made cool and kept a day, and it was made daily. Then, it was fed to the baby whenever the mother thought the baby felt thirsty or just after feeding other kinds of solid foods to the baby. Some mothers used *Yay Thant* or *Yay Sane* to feed the baby. It was usually introduced to the baby during the time ranging from just after the delivery to one to two months of age.

3 *San Mhote,* nutritious powder

San Mhote was also known as nutritious powder. It was prepared with boiled water in a bowl to make a non-watery or non-sticky paste according to the baby's eating. It was made cool and fed to the baby. 18 out of 25 mothers who practiced mixed feeding fed the babies with reasons and beliefs mentioned in the above table. It was introduced to the baby at the age of two to four months usually, and mothers fed two times a day. There were local made *San Mhote* in the market which was cheap, but notorious for making the baby suffered tightness of chest and sticky sputum in the throat and expensive foreign made *San Mhote* which HIV positive mothers perceived as a good food to feed the baby. Mothers bought and fed the baby with appropriate kinds of *San Mhote* according to their economic status and the baby's health. And five mothers mixed *San Mhote* with formula milk and fed the baby to reduce formula milk cost.

4 *Htamin Yay,* boiled rice cooking water

Htamin Yay was prepared by keeping boiling rice water into the steel bowl from nearly cooked or steamed rice from the pot or rice cooker. Then, it was mixed with some salt, or some mothers, only two mothers, mixed with *Tha Nyant Khae,* toddy juice sweet, and fed the baby. It was also introduced at two to four months of age of infant and fed two to three times a day. Feeding of this kind of foods was also concerned with cultural beliefs about infant health and economic practices to

reduce formula milk cost mentioned in the table and only ten mothers out of 25 mixed feeding practicing HIV positive mothers fed it to their babies.

5 *Noe Htamin,* soft steamed rice with cow milk

This kind of food was usually bought from small street vendors by HIV positive mothers. It was also a kind of very soft cooked or steamed rice mixed with cow milk since it was cooked. Only ten mothers out of 25 mixed food feeding mothers fed their infants with above mentioned reasons and beliefs. It was introduced to the baby at the age of two to four months and mothers usually fed one to two times a day to their babies.

6 *Ta Nat Khar Myit A Nhit,* a kind of paste made from the root of a plant: its' bark is used for cosmetic purpose to apply on face and body

It was grinded on the smooth plain of rock called *Kyauk Pyin* with water to make the paste before every bathing the baby. And 10 out of 25 mothers fed it to their babies with above mentioned cultural beliefs for the baby's health and prevention of childhood diseases, after bathing the baby. It was also usually introduced to the babies at the age of one and half to two months and after every bathing the baby.

7 *Pyar Yay,* honey

Small amount, three drops of *Pyar Yay* was usually fed to the baby as soon as the baby was delivered because of cultural beliefs about prevention of infant diseases. It was not usual food fed daily to the baby. It was fed in the season when the baby was prone to tightness of chest or as one of religious beliefs. Kay Kay* who was a Chin Buddhist mother said, *"I fed Pyar Yay, just three drops, to my baby as soon as he was delivered and at the age of 45 days of infant when I came out from Mee Twin [the period of 45 days after delivery, during that time period, most of Myanmar have beliefs that mothers are sensitive and fragile to local illnesses and diseases, and so be the babies], by praying to Buddha and saying 'Phayar,* Buddha*', 'Tayar,* Dharma*' and 'Tangar,* Sangha*',*" carrying and luring her baby. Seven out of 25 mothers mixed feeding practicing mothers fed her babies honey.

8 Boiled or steamed soft *Pae Yar Zar,* lentil

This type of bean was prepared by boiling in the pot or rice cooker with a little amount of water to be soft and then it was fed to the baby together

with *Htamin,* soft steamed rice. It was also introduced to the baby at the age of three to four months of age of infant. It was not usual kind of foods fed to the baby daily, but it was occasionally fed to the baby. Only five out of 25 mothers fed this kind of bean to the babies under six months of age.

9 *Noe Mhote,* formula milk

Among 25 HIV positive mothers who practiced mixed feeding, including 22 mothers who decided to practice EFF, 24 mothers practiced formula milk feeding to the baby. This group included 22 mothers who decided to practice EFF, one mother who delivered at home and practiced cultural breastfeeding with other complementary food feeding, and one mother who decided to practice EBF. Mothers fed formula milk with the quality ranging from high and appropriate quality supplied partially and recommended by medical doctors, to low quality formula milk which cost only about 600 Myanmar kyats to feed the baby a day. Formula milk was prepared with boiled water in the feeding bottle according the baby's consumption. Mothers who chose to practiced EFF fed formula milk to the baby about 8 times a day while the rest two mothers fed two to three times a day since the baby was two months of age.

10 *Arr Luu Pyote,* boiled soft potato

Arr Luu Pyote was made by boiling *Arr Luu,* potato with a little amount of water in the pot or rice cooker. If it became soft, it was peeled and then, crush with steel spoon or hands to make a paste to mix with *Htamin.* Then *Htamin* and *Ar Luu Pyote* were mixed with some oil and salt and then fed to the baby. It was also introduced to the infant at the age of three to four months of age and two out of 25 mixed feeding practicing HIV positive mothers was practicing this kind of infant feeding with above mentioned beliefs and reasons in the table.

11 *Phee Gyan Mee Phote,* a kind of baked banana

This kind of food was made by baking banana, *Phee Gyan.* While baking, if the banana became soft, it was taken out form the fire and was made cool. Then, it was fed to the babies. The banana was baked because mothers thought that feeding banana without being baked would make the baby suffered flatus and indigestion. Sometimes, it was mixed with *Htamin,* oil and salt to feed the baby. It was also introduced to the baby at the age of three to four months of age and it was a kind

of occasional snacks to feed small babies. And, two out of 25 HIV positive mothers fed this kind of food to their infants.

12 *Htan Nyat Khae,* toddy juice sweet

It was Myanmar traditional toddy juice sweet and mixed with *Htamin Yay* to feed the baby. And it was introduced to the baby at the age of one to two months and only two mothers among 25 HIV positive mothers fed this food together with *Htamin Yay* to the baby.

13 *Kyat Ou A Nhit,* boiled or fried egg yolk

First, *Kyat Ou,* chicken egg, was boiled until *A Nhit,* yolk was fully boiled. Then, the boiled chicken egg, *Kyat Ou Pyote,* was peeled and *Kyat Ou A Nhit,* boiled or fried egg yolk was kept to feed the baby together with *Htamin,* oil and salt. It was also introduced to the baby at two to four months of age and two mothers among mixed feeding practicing HIV positive mothers fed this to their babies.

14 *Paung Mote,* bread

Small pieces of *Paung Mote,* bread were fed to the baby as a kind of snacks to feed small babies like adult's snack eating behavior to fulfill the baby's satiety. Two out of 25 mixed feeding practicing HIV positive mothers fed their babies since four months of age of infant.

15 *B Sa Cook,* biscuits

Small pieces of *B Sa Cook,* biscuit were fed to the baby as a kind of snacks to feed small babies like adult's snack eating behavior to fulfill the baby's satiety. Two out of 25 mixed feeding practicing HIV positive mothers fed their babies since four months of age of infant.

16 *Cake Mote,* cake

Small pieces of *Cake Mote,* cake were fed to the baby as a kind of snacks to feed small babies like adult's snack eating behavior to fulfill the baby's satiety. Two out of 25 mixed feeding practicing HIV positive mothers fed their babies since four months of age of infant.

17 *Ovaltine*

Two mothers prepared *Ovaline* with boiled water and fed the baby sometimes since three months of infant age as the adult's drinking of *Ovaltine* to provide various tastes to the infants.

18 *Lat Phat Yay,*Tea

Two mothers bought *Lat Phat Yay,* tea from nearby tea shops and fed the baby sometimes since four months of infant age as the adult's drinking of tea to provide various tastes to the infants.

19 *Yay Mann,* holy water

Yay Mann, holy water was created by venerable Myanmar Buddhist monks by praying Dharma and two mothers fed *Yay Man* to their babies sometimes when they went outside with their small babies, especially at night since the age of two months, to protect and prevent their babies from being harmed and being abused by ghosts, *Ta Yae, Ba Luu* or bad spirits, *Nat Soe*.

20 *Lat Phat Yay Gyan,* boiled water mixed with green tea

Lat Phat Yay Gyan, boiled water mixed with pickled dried green tea was made by putting dried and pickled green tea into the boiled water. One mother out of 25 HIV positive mothers had fed *Lat Phat Yay Gyan* to her baby to cure infantile diarrhea whenever her baby suffered diarrhea since two months of age.

B Traditional and western drugs (self medication by popular sector)

1 *Shar Put Say, or Shwe Ta Min, or Gaw Mote Ta, or Ta Ngal Nar Paung Chote Say, or Pan Nyo Lay*: kinds of traditional drugs for local infant diseases

They were traditional medicines used to treat local infant diseases such as *Ta Ngal Nar* and *Shar War*. All 16 mothers fed either one of these traditional drugs to the baby by rubbing or putting onto the tongue of the baby whenever they thought and saw that the baby was suffering salivation and extension and flexion of toes and fingers or as preventive measures for those infant's suffering symptoms.

2 *Burmeton,* chlorpheniramine [a kind of western medicine drug used to treat allergy, anaphylaxis and sneezing, rhinitis, etc]

Two mothers out of 16 HIV positive mothers fed *Burmeton* to their babies if their babies suffered sneezing. They said that they crushed *Burmeton* tablet first and one third of powder was mixed with *San Mhote,* or formula milk or *Noe Htamin* to feed the baby until the baby did not suffer sneezing.

3 *Paracetamol* [a kind of western medicine drug: non-steroidal anti-inflammatory drug used to treat pain and fever]

Two mothers among 16 HIV positive mothers fed *Paracetamol* tablet or *Biogesic* syrup [paracetamol syrup] to their babies if their babies suffered fever. One mother said that she crushed *Paracetamol* tablet first and half of powder was mixed with breast milk or tea, to feed the baby until the baby recovered from fever. And other mother said, "*I fed Biogesic syrup with its spoon level, the second line mark of spoon, three times a day until the baby's temperature goes away,"*

4 *Metro,* metronidazole [a western medicine drug used for anaerobic infections and tract infections, especially for amoebic dysentery]

This kind of medicine was used by one mother out of 16 HIV positive mothers to treat her infant's diarrhea. She said, *"Adult takes metro if they suffer diarrhea and so, I fed my baby metro two to three times if he suffered diarrhea. And metro works well for my baby's diarrhea and the baby feels better."* She said that she crushed *Metro* tablet into powder and then, one third of powder was mixed with breast milk or tea and fed to the baby two to three times a day until he felt better.

4.2.5 HIV positive mothers' cultural beliefs on current practicing infant mixed feeding patterns and chosen infant feeding practice

Table 4.4 HIV positive mothers' cultural mixed feeding practices according to cultural beliefs

No.	Of healthier and stronger baby	Of preventive and curative foods	Of cultural and western drugs for self medication	Of Religious food and drinks	Of snacks and drinks	Of baby's satiety and reducing formula milk consumption
1.	*Htamin*		*Shar Put Say, Gaw Mhote Ta, Ta Ngal Nar Paung Chote Say, Shwe Ta Min, Pan Nyo Lay*			*Htamin*
2.	*Yay*	*Yay*				*Yay*
3.	*San Mhote*					*San Mhote*
4.	*Htamin Yay*	*Htamin Yay*				*Htamin Yay*
5.	*Noe Htamin*					*Noe Htamin*
6.		*Ta Nat Khar Myit A Nhit*	*Ta Nat Khar Myit A Nhit*			
7.	*Pyar Yay*	*Pyar Yay*	*Burmeton*	*Pyar Yay*		
8.	*Pae Yar Zar*	*Pae Yar Zar*	*Paracetamol*			
9.	*Nhoe Mhote*		*Metrol*			
10.	*Arr Luu Pyote*					*Arr Luu Pyote*
11.	*Phee Gyan Mee Phote*				*Phee Gyan Mee Phote*	
12.	*Ta Nyat Khae*					
13.	*Kyat Ou Ah Nyit*					
14.					*Paung Mote*	
15.					*B Sa Cook*	
16.					*Cake Mote*	
17.					*Ovaltine*	
18.					*Lat Phat Yay*	
19.				*Yay Man*		
20.		*Lat Phat Yay Kyan*				

25 HIV positive mothers who practiced cultural mixed feedings fed their babies with above mentioned cultural food and practices because of the beliefs:

1 Of healthier and stronger baby

This category consisted of foods: *Htamin, Yay, San Mhote, Htamin Yay, Noe Htamin, Pyar Yay, Pae Yar Zar, Noe Mhote, Arr Luu Pyote, Phee Gyan Mee Phote, Hta Nyat Khae, and Kyat Ou Ah Nyit.* One mother who wanted to make her baby healthier and more developed said, "I *feed Pae Yar Zar to my baby after crushing it and mixing with Htamin, oil and salt because I think it can make my baby bigger and stronger."*

2 Of preventive and curative foods

Yay, Htamin Yay, Ta Nat Khat Myit A Nyit, Pyar Yay, Pae Yar Zar, Lat Phat Yay Gyan were included within this category and a 44 years old HIV positive mother admitted, *"I feed Lat Phat Yay Gyan to my baby when he suffers diarrhea because we have the customary feeding practice to feed it to the one who is suffering diarrhea. It has bitter properties and taste, and it stops and cures loose motions. It is our local medicine."*

3 Of cultural and western drugs for self medication

16 HIV positive mothers in this study used *Shar Put Say, Gaw Mhote Ta, Ta Ngal Nar Paung Chote Say, Shwe Ta Min, Pan Nyo La, Ta Nat Khar Myit A Nyit, Butmeton, Paracetamol, and Metro* for self medication purpose to cure the baby's illnesses. A 40 years old HIV positive mother said, *"When I see my baby suffering salivation so much, I put and apply Gaw Mote Ta onto his tongue."*

4 Of religious foods and drinks

Pyar Yay, and Yay Man had this role as the religious foods and drinks of food category. One Muslim HIV positive mother said, *"During name giving to my baby, 'Pali Saya, Islam religious teacher' put three drops of Pyar Yay, Honey on the tongue of my small daughter assuming that the sweet naming to my daughter was similar to that sweet property of Honey."*

5 Of snacks and drinks

Some HIV positive mothers fed *Phee Gyan Mee Phote, Paung Mote, B Sa Cook, Cake Mhote, Ovaltine ,or Lat Phat Yay* to their small babies to provide various kinds of tastes to the babies. An Indian Buddhist HIV positive mother

said, *"I buy and feed Lat Phat Yay to my baby because I think he would like to drink it as an adult, and to give him more kinds of taste."*

6 Of baby's satiety and reducing formula milk consumption

Most of HIV positive mothers feed *Htamin, Yay, San Mhote, Htamin Yay, Noe Htamin, or Ar Luu Pyote* to their babies with the purpose to fulfill the baby's satiety as well as for reducing formula milk consumption by the baby. One mother said, *"I cannot afford to buy formula milk because my baby eats a lot while he is getting old…so, I buy and mix San Mhote with formula milk to feed my baby to reduce the formula milk cost."*

Concerning with exclusive breastfeeding and exclusive formula feeding, only three mothers (one who practiced EBF and two practiced EFF) thought feeding formula milk or breast milk exclusively up to six months of age of infant according to medical professional's suggestions was enough and good for infant health and development, among four mothers (including one mother who fed formula milk exclusively to her infant up to two months of age and intended to feed *Htamin* to her baby coming days) who practiced infant feeding exclusively up to the time of interview. Phyu Phyu*, the mother who practiced exclusive breastfeeding to her two months old baby until the time of interview said, *" I believe doctor's explanation about infant feeding for HIV positive mothers, they are more educated than us and they know more than us. I believe that my baby will not be infected HIV because I am now feeding breast milk to my baby exclusively. But, one thing is I cannot eat well because of my economic problem and sore throat because of my oral thrush. I have not eaten enough for nutrition. So, my breast milk production becomes less and less. So, although I am breastfeeding exclusively my baby, I worry whether my baby will get enough breast milk and nutrition [with sad tone of voice and looking downward on the floor]."* And, Kyi Pyar*, who had fed formula milk exclusively to her six months old baby, said, *"I have fed formula milk exclusively to my baby up to six months of age of infant because I believe high-tech medicine and medical doctors, and formula milk alone will provide enough nutrition for my baby brain and body because it is produced with good things."*

But, for the rest 25 mothers who practiced mixed feeding patterns, they did not think feeding formula milk or breast milk alone to the baby up to six months of age was enough and was the best for their HIV exposed baby. They perceived that medical doctors' advised infant feeding would be perfect for their infant if they fed other various kinds of foods: from water and *Htamin* to some snack such as bread or cake. Although mothers with tight economic status felt sad because they could not feed enough formula milk, they were satisfied about their cultural supplementary food feeding patterns to their HIV exposed babies while mothers with fair economic status fed cultural foods to their babies according to their cultural infant feeding beliefs and practices related to infant health. Nilar*, a mother who practiced mixed feeding, said, *"Medical doctors suggest us according to their medical practice and knowledge, but we have our own traditional practices and beliefs to feed our babies, my mother fed me like this [cultural mixed feeding pattern] and so did other mothers."*

4.2.6 HIV positive mothers' perceived factors influencing their infant feeding practices

HIV positive mothers interviewed in this study had their various cultural beliefs and perceptions related to their infant feeding practices: exclusive breastfeeding (practiced by only one HIV positive mother with two months old infant among three mothers who chose to practice EBF and one mother who practiced cultural breastfeeding due to home delivery), exclusive formula feeding (practiced by only three mothers with two, three and six months old infants respectively among 25 HIV positive mothers who chose to practice EFF) and cultural mixed feedings. Their perceived realities were ranging from the policy level to micro individual level.

4.2.6.1 Perceived realities embedded in policy and law context

Work burden to medical staffs

Four out of 25 HIV positive mothers who practiced mixed feeding said that medical doctors were seeing so many patients a day. They seemed also tired. So, the mothers did not discuss and ask them about infant feeding practices which were not clear for them. Mothers asked and discussed with senior mothers in

neighbors and in the family. Advices from neighbors and family members led them to cultural mixed feeding practices. And, other mothers out of mixed feeding practicing mothers did not want to ask and discuss about what they thought and wished related to infant feeding because they were afraid of being blamed by medical professionals. Tae Tae* said, *"I am afraid to discuss with medical professionals because I think they will not like my question and they will blame me what they hear I say."*

On the side of medical professionals, one of three medical doctors who said about work burden also said, '*I know that we have not provided infant feeding counseling with appropriate time and explanation, but, there are also a lot of patient to see and other works to do. I wish we could do to give it like in other countries which are more developed than our country. We feel so tired of work load."*

Maternity leave and paternity leave

Among informants, one mother was a government staff while two mothers were private business staff. Government staff achieved only each 42 days of paid leave before and after delivery while private business staffs achieved unpaid leave of three months after delivery. After their leave, they had to return to their job and their babies were looked after by their relatives. At that time, the babies were looked after and fed by relatives with some foods and drinks such as water and *Htamin*. Ni Ni* said, *"after my leave, I had to return my job and my elder sister looked after my baby and I am not sure. She might feed water to my baby".* And their husbands who were private business staffs could not help for infant feeding because they also did not achieve paternity leave. And, they wished, as well as three medical doctors wished, to be provided with more paid maternity leave and paternity leave for both kinds of government and private staffs.

National Health policy to promote Exclusive Breastfeeding to general population of mothers

Two mothers among three mothers who practiced EFF and five mothers among 25 HIV positive mothers who practiced mixed feedings said that encouraging mothers who did not have HIV to practice exclusive breastfeeding by medical professionals and, health educations through mass media and campaigns made them difficult to explain neighbors and family members who were not disclosed about their HIV status, why they chose to practice formula feeding. They had to think and

prepare to persuade about their formula feeding with good reasons saying that they were suffering other diseases such as TB [tuberculosis] or hepatitis or blood compatibility to the baby or low production of breast milk for the baby.

4.2.6.2 Perceived realities embedded in hospital context

Hospital staffs' care and communication to the patients

Only three out of 29 HIV positive mothers replied that they dared to ask back the doctors what they felt not clear and what they confused about infant feeding and HIV infection explained by the doctors while the rest did not dare to ask back even though they were counseled unclearly. Pan Pan* replied, *" Even I dare to ask back, I do not ask the doctor about health in hospital, because in the past, I was scolded and blamed by medical professionals due to my question and discussion about my health. I felt shameful and angry when I was blamed in the public when I was hospitalized. I think I should not be treated like that, I am the leader of my family and I have my role in my family and so, I have not asked them back since that time to avoid that kind of shameful behavior."* And Kha Yay* argued, *"Medical doctors do not blame so much to us, young medical doctors are patient and they explain well. Nurses and peers have that kind of blaming behaviors than medical doctors."* And the rest mothers thought that they should not ask what they thought and wished for infant feeding because medical doctors seemed prefer more the patient who did not ask them back and who follow their advices. So, the mothers did not discuss the medical professionals when they wanted to know about infant feeding practices. That kind of relationship led them to discussion and asking to the senior mothers around them and resulted in cultural mixed feeding practices.

On the side of medical professionals, Myo* said, *"We counsel again and again to the mothers who had low education level because some mothers are hard to be explained and if we see some mothers feeding mixed feeding practices to their babies, we explain them again."*

Formula milk supply

All 25 mothers who chose to practice EFF said that formula milk supplied was not enough and cost of formula milk was also burden for them because of their economic status. Te Te* said, *"I cannot buy formula milk for my*

baby's heavy drinking, so, after asking mothers in my neighbors and discussing with my mother, I fed 'Htamin' and 'Noe Htamin' to my baby…it is to reduce the cost for formula milk as well as also for my baby's health according to cultural practice and beliefs."

In the same way for formula milk supply, medical doctors said that they had explained the mothers that they would support to some extent, up to 50 percentage of formula milk consumption and the mothers would be needed to buy remaining formula milk according to their babies' drinking and only if they could afford, medical doctors allowed the mothers to practice EFF.

Stigma and discrimination

All HIV positive mothers in this study said that there was no stigma and discrimination by medical professionals up to very surprised extent although during last decades, they were treated and they also treated to HIV patients with fear, stigma and discrimination.

4.2.6.3 Perceived realities embedded in neighborhood context

Neighborhood context also took an important role to determine HIV positive mothers' infant feeding practices.

Stigma and discrimination, and disclosure of HIV status to the neighbors

Only two out of total 29 HIV positive mothers disclosed their HIV status to the very close neighbor friends, but not to all neighbors. And those two mothers were from the group of mixed feeding practicing HIV positive mothers and they disclosed HIV status to their neighbors because they and neighbors were living altogether like family members since childhood. They were supportive one another. But, other mothers did not disclose HIV status to the neighbors because they worried about stigma and discrimination, especially for their babies. Nwe* said, *"I do not disclose my HIV status to my neighbors because HIV/AIDS is still seemed as bad girl's diseases in my community and they will discriminate and look down me. For me, it is not important, but, for my baby, if the baby grows up, they will backbite and will look down my baby. Moreover, they will not allow their children to play with my baby. For my baby's future, I do not disclose my HIV status to my neighbors."*

Actually, HIV positive mothers faced difficulty to feed formula milk, due to not breastfeeding, because of feeling afraid of stigma and discrimination by neighbors (only self-stigma and self-discrimination) and because of encouraging the general population of mothers to breastfeed their babies by medical professionals through health education films or mass media. So, if they chose to practice formula milk feeding, they had to find good reasons for formula milk feeding in advance. Shwe* said, *"I leave formula milk packing box shells on the way back to my home from every clinical appointment at hospital, in order that my neighbors cannot see formula milk package box. I take only formula milk pack inside the package."*

They convinced neighbors for their feeding formula milk to the baby by using reasons such as suffering TB or blood compatibility or low breast milk production. Then, feeding formula milk to the baby was accepted socially and culturally by neighbors. Twenty five mixed feeding practicing mothers, then, did not face any problems because they practiced cultural mixed feedings with breastfeeding or formula milk.

Among exclusive feeding mothers, one mother who was practicing EFF and one mother who was practicing EBF faced pressures when neighbors suggested them feed other kinds of food for the baby's health and development according to their cultural beliefs because those mothers wanted to practice infant feeding as suggested by medical professionals to prevent mother to child HIV transmission and in order that the baby would not suffer any diseases.

Support and pressure

Neighbors supported all 29 HIV positive mothers by suggesting various cultural infant feeding practices for infant health and development as well as for mother's health according to their experiences and cultural beliefs. They cared and fed the baby of one HIV positive mother with some snacks when the mother was working for wages for a short time. Thi Thi* said, *"when I am washing clothes for wage, I leave my baby with my neighbors and they look after and feed my baby with some snacks like Cake Mote or B Sa Cook. I let them to feed my baby as they wish because if I refuse their feeding, they will not look after my baby when I work."*

Although neighbors thought that they supported the mothers with advices and suggestion for the health of infant and mother according to their experiences and cultural beliefs and practices, two mothers who were practicing either EBF or EFF perceived as pressure and annoying things for their infant feeding practice.

Cultural beliefs and practices

Feeling and perception on current chosen infant feeding practice and on current practicing infant feeding patterns

Neighbors thought that feeding formula milk or breast milk alone to the infant was not good for the baby's health and development. Feeding above mentioned cultural foods was necessary for infant's health, development and satiety. Cultural mixed feeding made the baby developed, healthier and provided various tastes to the infants. Community's perception and beliefs were passed to family level and individual mothers' level by communication and relationship. Nilar* said, *"one elder mother near my house said me that feeding formula milk alone could not provide enough nutrition to my baby and I should feed Htamin to my baby for the baby's health and development, then, I introduced Htamin to my baby after discussion again with my mother."*

4.2.6.4 Perceived realities embedded in family context

Family was the nearest social institution around HIV positive mothers and it also occupied as the important context for HIV positive mothers' infant feeding practices.

Stigma and discrimination by spouse and family members

Among HIV positive mothers in in-depth interview and in focus group discussion, 12 out of 13 and 15 out of 16 HIV positive mothers had disclosed their HIV status to their spouse and only one mother from in-depth interview group did not disclose her HIV status to her husband because she thought that it was not needed to tell her husband who was her second marriage and she married after HIV infection, and her husband did not ask her about her HIV status although he heard it from neighbors. And one mother from focus group discussion did not disclose her HIV status because she was afraid of stigma and discrimination from her husband, she

thought. And mothers also disclosed HIV status to their mother or aunty or parents in law or elder sister and brother or younger sister or brother. If their relatives knew about their HIV status, the relatives did not suggest or force to feed other foods to the baby without HIV positive mother's wish.

Concerning stigma and discrimination to HIV positive mothers by their family members relating to infant feeding practices, stigma and discrimination was rarely the direct cause for infant feeding practices. But, one mother who practiced mixed feeding was ejected and separated by her husband and her parents in law, so, she was living with her parents and was feeding her infant with the support of her parents and elder sister. And Sein Sein* said, *"Although my sisters and brothers do not discriminate me and they treat me ordinarily usually, they call me AIDS Ma [lady] when we quarrel one another."* Although HIV positive mothers disclosed their HIV status to some of family members, who the mothers thought that they were supportive or helpful to the mothers, the mothers did not disclose to all family members for many reasons ranging from worrying stigma and discrimination to worry about the physical and mental health, and psychological trauma of family members such as old mother or old father.

Support and pressure

Family members', including husbands', support and pressure took an important role in practicing infant feeding practices among HIV positive mothers. Family members supported HIV positive mothers by suggesting and sharing cultural infant feeding knowledge, beliefs and practices for infant health and growth. Mar Mar* said, *"My mother suggests to feed the baby Htamin at the age of two months for the infant's growth and to make the baby's muscle strong and resist to insect bite."* And family members and relatives supported money to HIV positive mothers to buy formula milk to feed the baby if they knew mother's HIV status and they could support money.

If HIV positive mothers wished to practice infant feeding according to cultural mixed feeding practices suggested by senior mothers in the family, family members' suggestions and support were not problematic to HIV positive mothers. But, if HIV positive mothers wished to practice according to medical professional's advices, family members' suggestions to practice cultural mixed

feeding changed into pressures for HIV positive mothers. It was worse if family members did not know HIV positive mother's HIV status and prevention of mother to child HIV transmission. Ma Lay* said, *"I don't want to feed San Mhote to my baby at very young age. But, my father suggested me to feed San Mhote to make the baby more developed. Then, he and I agreed to feed San Mhote to my baby at only two months of age. At the age of two months of infant, I started to feed San Mhote to my baby according to my father's wish and suggestion. My father is short-tempered. If I refuse to feed San Mhote to my baby, he will beat and ask me to get out of his house."*

Cultural beliefs and practices

Feeling and perception on current chosen infant feeding practices and on current practicing infant feeding patterns

Family members who did not know mother's HIV status did not like formula milk feeding to the baby. They assumed that formula milk was not as good as breast milk. Breastfeeding could make the baby more attach to the mother and the family, and breastfeeding was the best for the baby and the mother. Concerning with exclusive feeding practices, both family members who did not know or who knew HIV status of mothers thought that feeding formula milk or breast milk only to the baby was dangerous for the baby health. The baby would not be provided with enough nutrition. Even family members who knew the mother's HIV status would like to feed some water to the baby. Te Te* said, *"My mother fed water to my baby as soon as delivered and she said me that there was a proverb in Myanmar, 'without water, everybody lasts only one morning and will die soon'."*

4.2.6.5 Realities in HIV positive mothers

Among 25 mothers who practiced mixed feeding although they chose to practice exclusive formula feeding or exclusive breastfeeding, cultural belief and practices concerning infant feeding were the most important part of findings. They were determinants casting under six months infant feeding practices among total 29 HIV positive mothers. 25 out of 29 mothers chose to practice EFF while 3 mothers chose to practice EBF and one mother who delivered at home practiced cultural breastfeeding with other complementary food feedings. Only 3 mothers (with two, three and six months old infant respectively) out of 25 mothers who chose EFF could

practice formula feeding exclusively while only one mother with two months old baby could breastfeed exclusively among three months who chose to practice EBF.

Cultural seniority

Except three mothers among four mothers who had practiced exclusive infant feeding patterns according to medical doctor's suggestion, all other mothers, who had practiced mixed feeding and the one who had practiced exclusive formula feeding, had strong belief on their family members and neighbors who had delivered and cared many children before. Three mothers out of four mothers who had practiced infant feeding exclusively believed on modern medicine and medical professional's advice more than advice and knowledge of their senior mothers in the family or in the community.

On the other hand, the rest 26 mothers had strong beliefs on their baby-caring well experienced women around their house or in the family members. Tae Tae*, a 20 years old mixed feeding practicing mother, said, *"when I hear shared knowledge about cultural infant feedings or see other mother's infant feeding practices such as feeding Htamin or San Mhote, I would like to feed my baby for my baby's health and development because I think feeding Htamin or San Mhote cannot harm my baby. Then, I ask my mother and other senior women around my house. If they reply me it is good for my baby and if they encourage me feed, I try to feed and introduce those kinds of food to my baby."*

Moreover, a 28 year old mother who practiced mixed feeding, Pan Pan* said, *"I believe my mother more than medical professionals because she delivered me and cared me up to this age, I am healthy and have no other diseases except this disease [HIV]. I have not suffered anything [any diseases] during my childhood. So, I trust my mother, I discuss her everything concerned with my infant feeding practices, then, I follow and do as her suggestions."*

Motherhood: Good mother, Mother role and status

According to in depth interviews and focus group discussions, 'motherhood and good mother' metaphor can be defined as:

- Mother's love and action doing the best for their baby's health and development and,

- Mother's love and action doing the best for the baby's future,

All mothers in this study, who had practiced exclusive feeding patterns or mixed feeding patterns perceived that a good mother must care and feed for the sake of the baby concerning with infant health, growth and development. So, mothers, who could not afford the cost of branded good quality formula milk, fed their babies according to their cultural infant feeding patterns and beliefs for the optimal health and development condition of their babies as they could. Te Te*, a mother who practiced cultural mixed feeding, said *"I feed other foods such as Htamin or Noe Htamin to make my baby healthier and more developed because I cannot afford to buy good formula milk like the formula milk prescribed and supplied by the hospital. So, I practice infant feeding like that [cultural mixed feeding] as a good mother. I perceive a Myanmar good mother must feed the baby for the baby's health and growth because I am happy if I see my baby becoming fat."* On the side of mothers who practiced cultural mixed feeding although they could afford to buy formula milk, Pan Pan* said, *"I feed other foods to my baby to make him more strong and healthy, as a good mother for my baby, I think I should feed like that although medical doctors asked me to feed my baby exclusively up to six months of age of infant. This is one that a good mother should do to make her baby healthier in additional to medical doctors' suggestion. I feed my baby only after discussing my mother."*

But, mothers who had practiced infant feeding according to medical professionals' suggestions perceived that a good mother must feed and care the baby according to doctors' suggestion. Khine Khine*, who practiced EFF, said *"My baby is not an ordinary baby, he was born to a HIV positive mother and so, as a good mother for my baby, it is the best to feed him according to medical doctors' advice if the HIV positive mothers really love her baby."*

Myanmar mother, infant health and growth

Breast milk, breastfeeding, HIV and mother:

All 25 HIV positive mothers who chose to practice EFF had the desire to feed breast milk to their babies. They perceived that breastfeeding was one part of Myanmar mother life. Moreover they assumed that breast milk was the best for the babies and it was better than formula milk in making the baby more resist

to diseases. Breastfeeding could increase attachment between mother and babies. But, as mentioned above, they perceived that breastfeeding alone was not good for the baby. Ka Yay* said, *"I wanted to breastfeed my baby; I wished I could, but I couldn't because I have HIV. I don't want my baby to be infected with HIV because of my breastfeeding. And I think my breast milk is now dangerous for my baby because it contains virus."*

But, two mothers out of 29 HIV positive mothers chose to practice EBF because of financial problem to feed formula milk as well as their wish to breastfeed their babies. They assumed that breast milk was the most appropriate for them and their baby. But, they perceived feeding breast milk alone could not provide satiety to their babies and so, they fed other foods such as water or *Htamin* or *San Mhote* to the baby. One mother chose cultural breastfeeding because she delivered at home. She also assumed breast milk was the best and the most nutritious for the baby. The last mother, Phyu Phyu*, who chose and had practiced exclusive breastfeeding until interview said. *"He is my son. Mother's breast milk must be for her baby. I love him. I believe my breast milk cannot transmit HIV to my baby because of my love to him and I pray to Buddha, I assume my breast milk is the best for him."*

Animal milk, animal milk feeding, HIV and mother:

Although 18 mothers perceived animal milk, especially cow milk and goat milk, was suitable for their HIV exposed baby as a substitute if the mothers could not breastfeed and could not afford to buy formula milk. But, the rest assumed that feeding animal milk to the baby would make the baby receive wild characters from animals, and no mothers had fed animal milk to the baby under six months of age.

Mixed feeding, HIV and mother:

Although medical professionals encouraged and suggested HIV positive mothers to practice EBF or EFF to prevent HIV transmission to the baby from their mothers, most of mothers (25 out of 29 mothers) practiced cultural mixed feedings because of their beliefs and cultures within community and family level, reinforced by financial problem for half of mothers, concerning infant health and growth, religion in the aspect of health and bad luck.

But, three mothers out of the rest four mothers (except one mother who was planning to feed *Htamin* to her baby coming days) thought that feeding mixed foods to under six months infants born to HIV positive mothers was making the baby suffer illness and diseases, and so, it was like killing the baby by his/her own mother.

Formula milk, formula milk feeding, HIV and mother:

All HIV positive mothers in this study did not want to feed formula milk to their under six months babies as the main food. 25 mothers had to choose to practice EFF for the only reason: to prevent HIV transmission to their baby through breastfeeding while three mothers chose to practice EBF. They perceive formula milk was not as good as breast milk. But, 28 mothers did not have any serious beliefs on formula milk while Phyu Phyu*, the only mother who could practice EBF, said, *"I don't want to feed formula milk to my baby because it was made with chemicals and it contains bad things that can harm the baby."*

Baby's gender

Although most of the HIV positive mothers (28 out of total 29) did not perceive anything about the baby's gender concerned with infant feeding practices, Pyu Phyu*, the mother who had practiced EBF, said, *"My baby is male and I love him more than my elder daughter although I love both of them so much. I give more value to my son because I would like to novitiate him when he grows old and so, I breastfeed him according to medical doctor's explanation."*

Biomedical knowledge

Biomedical knowledge about HIV/AIDS infection, transmission and prevention, mother to child HIV transmission and prevention, treatment and compliance was also the important part of infant feeding practices among HIV positive mothers.

Concerning mother to child HIV transmission and prevention, as mentioned above, only five among 29 HIV positive mothers had weak knowledge in HIV education. Other mothers knew well about HIV: transmission and prevention including of mother to child transmission and prevention and moreover, five mothers could explain "Gut theory" of HIV transmission to the baby if the mother practiced mixed feeding together with breastfeeding. But, only 20 mothers out of total 29

mother informants knew that exclusive feeding meant feeding infant with only breast milk or formula milk only up to six months of age of infant. Nine mothers thought that they could feed other foods to their baby even if they were practicing EBF or EFF.

Although all mothers who had good HIV and mother to child HIV transmission and prevention knowledge did not practice infant feeding exclusively as suggested by medical doctors, all three mothers who practiced exclusive infant feedings (two mothers for exclusive formula feeding and one mother for exclusive breastfeeding) had the excellent knowledge on HIV and could explain 'Gut theory' of HIV transmission to the baby during infant feeding period. It was also the same for infant caring and preparation for formula milk feeding of biomedical knowledge.

Health status and hospitalization after delivery

Infant health status and hospitalization

Among 30 babies (one mother delivered twin babies) of total 29 HIV positive mothers, all babies had suffered minor illnesses such as sneezing, coughing, fever and diarrhea one to two times, three babies of two mixed feeding mothers were hospitalized for severe diarrhea and one baby of cultural mixed feeding mother who delivered at home was shown to hospital's OPD [out-patient department] clinic for wasting and mal-nutrition. As mentioned in 'Explanatory model and mixed feeding patterns', mothers fed various kinds of foods and traditional drugs or western drugs for preventive purpose and curative purpose of cultural infant health beliefs.

Elder children health status, hospitalization and death

As mentioned above, five mothers out of total 29 mothers delivered two babies after HIV infection: one mother delivered twins after HIV infection. The two children prior the infants of two mothers were healthy and HIV negative, one child of one mother had died of HIV related diseases and, one child of one mother was taking ART while the twins of one mother were healthy. Two mothers who practiced formula feeding and whose elder children were healthy and HIV negative, and one mother whose child was died of HIV related diseases due to breastfeeding resulted from late seeking to diagnosis chose EFF, while one mother whose elder daughter was HIV positive and was taking ART, still chose EBF because she believed that her daughter might be infected during pregnancy and delivery, not

due to breastfeeding, and because she believed and relied on modern medicine, and moreover due to her motherhood concepts to breastfeed the baby and due to financial problem. Among those four mothers, excluding mother who delivered twins after her HIV infection, only one mother could practice EBF as she chose to practice.

Mother health status

Among total 29 HIV positive mothers interviewed, 26 mothers were healthy and did not have any serious illness and sufferings. Among the rest, one of them, Phyu Phyu* was taking ART second line drugs and the one receiving treatment to initiate ART had CD_4 around 30 only. The last mother, Ya Ti*, was suffering pleural effusion with pulmonary tuberculosis and also, she was also receiving treatment to initiate ART. Concerning relation between infant feeding practices and mother's illness, Ya Ti* and Taw Taw* said that they could not breastfeed their babies because of their sufferings and they fed other kinds of foods such as *Htamin* and *Noe Htamain* as early as possible while Phyu Phyu* said, *"I am breastfeeding exclusively my baby although I feel so tired because of my sufferings: sore throat, breathlessness and dizziness."*

Globalization: Contemporary daily life of HIV positive mothers

Paid jobs and house chores

Out of total 29 HIV positive mothers, 19 mothers were jobless and 10 mothers worked for wage. Among 10 working HIV positive mothers, five mothers were working jobs such as sewing at home, two were manual workers such as hand launderer in neighbors' houses for wage while two were employees at private business and the last mother was working as a government staff. And all mothers, except three mothers whose babies were so young and one mother who was seriously ill, were working house chores such as cooking, washing clothes and cleaning the house.

Although mothers said that doing house chores made them tired, they said that doing house chores was not a barrier or a problem for their infant feedings. They could stop house chores at any time to care, lure and feed the baby whenever they heard their baby's crying. But, two working mothers at private business said about unpaid leave for delivery and post-partum period because unpaid leave

made them tight in financial situation for buying formula milk. All three mothers working as government staff or private business staffs faced difficulties to feed their infant after their paid leave or unpaid leave. It was not allowed to feed their baby at their job environment and there were no facilities to prepare and feed their babies. One said that she had to request her elder sister to care and feed her baby when she went to job and during that time, her baby was fed with water.

But, two manual working mothers said they requested their neighbors to care their infants while they were washing clothes at others' houses and they did not prohibit their neighbors feeding various foods to their babies because they worried about not caring their babies by their neighbors if they prohibited their neighbors' feeding to their infants. Thi Thi*, a 44 years old hand launderer, said, *"I request my neighbors to look after my baby when I go to wash clothes for wage. They care and feed foods such as Cake Mote or B Sa Cook. My son eats all like he has teeth although he does not have teeth really. I don't dare to say my neighbors not to feed such kinds of foods. I worry…they might not care and look after my baby if I say like that. If so, it will make me difficult to work for wage."* But, for five mothers who could work at home, they said that their paid job did not make any problem for them to feed their babies.

Mother perception to infant formula milk, substitutes, and other foods and drinks advertisements

Te Te* said *"formula milk advertisement acted by Htet Htet Moe Oo [one of Myanmar actresses] and a baby is impressed so much in my mind. I do not know the name of that formula milk. I like so much to look the baby who turns his head to the sound when he hears the 'click' sound produced while Htet Htet Moe Oo opens the formula milk tin cover to feed the baby"*. Half of mothers had seen formula milk or infant feeding substitutes such as nutritious powder and other drinks such as *Ovaltine* or *Milo* advertisements in television or weekly news journals or stand signboards near the markets. They were impressed with those kinds of food advertisements. But, only two mothers among 29 mothers fed *Ovaltine* to their babies to provide various tastes for their babies' satiety. Although other mothers wished to feed those kinds of foods seen in advertisements to their babies, 13 mothers did not fed their babies because of financial problem to buy and because they thought that those

should not be fed to the very young babies. They thought that the foods and drinks advertised might not be as good as being advertised.

Development era and infant feeding practices

As the country was developing, HIV positive mothers in this study had various perceptions on infant feeding issue related to daily life in the development era. Taw Dar*, a mother who practiced mixed feeding and worked as a private business employee said, *"when it is more developed, we have to work hard day and night; we lost time to care and feed our babies. But, on the other hand, medicine is also developed and there are many methods and treatments to prevent HIV transmission to the baby from HIV positive mothers. It has pros and cons."*And 10 working HIV positive mothers said that there was still low wage for the jobs and there were less and less job opportunities for them and their husbands. So, it made them earn less money to buy and feed formula milk to the baby while other mothers said development was good for their HIV infection and treatment, and also for prevention of HIV to their babies.

Economic status

As mentioned above, half of HIV positive mothers in this study had low financial situation while half had sound economic status. Although cultural beliefs and practices concerning infant feeding patterns among HIV positive mothers were the most important figuring factors, low financial status was also acting as reinforcing factors for mixed feeding practices. Among 25 HIV positive mothers who practiced mixed feedings, 19 mothers practiced mixed feeding due to cultural beliefs and practices as well as due to financial problem to buy and feed formula milk to their babies while six mothers introduced other foods to their babies due to cultural infant feeding beliefs and practices. Te Te* said, *"As time passes to feed formula milk to my baby for a long time, when my baby was two months old, my husband and I could not afford to buy much formula milk according to my baby's consumption. So, we decided to feed Noe Htamin to my baby as a substitute for formula milk and to make my baby healthier and more developed."*

4.2.7 Similar and different perceptions, concerning HIV and infant feedings, between HIV positive mothers and medical professionals

After analyzing above mentioned facts and data perceived by HIV positive mothers and medical professionals, it can be concluded that HIV positive mothers and medical professionals had the same perception on mother breast milk that breast milk was the best for the baby and it was better than any other foods to feed under six months aged infants.

But, HIV positive mothers perceived that feeding formula milk or breast milk only up to six months of age of infant was not good for the health and development of the baby while medical doctors from public hospitals insisted to encourage exclusive feeding practices for HIV positive mothers infant feeding. But, according to some mothers' perception, some doctors from private hospitals and clinics allowed HIV positive mothers to feed other complementary feedings at about three to four months of age of infant if the mother was practicing formula feeding.

In the same way, both almost all HIV positive mothers and almost all doctors preferred to chose EFF to prevent HIV transmission to the new born infants. But, feeding other complementary foods to under six months infant was assumed as dangerous feeding practice for infant health and development by medical doctors while HIV positive mothers assumed it as cultural infant feeding practices for infant health and growth optimization in addition to medical doctor's suggestions.

As the most contradictory fact between HIV positive mothers and medical doctors concerning with under six months infant feeding practices and HIV, HIV positive mothers had to adapt their life and infant feedings in the context of family and the community for socio-cultural-economic reasons while medical doctors perceived that practicing mixed infant feeding by HIV positive mothers was due to low education level and low socio-economic status.

One doctor claimed, *"If the doctor can explain well and…if the mother has appropriate education level, she will obey and follow medical professional's suggestions to feed their new born HIV exposed babies."* And she also argued, *"EFF also needs no additional foods, no drinks and even no water to feed the baby except feeding formula milk exclusively up to six months of age of infant."*

In contradiction, most of HIV positive mothers from both in depth interviews and focus group discussions said, *"formula milk is prepared with boiled water, it is water? So, we think we prepared formula milk with water and so, feeding water to the baby might not harm the baby. We think it is good and needed to feed water to the baby for the baby's health and prevention of illnesses."*

And one doctor said that there would be more mothers who could practice infant feeding exclusively from EFF choosing group after AFASS assessment by medical doctors during infant feeding counseling. But, in real practice, although most of HIV positive mothers had good health education on HIV and AIDS, and HIV and infant feeding issue, they practiced mixed infant feeding according to their cultural and economic factors. But, medical doctors thought about the links between knowledge, attitude and practice, but, they consider about family influence on infant feeding issue among HIV positive mothers.

Rarely, one doctor said, *"mothers have their own life experiences according to their or surrounding infant feeding practices and…"*, because he run his general practitioner clinic in a ward and then, he had learnt about it from his patients. Moreover, one lady doctor who had already delivered a baby, cared and fed her baby, said that it was needed to consider about more maternity leave and it would be better if paternity leave was allowed because she also faced difficulty to breastfeed her baby exclusively after her paid maternity leave and when she had to return her job at hospital.

4.2.8 Decision making process to introduce mixed feeding practices

As the mothers were practicing EBF or EFF, they saw or heard other mothers' [who were HIV positive or were HIV negative] infant feeding practices and beliefs. They received shared infant feeding knowledge related to infant growth, development and health, moreover infant feeding practices related to religion and health of infant. Although they were practicing EBF or EFF according to medical professionals' advices, they were also enthusiastic to feed other foods to their babies for their babies' health, growth and development as well as for the cost reduction of formula milk. And most of the mothers did not dare to discuss about that with medical

professionals while some mothers believed their mothers more than medical professionals. By interacting and mixing of above mentioned determinants perceived by HIV positive mothers, finally, all mothers who practiced mixed feeding, asked and discussed with their mothers or other women in the family or in the community, who had delivered and cared many children, for their infant feeding practices.

Mixed feeding mothers did not start mixed feeding to their babies themselves. Only after discussing and confirming with other mothers in the family or community, they tried to introduce small amount foods that they thought that it was good for the baby's health. Only if the baby ate and that food did not harm the baby or did not cause any health problem to the baby, they fed those kinds of food to the baby for above mentioned reasons. Nilar* said *"If I wished to feed Noe Htamin to my baby after being suggested by the old lady in neighborhood, I asked my mother whether it was good or not for my baby. Only if my mother said that it was good to feed my baby, I tried a little amount of Noe Htamin to feed my baby. When I fed, he ate. I thought that he liked. Then, the next day, I assessed him what was happened to him: he was suffering diarrhea or sputum and tightness of chest. Nothing he suffered, so, I have fed Noe Htamin to him."*

4.3 Life experiences of some HIV positive mothers practicing infant mixed feedings

Among 13 HIV positive mothers participated in in-depth interviewing, 10 HIV positive mothers chose to practice exclusive formula feeding to prevent HIV transmission to their newborn baby through breastfeeding and two HIV positive mothers chose to practice exclusive breastfeeding to prevent HIV transmission and also with the considerations for economic situation to buy formula milk to feed their infant while the rest mother delivered at home and followed cultural breastfeeding with other complementary food feeding practices because she did not receive AN care and did not know about her HIV status before and at the time of delivery.

Among those mothers, only each mother could practice either EFF or EBF according to their infant feeding decision during AN care. But, the mother who had practiced EFF and had about two months old baby was considering to feed *Htamin* and

Yay coming days to her baby. But, the mother who was practicing EBF considered to practice EBF or other necessary infant feeding according to medical professionals' suggestions for her infant's health and according to her health status because she was taking second line ART and her health status was worsening and her breast milk was not coming out enough.

Among 10 mothers who practiced cultural mixed feedings although they chose to practice exclusive formula feeding, the main determinants could be classified as three groups: one was mixed feeding practices due to cultural beliefs and practices, another group was mixed feeding practices due to cultural beliefs and practices in the context of financial struggling and the last was mixed feeding practices due to policy structural functioning while two mothers belong to the first category, six mothers belonged to the second group and the rest two belonged to policy and structures determinant group.

4.3.1 Life experience for category one of mixed feedings: cultural beliefs and practices

Case I

A 29 years old Myanmar Buddhist HIV positive mother, a wife of a manual worker, had known her HIV status at the age of 26 years when her third daughter and she felt sick. After testing HIV at one INGO, receiving pretest and post-test counseling, she realized that her daughter's and her suffering were due to HIV/AIDS. Then, she came back her house quickly and was crying the whole day; she disclosed her HIV status to her parents and her husband, with tears in her eyes. She said, "*As soon as I arrived home after blood testing for HIV, I said my HIV status to my husband and gave him the enclosed blood test result. He encouraged me not to feel so severe...he loves me...he is over 10 years older than me*". She got warmly mutual understanding and encouragement from, parents in law and her husband, and her parents who were living in the house side by side. Then, her tension, worry, sorrow and depression were reduced and relieved by warmly love of her family members. But, her daughter was hospitalized due to severe sufferings such as fever, thinness, cough and diarrhea, and finally died of AIDS related symptoms at the age of two years. She was impressed in her mind about normal spontaneous vaginal delivery and

cultural breastfeeding when she heard health educations on HIV and infant feeding during infant feeding counseling when she got the fourth pregnancy to deliver the recent infant. During infant feeding counseling with medical doctors, she said about her perception about counseling, "*They explained me that if I breastfeed the baby, the baby might be transmitted HIV and it is also needed to avoid feeding mother-chewed steamed rice to the baby. If I feed formula milk, the baby has no risk to be transmitted with HIV. But, medical doctors explained me that a HIV positive mother can breastfeed her baby exclusively up to six months of age of infant.*" Moreover, she explored her perception about her understanding upon infant feeding counseling by medical doctors, "*They explained me about infant feeding practices, but, I did not understand. I only knew that it is needed to care baby hygiene, and to feed baby cleanly. To avoid fly resting, it is needed to cap the feeding bottle nozzles and to wash, boil and clean the feeding bottles and utensils to prevent diarrhea. From medical professionals' explanation, I know and understand about only HIV transmission from feeding practices. I do not understand other explanations for infant feeding practices among HIV positive mothers*."

After taking ART regularly, and receiving pregnancy care, she decided to practice EFF and to deliver the baby with abdominal operation delivery, caesarian section delivery, in the hospital, to reduce HIV transmission to her baby. Concerning infant feeding decision making, she said, "*I have decided myself to choose and practice formula milk feeding …not need to discuss with anyone. All family members and my husband agreed and followed my decision... My husband is a stingy person, but, he agreed and allowed me to feed formula milk because the hospital supplied formula milk…because I suffered a lot when my third daughter suffered symptoms and disease. I felt so sad when she died... I am a mother…not like the father…fathers are just to earn money... mother more suffers if a baby feels sick and die. So, I would decide to feed formula milk even if the hospital did not supply formula milk to me…I have to earn money to buy formula milk to feed my baby as a mother, I do not want my baby to be infected with HIV. So, I saved money to do abdominal operation for delivery.*"

Although her husband did not have HIV, her HIV status was disclosed to all family members and to some neighbors around her house. There was

no stigma and discrimination in her family environment and surrounding neighborhood environment, showing mutual understanding and supporting to one another. She shared about her neighbors, "*Some of my neighbors asked me why I do not breastfeed my baby. Then, I replied them that I have HIV, so I cannot breastfeed to prevent HIV transmission to my baby. Then, they encourage me not to breastfeed the baby if so. At first, I felt depressed. But, now I am not depressed. I said my HIV status to the neighbors openly.*" Her life was leading with elder two children and four months old infant, doing house chores as well as home business, cleaning and taking out viscera from dead eel to send to restaurants while her husband earned money by working as a dock worker, living in an extended type of family happily. And she discussed the researcher about her concept about small baby feeding, "*if we are mothers, we learn from seniors who have motherhood experiences like infant feeding practices. But, there is no strong obligation or custom to follow and obey what our seniors said and asked me to do concerning with under six months infant feeding practices. We just do according to what we think which is the best for the baby.*" And she had the perception about good mother as, "*I think breastfeeding mother is a good mother, but, avoiding breastfeeding and feeding formula milk to prevent HIV transmission to the baby is also a practice of good mother. But, actually, feeding formula milk is not as good as breastfeeding. Concerning with the concepts of good mother, it is not related with breastfeeding. I assume she is a good mother if she gives first priority for her baby's health and development."*

Moreover, she had the feeling about breastfeeding that breastfeeding can transmit HIV to her baby and so, she did not feel nothing about not breastfeeding and she knew that feeding formula milk was not as good as breastfeeding because all nutrition eaten by the mother would go to the baby through breastfeeding. But, she thought that she should not breastfeed her baby because her breast milk came from her blood and then breast milk would become blood if it reached into the baby's abdomen [gut]. For animal milk feeding, although she had not fed animal milk to her baby, she thought that animal milk could make her baby strong as well as sometimes make the baby suffer diarrhea. And concerning with EBF and EFF practices, she explored her perception, "*I assume EBF is dangerous for infant HIV transmission, I am afraid to practice EBF. And it will be busier with my job and*

house chores if I have to breastfeed, and for the health of the baby, formula milk is better than breast milk. I am feeding formula milk for the health of my baby. I do not have negative view on formula milk. I am not afraid of formula milk feeding. Feeding formula milk is more convenient for my daily life as a mother. Concerning with EFF, I will feed water to the baby because I worry about my baby's feeling of thirsty although I believe medical doctor's advice." And moreover, she shared her perception about her friend who were practicing breastfeeding as well as formula feeding to the HIV exposed baby, *"One of my friends who has also HIV fed both formula milk and breast milk to her baby. She has no husband, but, I do not know why. She has also another child of two years old. I think… feeding both formula milk and breast milk is dangerous for the baby health and it is because of her job. She has to struggle for her live and to feed her children, actually, she earns money as a bad women [commercial sex worker]. In the past, she was human trafficked to the China-Myanmar Border. She is from Myeik. Her chinese husband was died…She was married to a Chinese man in China. When her husband died, her parents in law from China ejected her out of house…I think she should not practice mixed feeding practices to her small baby. But, I think it is due to her economic status and job."*

After her delivery, she practiced EFF to feed her small baby till above two months of age of infant and she explained her formula milk preparation and feeding as, "*I put 6 spoonfuls of formula milk for 100 ml of warm water and it can last for two hours… About 8 bottles are drunken a day by the baby. For cleaning the bottles, I put 5 drops of feeding bottle cleaning solution liquid into the bowl used for bottle cleaning and I boil it with warm water for 5 to 10 minutes. I clean like that three times a day. It is enough and cleaning like that prevents milk from being fermented. But, I cannot do cleaning for every feeding time. But, for the night, I do two times cleaning. I have three feeding bottles to feed my baby. If I prepare it and feed my baby uncleanly, the baby will suffer diarrhea and I will feel stress and sad.*"

While thinking past memory back, she uttered about her feeding practices to her third child, when her economic status was tight and she did not know her and her third daughter's HIV status:

I breastfed my third baby who was died of HIV at the age of two years. At the age of five months, I chewed steamed rice first and fed her because I did not

know that I had HIV. I wanted to feed Htamin because other mothers also fed it to their children. My mother also asked me to feed Htamin to stop breastfeeding to her. Because my baby was thin and so, my mother asked me to feed chewed Htamin, steamed rice, to make the baby fat. I chewed Htamin first because the small baby did not have teeth and my economic status was not ok that time enough to buy San Mhote. So, I fed chewed Htamin and then, I fed water….pure water which cost 400 kyats per bottle. Because my mother said me even the adult felt thirsty and so, the baby also would feel thirsty. So, I fed pure drinking water or cool boiled water to my baby. My third daughter felt sick over one year of age. She felt fever, cough and ulcers…she felt sick frequently. Sometimes, I went to the clinics near my house, which cost only 1500 or 2000 kyats Sometimes, I used "Say Mhee To", lay man drugs. Sometimes, I used drugs combined by small drug stores near my house…finally, I went to child specialist clinic, and it cost 6000 kyats for consultation fees. She diagnosed my daughter as TB after X ray examination and clinical physical examination. Then, my daughter had to take anti-TB drugs and ARV...and she was admitted to hospital for three times because she suffered diarrhea at the age of one and half year. She became thin. I feel sad. Actually, she was over one and half year, so, she should sit and walk, but, because of her disease, she could not sit…I also fed Ta Nat Khar root paste to that daughter after having a bath, the root is bitter...to prevent the effects of acrid smell: fried garlic smell and fried spices smell and so on because acrid smell can make the baby suffer Ta Ngal Nar Naute Kyaw Tet, a kind of neck pain due to neural pain. I fed it to the baby after every bath... I made Ta Nat Khar paste by grinding the root of Ta Nat Khar on to the flat and smooth stone surface, called Kyauk Pyin in local term, with water. The water is from the tap, I kept the water in an emptied bottle with a hole to pinch out the water. Kyauk Pyin is covered with a lip. But, we do not clean Kyauk Pyin after every grinding."

After those kinds of feeding experiences to her died baby, she chose and practiced EFF to her recent small baby still two months of age, but, she said that she had introduced feeding water to the baby, "*I have feed water to my baby since the age of three months. It is pure water and because I thought she would feel thirsty*

like an adult although medical doctors suggested me not to feed any foods, drinks and water and although I believe medical doctors' advices. And, I think formula milk as a food and so, water is needed. There is no suggestion from my family members and neighbors to feed other foods to this baby."

In contradiction, one medical doctor said that EFF also needed no foods, no drinks and even water to feed the baby except feeding formula milk, because formula milk was prepared with warm water that was enough for baby's daily needs for water. But, on the side of HIV positive mothers, they assumed that formula milk was prepared with water, so, they believed that feeding water to the baby in addition to formula milk feeding, as a food, could not harm the baby's health and will make the baby free of thirsty.

4.3.2 Life experience for category two of mixed feedings: cultural beliefs and practices in the midst of financial difficulty

Case I

A 35 years old HIV positive mother, a Burmese Buddhist lady with high school education level, who had known her HIV status at first AN care visit of her second child pregnancy, had two children including six months old infant born after HIV infection. She lived with her husband, her children and her parents in law at evening and night time while she visited her parents' home at day time. She had disclosed her HIV status to her husband who also had HIV, and to other family members, except her father because her father was old and she did not want to make him feel sorrow and feel misunderstand to her husband. But, she had not disclosed to her neighbors because of worry about stigma and discrimination by the community, especially to her children. But, there was no discrimination and stigma among family members regarding her and her husband's HIV status. She sewed clothes at home to earn money while her husband worked as a high way driver.

During AN care visit, she was counseled by a medical doctor about HIV and infant feeding issue. She recalled, "*They[medical professionals] explained me that breastfeeding can transmit HIV to the baby, but formula milk cannot. But, they explained that I must prepare formula milk and bottles cleanly if I choose formula milk! If not, it can cause diarrhea. And formula milk is not good as*

*mother milk for nutritional value and if a mother chooses formula milk to feed the baby, they suggested feed only formula milk. And they suggested not mix formula milk and breast milk to feed the baby. They said not to feed breast milk to the baby after choosing and practicing formula milk feeding again and again because they worried that the mother may breastfeed the baby if the mother feels sad for the baby [who does not have a chance to be breastfed]. They suggested me that I should feed my baby with formula milk and I should not breast feed my baby. They suggested me to feed the baby with only formula milk, not other foods and meal up to six months."*And "*they [medical doctors] asked me what I want to feed the baby…I decided not to breastfeed my baby. But, mother milk is the best for nutrition of the baby.*"

After receiving HIV and infant feeding counseling, she decided to practice EFF to the baby to prevent HIV transmission to the baby and she said about that, "*I chose myself first. But I disclosed my HIV status to my family including mother and father in law and I explained them about that [HIV transmission to the baby and choice of formula feeding]. And then, they said 'It is ok and it is up to you'. I chose freely with my own wish because I think 'It is me who must do caring and feeding my baby'. But, at that day, when I arrived home, I explained all to my family.*"

After abdominal delivery operation with PMTCT measures in a public hospital where medical professionals showed no stigma and discrimination to her, she practiced EFF up to four months of age of infant. During EFF practice and choosing to feed formula milk to the baby, she said that feeding formula milk to the baby made most of people in her neighbors feel strange, many people asked her why she fed formula milk to her infant and she said the researcher, "*I cannot answer my health status for my child's future, So. I replied with other disease that my elder daughter had to be blood-exchanged because of yellow skin [neonatal jaundice] and she was admitted to hospital for one week and received blood exchange therapy"* and *"I cannot and do not breastfeed my boy because of blood poison [she wants to mean that she cannot breastfeed her child in order that the child will not suffer neonatal jaundice], then, they accept that because of low knowledge level!. But ones with high health knowledge will not accept, but, my neighbors accept and believe my explanation why I do not and cannot breastfeed my baby."* And, she stated that for stigma and discrimination in the community that it was not same as before [not as

strong as before]. Some understood that disease and they did not discriminate. But, her quarter was a little bit outside of the town and her neighbors were low educated. And so, they might discriminate and might not communicate the baby. But, some who understood the nature of that disease were not like that.

And concerning consulting with other people about infant feeding practices, she said that she discussed with her sister in law and she practiced infant feeding patterns only when she thought it could not be harmful to the baby and it could make that baby feel better for health, growth and development. And, she said that there was knowledge sharing among mothers in the community concerning infant feeding practices and that her neighbors suggested her to feed *Htamin* to her baby because it made the baby resistant to mosquito bite. And she claimed that she also shared her knowledge related with infant feeding practices, "*there are three mothers near my house whose infants are about 18 days younger than my child. I know infant feeding practices because doctors said me those practices at every follow up and so, I share those to them and they try and follow my suggestions [her face showed satisfaction for her knowledge sharing]. But, there is no problem among us if they do not follow or practice according to my suggestions and also same to me because they have their own ideas and beliefs and we have our own ideas and beliefs*"

Although the mother chose and practiced formula milk feeding to the baby she said, "*We, including my parents, feel sad because of our concepts about bottle feeding. My father said me frequently that he feels sad because the baby does not have a chance to be breastfed. [With sad tone of voice and face manner] and I also felt sad because I cannot breastfeed my child. When he cries and he is hungry, or when we go hospital for injection [immunization] and when he cries due to pain of being injected, I can breastfeed my child if I do not have HIV. But, now, when he cries due to being hungry, I feel sad because I cannot take formula milk bottles everywhere near my house*."

She also thought that formula milk was not as good as mother's breast milk and she exploded that she would like to breastfeed her baby if she did not have HIV. But, she had to chose and practice EFF because she did not want her baby to be transmitted with HIV. She said her perception on breast milk, "*Breast milk is…due to love to the baby, breast milk becomes white from blood*

because of love to the baby. I think and perceive like that…because breast milk has smell of fish and so the blood, I think so. And honestly, I want to feed breast milk to my baby. There are some beliefs that feeding formula milk makes the baby unfamiliar to the mother. So, I want to breastfeed my baby. But, desire to breastfeed is one thing. Thinking about transmission of virus through breast milk is one thing. Clearly, love desire to breastfeed the child is one thing. For the infant's health and future…[chose formula feeding] and not breastfeeding is the best for the baby."

Concerning with perception about animal milk, the mother said, *"According to my knowledge, cow milk should not be fed to the baby less than one year of age, I have read in a book [in the literature]. For goat milk, I have not heard. I have read only about cow milk not to feed baby less than one year of age. There is…if cow milk is fed, the baby will have wild mood...and if bottle milk [formula milk] is fed, the baby will not be familiar with mother."* And she said about her infant feeding preparation, "*one spoonful of formula milk needs 30 ml of water [boiled water]. This month, it is needed 7 spoonfuls with 210 cc of water to feed baby one time. It must not be exceeded or reduced. After delivery, I prepared formula milk in not this way. And, after that, my child was admitted to children hospital for diarrhea. Staffs from that hospital told me exactly how to prepare formula milk. If the formula milk is sticky and over saturated, the baby will suffer indigestion. If the formula milk is watery, it is not good for baby. So, they guided me to prepare formula milk exactly. And for cleaning bottle feeding I use feeding bottle washing oil. I wash feeding bottles with it and wash with water and then, boil feeding bottles and soak feeding bottles with warm water.*"

She also attended many health education sessions provided by INGOs, CBOs and hospitals for HIV and infant feeding and so, had excellent knowledge on HIV and infant feeding, HIV infection, transmission and prevention and treatment. She had fed formula milk only, even without feeding water, up to four months of age of infant. But, she started to introduce other kinds of food at around four months of age of infant with cultural belief background and to reduce formula milk cost due to economic reason. She said:

Just over 4 months of infant age, I started to feed 'San Mhote'. At near 5 months, I began to feed 'Htamin Yay'. For 'Htamin', just one to two days, it is

nearly six months. In the morning, I feed him 'Htamin Yay' [the boiled water poured out from the steamed rice cooking, it is a kind of cooking or steaming rice traditionally.] And I feed a little 'Noe Htamin [cooked soft rice together steamed with cow milk]. And I feed 'San Mhote'[nutritious rice powder]. And I feed 'Pan Nyo Lay', a kind of Myanmar traditional drug used for local infant diseases, by mixing it with sesame oil and I rub and feed the baby to get resistant to acrid smell. And because the baby chews his tongue, I feed some Myanmar traditional drugs such as 'Shar Put Say', a kind of Myanmar traditional drugs which has to be rubbed on the tongue and because his fingers and toes are flexed. Old people said that it is due to tension of tendon and stiffness of neck and back. So, to relax those tendons and to cure stiffness of neck and back, we feed those kinds of traditional drugs to infant because we worry fit and convulsions due to that stiffness. And I apply 'Sa Mon Net', one kind of raw materials of Myanmar traditional drugs, with sesame oil on the abdomen of the baby to prevent flatus [seeing the satisfied facial expression on her face].

And she also mentioned about her cultural beliefs related small babies feeding patterns that she practiced:

'*Htamin Yay' contains nutrition when we pour water from cooking rice. So, I feed 'Htamin Yay' to my baby just for the baby's health. And I think that tonics will not be needed for my baby if I feed 'Htamin Yay' to my baby. For ' Noe Htamin', most of my neighbors feed 'Noe Htamin' to their babies...It contains only cow milk and rice. So, it cannot be dangerous for babies. And I feed it to my baby because I think it is nutritious. First, I tried feeding 'Noe Htamin' to my baby. The baby ate it and so, I continue to feed him 'Noe Htamin' to reduce baby's formula milk need and it can make baby healthy and get nutritious things.*

But, she mentioned that her house chores and her home business was not an obstacle to care and feed the baby.

One information rich key informant said, *"If the doctor can explain well and make HIV positive mother clear about HIV transmission to the baby and infant feeding practices, and if the mother has appropriate education level, she will obey and follow medical professional's suggestions to feed new born HIV exposed*

baby. And we do AFASS model assessment especially for economic status of mother and family in order that they would not face financial problem to buy formula milk during infant feeding. We allow them to feed formula milk only when they are affordable to buy needed formula milk, in additional to hospital formula milk supply and so, we do not worry about their economic status to buy formula milk." But, in reality, although this mother had enough HIV health education, she practiced cultural mixed feeding to the baby because of cultural beliefs and to reduce formula milk cost.

Case II

A 36 years old Indian Hindu HIV positive mother, who knew her HIV status during hospitalization due to accidental falling into the stream while washing clothes at seven months of pregnancy, was living in a small tent, located in slam area in Mandalay, together with her elder two children, five months old infant and her husband who had no HIV, a garbage collector. While her husband did not have regular income, she was suffering TB, pulmonary tuberculosis, and '*A Sote Yay Win*, pleural effusion'. Because of her economic difficulty even for transportation to the hospital, her AN care follow up were irregular. Concerning with infant feeding practice counseling, she said, "*I did not understand and know everything what the doctor said and explained to me. I knew only that if I chose breastfeeding, breastfeeding will transmit HIV to the baby more while formula milk feeding can prevent HIV transmission to the baby. I did not dare to ask medical doctor back because I worried to be blamed and scolded by medical professionals. If I could, I wanted to ask them back what I was not clear about my infant feeding. It is also the same for my husband; he did not dare to ask medical doctors back. I think medical professionals do not care me because we are poor and we cannot afford for treatment fees.*"

After infant feeding counseling, she discussed with her husband for EFF concerning with the cost to buy formula milk. She said, "*First, I discussed with my husband to practice EFF to prevent HIV transmission to my baby, but, we have to earn money hardly even for daily expense to eat and live. Finally, we decided to practice EBF praying our Buddha to prevent HIV transmission to my baby form me. I swore to the Lord of Buddha that my true love to my baby may be powerful to prevent HIV transmission to my baby.*" But, after that, she wanted to change her

infant feeding decision when she had the information that hospital supplied some formula milk packages to a certain extent. But, she uttered, *"I wished to change my infant feeding decision, but, I did not dare to say medical doctors about that because I worried about being blamed, scolded and misunderstood. I thought that they might think me that I wanted to change my infant feeding decision in order that I could sell it outside for money. So, I did not change my infant feeding decision."*

But, she delivered the baby with abdominal delivery operation under PMTCT measures at a public hospital and also, her post delivery clinic follow up visits were irregular for her baby as well as for her because of lack of money for bus fares to go to the hospital. And she had to admit hospital for her deteriorating health status with TB and pleural effusion. Moreover, although she wished to go to hospital for her infant feeding counseling after birth and treatment, she could not go because of financial problem even for transportation bus fares. She practiced breastfeeding herself to feed her baby. Although she was practicing breastfeeding, she assumed, *"Breastfeeding is the best for the baby, but, I perceived that the baby should be fed with various kinds of food to make him more healthy and developed. I think he might want to eat all kinds of foods like an adult."* And she admitted:

> *I have fed water…I buy San Mhote to feed him, after choosing to breastfeed my baby, I also tried feeding formula milk to my baby. But, the baby suffered diarrhea because we could buy and feed only 100 kyats formula milk. But, now my baby is strong, healthy and fat. Now, I cannot breastfeed my baby because of my disease. And I feed the baby formula milk which cost only 100 kyats. I fed water to my baby since my delivery because the baby's lip were dry…and I think my baby feels thirsty like me…and to make his abdomen cool. Water is just water. We cannot buy pure drinking water. We are poor. At five months of age, I have fed Htamin and some snacks when he has teeth, upper two and lower two teeth. He was also healthy at that time. He just suffered fever and then I bought drugs from betel shop or nearby drug stores…I crush Burmeton and Paracetamol and then I feed the baby whenever he felt fever. Moreover, I feed him, Shwe Ta Min, Myanmar traditional drugs, which is good to fight indigestion and abdominal pain. I feed it to all my children after dinner every day. I have fed that just after four months of age of infant because I worry about*

chocking when I feed it to the small baby. Then, I apply Htet Lin chest liniment onto the chest of the baby. At the age of four months, other people gave some foods to feed him..then, he could eat other foods. But, I have not started myself to feed him because I worried about chocking and fullness to his throat. Then, I started to feed Htamin to him. Other people gave him biscuit, soft bread, orange and apple. I allow them. I like and I feel satisfied when I see other people love my baby and feed my baby. I allow them to feed my baby. They feed those kinds of food because they want my baby eat those, not with other cultural beliefs or practices. But, when they go back I remove or do not feed orange and apple because I worry about blockage in the throat. But, I do not remove in front of them, it is wild behavior. So, if they go back, I remove those because I have seen one baby suffered blockage in the nose because of orange seed playing…I have tried soft Htamin. I crush hot soft Htamin and then, mix with oil and salt, and then I feed my baby because some of my elder friends suggest me to feed Htamin to my baby because Htamin makes the baby resistant to mosquito and bed-bug bite. So, I feed Htamin to my baby. And some suggests me to feed Honey to make the baby deworming. But, I do not feed Honey to my baby because I cannot buy Honey. But, I wish to feed Honey to my baby. His father fed him Tea sometimes. I also think if my baby drinks, it is ok to feed Tea to my baby. And I feed soft bread to the baby when we go to bed because if I feed Htamin, I worry about vomiting."

4.3.3 Life experience for category three of mixed feedings: policy structural functioning

Case I

A 38 years old Shan Buddhist HIV positive mother, who knew her HIV status during first AN care visit, served as a government staff and was living in the staff house provided by her department together with her elder sister, two twin babies born after HIV infection and with her husband. She was diagnosed HIV at the first visit of AN care, she felt shock and depressed and could not believe the test result. She tested HIV again in public hospital as well as in a private specialist hospital. As soon as she knew her HIV status, she ran to her parents in law's house and disclosed

her HIV status sadly to reduce her suffering. She said, *"I could not believe my test, I have not done nothing…I felt shock and depressed…felt explosion in my heart then ran to my parents in law and I disclosed them about my HIV status, they gave me mutual understanding for my feeling. They encouraged me, then, they said their son, my husband, about my HIV status. My husband also supports me and understands me. They suggest me to do more meditation and praying to Buddha."* And she disclosed her HIV status to her elder sister, but, she did not disclose her HIV status to her mother because of her mother's heart disease.

Then, she was counseled for HIV and infant feeding by a medical doctor and she decided to feed formula milk to feed her baby after discussion with her husband. After receiving ART and PMTCT measures, she delivered the twin babies with abdominal operation delivery at a public hospital. As a government staff, she received 42 days of maternity leave each before and after delivery. After delivery, she lived with her parents in law to feed and care her twin babies. At that time, because of maternity leave, she could arrange well for infant feeding issue. According to her education level, she had excellent knowledge on HIV and infant feeding, HIV infection, transmission, prevention and treatment. She assumed breast milk is the best for the baby, while she perceived that a good mother can feed formula milk to her baby for the health and development of baby. She really followed the advice of medical professionals concerning with her disease and infant feeding.

But, after her maternity leave with paid salary, she had to return to her work and then, she faced stressful situation for feeding her twin babies although her elder sister helped her in caring twin babies. She wanted to prepare formula milk herself cleanly to prevent diarrhea for her infants. So, during working hours and meeting time, she felt burning heart worrying about her babies' crying due to hunger. She said, *"I cannot concentrate what others say during meeting, I want to run out of the meeting room to prepare formula milk and feed my baby. It is the time to feed my baby. I am worrying how they are suffering."* So, she arranged one thing: preparing formula milk in advance before she went to job and keeping it in the thermo flask for two to three feedings in order that her elder sister could feed her babies whenever her babies cried for formula milk. But, after one week, at the age of two months of babies, the babies suffered loose motions and were hospitalized. And she

said that there was no facility at her working place to prepare formula milk and feed the babies. She suffered stressful mood for caring and feeding her babies due to maternity leave policy and also did her babies suffer diarrhea.

And, she had to leave her babies with her elder sister who had contradictory mood on exclusive formula feeding practice. She said:

> *I have fed only formula milk to my babies up to six months of age of infants .I have not fed even water to my baby…but, I am not sure about my elder sister because I cannot stay with my babies all the time because of my job and she could feed water to my babies. But, I am not sure because she said me that she have fed water to her babies…and in the hospital when I delivered my babies, my elder sister saw the posters to educate the mothers and all to feed only breast milk to the baby up to six months age and when she heard the doctors' advice to me to feed formula milk only up to six months of age of infant, then, she said me that our mother had 8 siblings and our mother fed water to us and we did not suffer any problem. So, she said me that she will feed water. That is why I am not sure about her that she fed water to my baby or not. I cannot convince her not to feed water. But, she did not feed water my babies, in front of me. And she did not tell me back what she fed my babies. But, my sibling elder sister feed 'Ta Nat Khar' paste when she applies 'Ta Nat Khar' to my babies since four months of age of infant. When I asked her back why she fed 'Ta Nat Khar', she replied me that it was good for the baby and the 'Ta Nat Khar' root makes the baby healthy. But, she cannot explain how 'Ta Nat Khar' makes the baby healthy in detail and it is good for what specific disease…but, she warns me after she feeds 'Ta Nat Khar' to my babies not to feed apple because if fed together, it can cause poison until to die.*

On the side of medical professionals, a post graduate medical doctor said, *"Mixed feeding among HIV positive mothers to their infants depends entirely upon their education level and health knowledge level. Mothers with low education level will feed various kinds of food to their baby, so we need to promote their health education level…but, even for me, while I delivered and fed my baby, I faced difficulty about maternity leave to practice exclusive breastfeeding. But, it is*

difficult to say about policy structure…it is really good to get more maternity leave as well as to allow paternity leave."

In addition to this case, a mother with graduate level education and with excellent knowledge of HIV: infection, signs and symptoms, transmission, treatment and prevention including mother to child transmission prevention, whose husband was also a peer health educator, said "*I got only unpaid leave for my delivery and caring my baby as a private company staff. So, I do not have income these days and I have to return my job. I have to leave my baby with my family members and request them to feed and care my baby. So, now, although I know that the baby should be exclusively formula milk fed, I am now trying to introduce 'San Mhote' to my baby in order that it is ok for family members to feed when I return my job."*

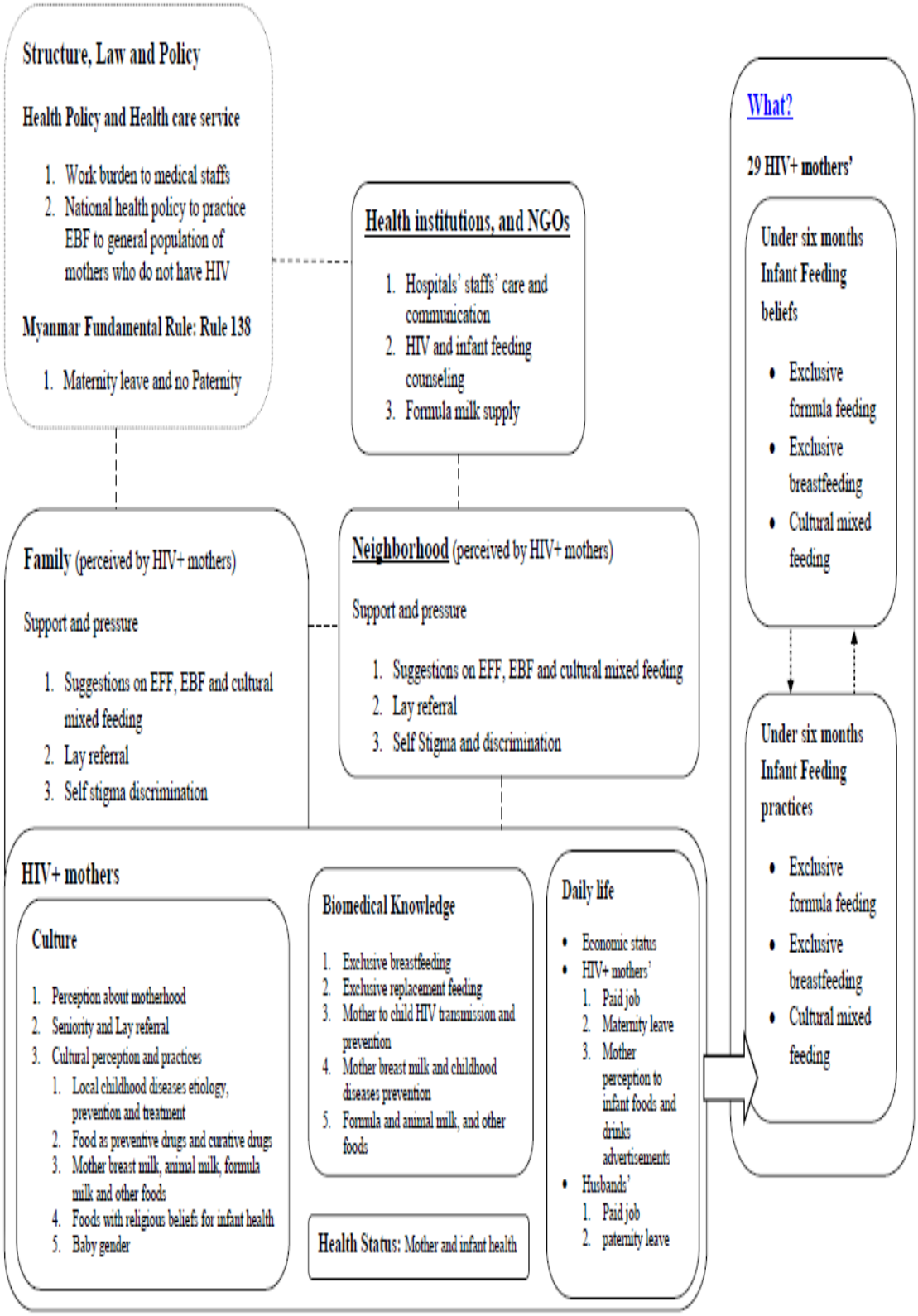

Fig 4.1 Diagram of Research Findings

CHAPTER V
CONCLUSION, DISCUSSION & RECOMMENDATION

5.1 Conclusion

In conclusion, this research was conducted because HIV/AIDS was increasing in trend all over the world as well as in Myanmar. In Myanmar, HIV infection was increased in reproductive age of both men and women, and also in pregnant mothers. Along with this, mother to child HIV transmission came into the consideration of world health concerns. HIV can be transmitted to HIV exposed baby from their HIV positive mothers during pregnancy, delivery and breastfeeding period. Although mother to child HIV transmission during pregnancy and delivery was successfully prevented by ARV and elective cesarean section delivery, infant feeding issue after delivery among HIV positive mothers became socio-cultural and political concerns considering exclusive breastfeeding or exclusive formula feeding or cultural mixed feeding practices. Considering about 'HIV free survival: reduction of both children HIV transmission from their HIV positive mother and, child mortality and morbidity due to childhood and infant diseases, medical professionals recommended HIV positive mothers to practice exclusive breastfeeding or exclusive formula feeding to their babies. But, infant feeding was entirely a cultural practice in the contexts of political, social and economic conditions within community and family institutions. Because of social stigma and discrimination of HIV/AIDS and, cultural practices and beliefs related to infant feeding foods and patterns, under six months infant feeding practices among HIV positive mothers were explored with cultural medical anthropology perspective with critical consideration for institutional structures and policy level.

The research was explored in the second largest and third capital of Myanmar, Mandalay because it had high HIV incidence and prevalence rate in reproductive age of both men and women, and also in pregnant women. Moreover, mixed feeding practices to infant were still prevalent among mothers. Child mortality

and morbidity rate, and malnutrition rate were still high in Mandalay. In conducting field research, with the help of one peer research assistant for contacting with informants, HIV positive mothers with one under six months old infant at least (but, one mother had twelve months old twin babies.), the researcher applied cultural medical anthropology approached in-depth interviews with 13 HIV positive mothers, 2 HIV positive mother peer counselors and 8 medical professionals from government sector, INGO sector and formula milk pharmaceutical business company. And the researcher conducted three focus group discussions with 16 HIV positive mothers to achieve diverse views on under six months infant feeding practices. Field research was conducted from August 2013 to mid of January 2014 by in-depth interviewing, focus group interviewing and participant observation methods created with emic point of view with critical consideration for policy and institutional contexts.

In summary, among total 29 HIV positive mothers interviewed in this research, 25 HIV positive mothers chose to practice exclusive formula feeding [EFF] because they were afraid of more risks due to breastfeeding to transmit HIV to their babies from them, explained by medical professionals during infant feeding counseling and explained by peers prior to counseling by medical professionals. During infant feeding counseling and decision making process, all of 25 mothers could not consider other cultural beliefs and practices related with infant feeding issue and financial problem to buy formula milk if formula milk was not enough with supply from hospital, to feed their children. At that time, the only thing in their mind was giving priority to prevent HIV transmission to their new born infants. So, after discussing with their spouse or mothers or aunties or brothers or sisters who had the influencing role in the family and who could support and help for their infant feeding, they decided to practice EFF. And one mother who delivered at home by a trained birth attendant had already practiced cultural breastfeeding with other complementary food feeding practices. And among the rest three mothers, one mother chose to practice exclusive breastfeeding [EBF] because of her strong belief on the fact that EBF could also reduce HIV transmission to the HIV exposed baby and she had strong good mother concepts on breastfeeding and her love to her baby, and due to an additional reason for economic status to buy formula milk while the last two mothers chose EBF due to financial situation.

After infant feeding decision making and delivery, the actual practice of infant feeding among the interviewed HIV positive mothers came into consideration. According to in-depth interviews and focus group discussions, only three mothers out of 25 HIV positive mothers who chose to practice EFF, could practice EFF until the time of interview when they had two months, three months and six months old baby each. Even for those three mothers, one mother was considering to feed *'Htamin'* and '*San Mhote'* to her baby coming days. And, on the side of three mothers who chose to practice EBF, only one mother could practice EBF until the time of interview when her baby was two months old.

On discussing with 22 mothers who practiced mixed feeding although they had chosen to practice EFF (total mothers who chose to practice EFF was 25 mothers), the most casting determinants were:

- mothers', their family members' and the community's perception on current chosen infant feeding practices and cultural beliefs on current practicing mixed infant feeding patterns,
- local infant diseases etiology, prevention and treatment
- food as preventive and curative drugs for infant health and development
- motherhood: good mother and role
- self medication for the baby's health of popular sector of health care systems, especially for local infant illnesses

in the context of their job or daily life. For working mothers, their paid or unpaid maternity leave and no paternity leave policy and law, and no permission and no facility for infant feeding at their job environment were also casting their mixed feeding patterns. Manual job behaviors also made the mother led to mixed feeding practices while working mothers at home were convenient for their infant feeding. Economic condition was also one of main determinants leading mothers to mixed feedings while only six of mothers introduced and fed other foods to their babies due to cultural beliefs and practices. Other mothers practiced mixed feeding because of cultural beliefs as well as for economic condition. And moreover, mother's fear of being blamed and scolded by medical doctors if they discussed about infant feeding patterns they wished to practice to their babies, led mothers to asking and discussing with mothers who had delivered and cared many children in the family or community

while mothers were being supplied with limited formula milk by hospital for their baby's eating, was making them difficult to practice EFF. Finally, the work burden to medical staffs by health care system of Myanmar prohibited HIV positive mothers to discuss with medical doctors freely and familiarly about infant feeding practices because HIV positive mothers perceived that medical doctors were so tired of their works and if they asked something about infant feeding practices in additional to doctors' explanation, they would be scolded and blamed by tired medical professionals.

But, by interviewing with two HIV positive mothers who could practice EFF, their belief about good motherhood and role, perception of chosen and current practicing infant feeding, strong belief on biomedical knowledge about HIV and infant feeding practices, and prevention of mother to child HIV transmission were forces making them practice EFF according to medical professionals' suggestion. One of these two mothers could practice EFF with the help and support of her husband and her mother while other mother practiced EFF by herself.

On the side of three mothers who chose to practice EBF, two mothers practiced mixed feedings. One mother with 19 days aged infant practiced mixed feeding because of her senior aunty peer's suggestion to feed water to the baby while other mother practiced mixed feeding because of her perception on chosen and current practicing infant feedings, local infant diseases etiology, prevention and treatment, foods as preventive and curative drugs for infant health and growth, low biomedical knowledge on HIV and prevention of mother to child HIV transmission, and poor economic condition even for transportation to health care services and mother health status. But, one mother who could practice EBF until the time of interview said that her ability to breastfeed her baby exclusively was due to her love to her son as a male baby, strong belief on biomedical knowledge concerning exclusive breastfeeding and mother to child HIV transmission reduction, and her strong cultural concepts about good motherhood, breastfeeding and infant health, growth and love between mother and son.

But, on the side of medical professionals, they thought that there were more mothers who could practice infant feeding exclusively among mothers who chose to practice EFF. They worried about mixed feedings in mothers who had chosen

EBF, because medical doctors worried about HIV transmission to the HIV exposed babies born to HIV positive mothers although medical theories said that there were more mortality and morbidity in children fed with mixed feeding with formula feeding, due to childhood diseases in developing countries. Although they counseled and explained HIV positive mothers about HIV and infant feeding practices as they could, according to their workload, they thought that they should give more intensive counseling to HIV positive mothers and current counseling services were not enough for HIV positive mothers. Moreover, they absolutely thought about the direct association of HIV positive mothers' education level, thinking and reasoning ability and health education level related with HIV and infant feeding practices.

In conclusion, mixed feeding practices to under six months infants among HIV positive mothers were casted by policy, cultural, social and economic determinants in the context of doctor patient relationship and cultural seniority learning and practicing behaviors. Most of the mothers were facing two opposite forces: cultural beliefs and practices concerning infant feeding patterns and medical professionals' recommendation for HIV and infant feeding in the context of policy, society, family and individual level in the era of globalization. Limited number of mothers could practice infant feeding exclusively according to medical professionals' advices while most of them were practicing cultural mixed feedings to their under six months infants.

5.2 Discussion

5.2.1 Cultural Medical Anthropology theories and Research Findings

As Byron J. Good (1994) explained that diseases were classified, diagnosed and treated according to various cultural medical systems (as cited in Baer et al., 2003), in this research, HIV positive mothers diagnosed their infant diseases according to their local infant disease knowledge with the help of other senior mothers who had delivered and cared many children in the family or in neighborhoods. In this

study, there were “medical pluralisms” related with infant feeding issues. There were local popular sector of health systems which emphasized on determination of local infant diseases: diagnosis, treatment and prevention, and foods as preventive drugs for infant health, development and diseases, finally resulting in feeding various foods to the infant. And professional sector of modern biomedical systems emphasized encouraging HIV positive mothers to practice exclusive breastfeeding or exclusive formula feeding to prevent HIV transmission to the HIV exposed baby born to HIV positive mothers and to provide “HIV free survival” to the HIV exposed baby by minimizing mortality and morbidity. Therefore, HIV positive mothers were under the influences of both medical systems because they were receiving treatment from western medical practitioners as well as they were living in their own cultural medical system of society and family.

Moreover, Baer et al. (2003); Hardon et al. (2001) mentioned Chrisman and Kleinman’s health system: popular sector: self medication, self care, family and social network’s various therapies from social counseling to self use of antibiotics, folk sector: herbalists, bonesetters, etc, and professional sector: biomedicine professionals as well as other professionalized heterodox medical systems such as Ayurvedic and Unani medicine professional sectors. And it was claimed that medical system was composed of traditional values, norms and values of treatment satisfaction and assessment of treatment given by practitioners, local understanding of disease and illness causation, social role, status, interactions within the context of power relationship and medical system was altering with the flow of context and situation changes.

And also in this research, popular sector of health system and professional sector of biomedicine health system were influencing HIV positive mothers in the issue of under six months infant feeding practices. Actually, these two health systems were acting as attractive forces to HIV positive mothers in the context of cultural norms and practices, policy and economic matters. When policy and economic determinants did not create favorable conditions to HIV positive mothers to practice infant feeding patterns according to biomedical advices, biomedical health system could not apply strong attractive force to HIV positive mothers, then, HIV positive mothers were pulled to popular sector of health system which was supported by

existing cultural structure, norms and practices with the support of cultural seniority concepts and lay referral systems. There was nothing found to discuss about folk sector of health system in the issue of infant feeding practices among HIV positive mothers although there were some cultural practices to offer foods or things to the cultural spirits if the baby felt severe illness, according to the researcher's life experience. Nothing was found in interviewed HIV positive mothers concerning with feeding foods related with folk sector.

Moreover, Hardon et al. (2001) argued that health care system can be classified according to "various levels of organization. Starting from the household. . . organize their ideas and activities to maintain or restore health, one may move to higher levels such as the local community, the district, the region, the national level and finally the international level" (p. 27). But, in this study, family and community level of health care system were homogenous as the same level with cultural seniority power relationship and lay referral system in socio-cultural context for local infant diseases: diagnosis, treatment and prevention, and for local infant feeding practices: infant health, growth and feeding, and feeding food for prevention of some local infant diseases (e.g. feeding *'Ta Nat Khar Myit A Nhint* for prevention of *'Ta Ngal Nar'* disease because HIV positive mothers asked and discussed with their mothers or other mothers who had delivered and cared many children in the family or community for infant health, illness, treatment, primordial and primary prevention, and infant feeding practices).

In addition, according to culture, Helman (1990) classified food as "1. Food versus non-food. 2. Sacred versus profane foods. 3. Parallel food classifications. 4. Food used as medicine, and medicine as food. 5. Social foods (which signal relationships, status, occupation, gender or group identity)" (p. 32). Food versus non food classification usually based on the cultural definition whether which was edible or not. But, all cultures did not classify food only on the basic of edible criteria; some were based on historical assumptions. Scared versus profane food classifications were usually associated with religious beliefs. But, in modern life, it is also based on assumptions of 'natural' and 'artificial'. Parallel food classifications classified foods into two groups, 'hot' and 'cold' mostly based on the traditional medical etiology of 'balance' of the body: 'hot and cold' (Helman, 1990). People diagnosed illness and

diseases on the basic of 'hot diseases' or 'cold diseases' and they balanced the disturbance state of body with the use of foods origin of 'hot and cold' to achieve 'hot and cold balance' of body as food as medicine and medicine as food (Helman, 1990; Hardon et al., 2001). According to this theory, parallel food classification was seen in the research and HIV positive mothers fed parallel foods and drinks such as *'Pyar Yay*' and *'Yay'* to the babies to cure or prevent local diseases caused by 'hot and cold' imbalance. They used so many foods and drinks such as *'Ta Nat Khar'* and *'Lat Phat Yay Gyan'* as medicine as well as preventive medicine with cultural beliefs about food relating with infant health and growth. HIV positive mothers fed *'Htamin'* to make the baby strong, develop and resist to insects' bite such as mosquito bite and ant bite.

Cultural seniority: family senior mothers' and neighbor elder mothers' suggestions

Concerning seniority concepts in cultural context, Arnault (2004) argued in his work that in Japanese culture, the seniors had traditional responsibilities to lead, to guide and to look after their juniors in the family of Japanese culture. Moreover, Maloney, Aziz, and Sarker (1981); Rob and Cernada (1992) claimed in Bangladesh family, the patriarchy family head had the responsibilities and power over his family members while his wife was responsible especially for female members of the family such as daughters and daughters in law.

According to research findings, all families in this study were patriarchy family type. Man who could earn the most money or could provide the most support or was the eldest among family members had the power and responsibilities over all family members even he could not earn money. If he was the eldest male in the family, others assumed and respected him as the head of the family according to Myanmar culture. Except one father of the one mother among 29 HIV positive mothers, who suggested and encouraged his daughter to feed *'San Mote'*, other fathers or husbands of HIV positive mothers did not force HIV positive mothers as to infant feeding practices although they discussed and said about infant feeding with their daughters or their wives, they gave full decision making authority and responsibilities to HIV positive mothers. But, the eldest or the most senior mothers such as mothers or mothers in law or aunties or sisters in family shared and suggested their cultural beliefs and practices on local infant diseases: diagnosis, treatment and prevention,

foods as preventive drugs and curative drugs for infant illnesses, cultural feeding foods for infant health and development, and perception on HIV's positive mothers chosen and current practicing infant feeding practices.

The cultural beliefs and practices relating infant feeding practices were being diffused within community and family level with cultural seniority's knowledge sharing and learning practices and, lay referral system and practices. When HIV positive mothers saw or they were suggested by other senior mothers about infant feeding practices, they discussed and asked mothers, who had cared many children, about those feeding practices. They learned from well experienced mothers in the family or neighborhood. They assessed and evaluated their senior mother's advices with the senior mothers' children's health and development status. Then, they thought, analyzed and perceived themselves whether to practice those kinds of mixed feeding or not. HIV positive mothers discussed and requested advices from their mothers or well experienced mothers around the house. Pan Pan* said, *"Whenever I want to feed some foods to my baby, I ask my mother because she delivered, fed and cared me not to suffer any illnesses. So, I believe her and I follow what my mother suggests."* And Te Te* said, *"I consider and think myself about the suggested infant feeding practices suggested by senior mothers around me. Considering does not mean not believing their advices. I believe them because they have many experiences. But, I think myself also for my small baby relating with his health and sufferings."*

According to research findings, it can be said that cultural seniority concept perceived by HIV positive mothers, and professional-client communication and relationship between HIV positive mothers and medical professionals were acting as two attractive forces upon HIV positive mothers. When professional-client relationship could act weak attractive forces due to policy and economic determinants such as medical professional's work burden and HIV positive mothers' paid job, maternity leave and economic status, HIV positive mothers were influenced more by existing strong cultural seniority concept to practice cultural mixed feeding patterns to their under six months babies. Cultural seniority concept related to infant feeding practices among HIV positive mothers interviewed in the research did not go along with power as structural violence for 23 mixed feeding

practicing mothers, it was composed of those HIV positive mothers' perception about experiences related to child caring among those senior mothers, also as one kind of family and community influence.

Moreover, there were two mothers who had to introduce cultural mixed feeding although they thought that their babies were too young to introduce other kinds of food. One of mothers was under the influence of his father who was short-tempered. Although her mother was calm and did not force her to feed other foods to her baby, her father forced her to feed *'San Mhote'* to the baby. And she said, *"If I did not feed my baby according to my father's suggestion, he would be angry me, scold me and kick me out of his house."*

Moreover, one mother said, *"since my delivery, my parents in law love my baby so much, they have cared and fed my baby day time, they take my baby since early morning and send him back to me only at night. I request them not to feed any other foods to my baby, they all know my HIV status, but, they feed my baby. They said me that they delivered and cared their son [her husband], it was nothing happened to their son. I cannot say them not to feed other foods to my baby."* So, although this happened in only two mothers out of 29 HIV positive mothers, it should be considered in mind because it might be concerned with structural violence resulted from cultural patriarchy type family.

In additional to Moland's (2004) argument: not following and not practicing medical professional's recommendation for infant feeding was not resistance to medicalization concerning with western medicine advice, but it is due to power relation and problem being afraid of losing social status and afraid of sanction by the family and society due to individual women's lack of agency and power, HIV positive mothers' mixed infant feeding was also due to unsatisfied feeling of HIV positive mothers, their family members and community on exclusive feeding practices to the babies, suggested by medical professionals, because of their local explanatory model of local infant diseases: diagnosis, treatment and prevention, and local foods for infant health and growth for primordial and primary preventive purposes.

5.2.2 Policy and structural conflict: HIV positive mothers' infant feeding practices

Maternity leave and paternity leave: government staff and private business staff, and Lack of facilities in working environment for infant feeding

Biomedical guideline for infant feeding practices among HIV positive mothers in Myanmar was counseling about exclusive infant feeding practices: exclusive breastfeeding or exclusive formula feeding for first six months of age of infant considering infant's "HIV free survival" by reducing HIV transmission to the infant through infant feeding practices as well as by reducing infant mortality and morbidity.

Exclusive infant feeding practices means feeding infant only with medical professional's prescribed suitable formula milk only or mother's breast milk only up to six months of age of infant, and no additional foods or drinks including water are needed to feed. But, HIV is a disease syndrome that produces stigma and discrimination as well as self stigma and self discrimination. So, HIV positive mothers do not disclose their HIV status to everyone even to family members. They usually disclose their HIV status to their spouse or family members who they seem supportive and helpful to them.

At the same time, among HIV positive mothers, interviewed in this research, one mother who worked as a government staff was provided only with paid 42 days of maternity leave before and after delivery according to Division XVII-Maternity Leave, Rule 138 (1960). And, two mothers who worked as private business staffs were provided only with unpaid leave after delivery. They had to return their work to earn money or return to work according to Myanmar Fundamental Rules' Rule 138 of maternity leave [only for government staff mother]. And, other two mothers who worked as private business staffs were not provided with paid maternity leave although government's staff was provided. While they returned work, mothers had to request their family members to care and feed their babies because they could not take their babies to their working environment and there was no facility to prepare and feed their babies at their work. At that time, babies were introduced and fed with other foods by family members. So, it was found that Myanmar HIV and infant

feeding guideline and counseling's suggestions and recommendations were difficult to practice for HIV positive mothers who worked as government staff or private business staffs because of Myanmar Fundamental Rule's Rule 138 for maternity leave. And moreover, there was no opportunity for HIV positive mother's husband to be provided with paternity leave to help their wives in caring and feeding the baby. And according to information provided by HIV positive mothers during interview, it was also found that there was no facility for their infant feeding at their working environment and it was not suitable to take and feed their baby.

Local feeling on formula milk feeding practices and National Breastfeeding policy

Moreover, another point to discuss is about national policy on exclusive breastfeeding promotion to general population of mother. But, on the other hand, HIV positive mothers perceived that medical doctors who counseled them about infant feeding practices preferred exclusive formula milk feeding for them to feed their HIV exposed baby to prevent mother to child HIV transmission through breastfeeding with mixed feeding practices. And most of HIV positive mothers were afraid of HIV transmission to their baby due to breastfeeding. They chose to practice exclusive formula feeding to their baby. On the other hand, the community perceived that breastfeeding was the best for the baby reinforced by both cultural practices and beliefs, and some health knowledge gained from health educations on television or from health centers. So, if HIV positive mothers practiced exclusive formula feeding to the baby, the community and family members who did not know mother's HIV status, felt strange to HIV positive mothers. They wanted to know why HIV positive mothers fed formula milk to their babies in the era of 'Breastfeeding is the best' education era. Then, HIV positive mothers had to convince them about formula feeding practice to the baby by giving the reasons that HIV positive mothers were suffering tuberculosis or hepatitis or blood compatibility with children or low production of breast milk, etc. So, national promotion of exclusive breastfeeding to general population of mothers made HIV positive mothers difficult to practice formula milk feeding to the infant according to suggestions by medical professionals.

In the same way, limited health knowledge of the community and family members on "Breastfeeding is the best" policy, not knowing about

exclusive practice up to six months of age of infant, also made the HIV positive mothers, who chose to practice exclusive breastfeeding to their infant, inconvenient to breastfeed their baby exclusively.

5.2.3 Limitations and unexpected events encountered during field research conduction

Although this research was not an evaluative research upon either project's performance or medical professionals' performance on HIV and infant feeding issue, this research recruited 28 HIV positive mothers who had received AN care and infant feeding counseling services at private hospitals or public hospitals, out of total 29 HIV positive mothers while only one mother delivered at home with trained birth attendant. Moreover, the researcher's interviews entirely focused on in-depth interviews with HIV positive mothers, peer counselors and medical professionals and, focused on focus group interviewing with HIV positive mothers as well as participant observation on HIV positive mothers' infant feeding practices during in-depth interviews and focus group discussions. So, honestly, this research's scope of validity depended also upon HIV positive mothers' memory recall and perception about their infant feeding practices. Formal style of ethnographic interviewing such as living with informants together and feeding the baby like HIV positive mothers, interviewing with community members and family members could not be performed because of gender difference and closure of HIV status to family members and community members by HIV positive mothers due to being afraid of stigma and discrimination. So, these limitations can make this research probably not achieve some in depth information on infant feeding practices, their beliefs and foods among HIV positive mothers.

Moreover, concerning participant observation on infant feeding counseling processes, there were neither CBOs nor INGOs which were implementing home visit care, support and counseling to HIV positive mothers concerning with under six months infant feeding practices. Health education sessions, for pregnancy care, delivery care, postpartum care and infant care after delivery, provided by CBOs and INGOs were intended to general population of mothers. So, the researcher had the opportunity to participate as an active participant observer only in health education sessions for general pregnant mothers two times. And, the public hospital was taking

most of all responsibilities and duties for infant feeding counseling to HIV positive mothers. Finally, there was no opportunity for the researcher to participate as an active participant observer about infant feeding counseling processes and about medical professional- client relationship during health care service provision related with infant feeding practices for HIV positive mothers. Infant feeding counseling processes and medical professional-client relationship were analyzed and evaluated by using only data achieved from in-depth interviewing with medical professionals, peer counselors and HIV positive mothers. So, this can make the research conclude at the weaker degree relating with medical professional-client relationship during health care service provision.

And, this research was a cross sectional research. So, it could not follow the full six months time interval to interview HIV positive mothers concerning their infant feeding practices. It can only show about age of infant when the infant was introduced with cultural mixed feeding practices at a cross sectional certain point of research interviewing. And the research proposal faced one error about participant observation designing on observing HIV positive mothers' houses' nearby grocery stores for HIV positive mothers' buying foods to feed their babies. The researcher had not considered about HIV disclosure by the mothers to their community and neighbors. So, that point showed that the researcher could not achieve any information regarding HIV positive mothers' infant feeding practices by observing and interviewing with grocery stores' owners and sale staffs. So, the researcher omitted that participant observation after four observations at grocery stores nearby HIV positive mothers' houses.

But, this research recruited about half of HIV positive mothers among all HIV positive mothers who delivered at one of public hospital in Mandalay within six months of duration because it was known that about 120-150 HIV positive mothers usually delivered at that hospital a year, by in-depth interviewing with three information rich key informants. So, beyond the capacity of qualitative research, this research can claim more about infant feeding practices and their determinants among HIV positive mothers than quantitative research because of in-depth interviewing method with 'cultural relativism' lens.

5.3 Recommendation

5.3.1 Recommendation for health care services

This research's findings recommend health policy makers and State policy makers to plan, construct and reform Myanmar health care system: to increase number of doctors, or nurses, or to recruit counseling psychologists for infant feeding counseling services for HIV positive mothers in order that HIV positive mothers can discuss and ask medical professionals back freely and friendly, without worrying and considering about the mood of medical professionals, resulted from over workload of health care administration system. And it is needed to provide capacity building training to health care providers concerning with counseling psychology for HIV positive mothers' infant feeding practices. Work demand on health care professionals determined by State health policy should not be overloaded in order that health professionals can provide appropriate time for effective and efficient infant feeding counseling for HIV positive mothers.

Moreover, State's health policy and strategies on HIV and Infant Feeding practices should be implemented and adjusted according to Myanmar Fundamental Rules' Rule 138 of maternity leave or that Rule 138 of maternity leave should be adjusted according to State's health policy and strategies on HIV and Infant Feeding practices to achieve more impressive outcomes, e.g. providing maternity leave of at least three months after delivery with paid salary for both government staffs and private business staffs with social security scheme, and after three months of maternity leave, when the mothers return to work, providing facilities such as small baby day care centers equipped with nanny nurse who is trained for infant caring and feeding of exclusive formula feeding or providing facilities at work environment of government service and private business in order that the mother can breastfeed her baby exclusively or can feed formula milk exclusively with the support of nanny nurse for baby day care. And also, State policy makers should consider about paternity leave for at least one week or two weeks after delivery in order that the husbands can support and encourage the HIV positive mothers for practicing infant feeding patterns according to health care medical professionals' recommendation.

Concerning with ‘Breast milk is the best’ policy, health policy makers and health institutions should extend the magnitude of health education with clear health education messages that breastfeeding must be exclusive for six months of age of infant because community assumes that breast milk is the best for the baby like medical professional’s health education, but, they do not know about breastfeeding must be exclusively practiced for six months of age of infant. Another one important point is related with promoting breastfeeding in general population of mothers with mass media health education strategies on one side and infant feeding counseling skills for HIV and infant feeding issue in clinical and hospital setting, making HIV positive mothers more aware about more risks of HIV transmission to the baby due to breastfeeding and making them less aware about high mortality and morbidity of infant due to formula milk feeding. These two contradicting strategies are making HIV positive mothers confused to practice exclusive breastfeeding or exclusive formula feeding within the understanding of ‘Breast milk is the best’ policy without knowing about exclusive feeding practice up to six months of age of infant by the community. So, it is needed to promote exclusive breastfeeding in both populations of HIV negative or unknown mothers as well as in HIV positive mothers or, both exclusive breastfeeding and exclusive formula feeding should be promoted in both populations of HIV negative or unknown mothers as well as in HIV positive mothers, providing with two ways interactive discussion and counseling by providing adequate health knowledge on positive and negative effects of exclusive breastfeeding and exclusive formula feeding. That means, instead of promoting ‘Breast milk is the best’ policy, it should be promoting ‘Exclusive infant feeding up to six months of age of infant is the best’ policy in both HIV negative and positive mothers populations. And medical professionals entirely need to provide more precise health education about exclusive breastfeeding and exclusive formula feeding and they need to provide decision making power for infant feeding choices to mothers, with two ways active counseling.

To reduce medical professional’s higher power relationship self-perceived by HIV positive mothers, medical professionals should reduce their etic point of view [outsider point of view] on HIV positive mothers’ cultural mixed feeding practices and wishes to feed their infants. Infant feeding counseling sessions must be two ways interactive discussion about advantages and disadvantages of exclusive breastfeeding,

exclusive formula feeding and cultural mixed feeding practices. And finally, medical professionals need to provide decision making power to HIV positive mothers entirely concerning with infant feeding practices. Blaming the patients and not willingness to listen and discuss about HIV positive mothers' wishes and questions concerning with their infant feeding practices, by medical professionals should be changed and thus, HIV positive mothers will discuss and ask more friendly with medical professionals about their infant feeding desires, practices and beliefs instead of discussing and asking their senior mothers in the family or around their house.

To reduce stigma and discrimination in the community and in the family, although most of all HIV positive mothers expressed their self stigma and self discrimination upon attitude of community and family concerning with HIV/AIDS, health education about HIV/ AIDS and mother to child HIV transmission and prevention should be promoted to reduce fearful feeling to HIV/AIDS by community and family members.

To involve in infant feeding practices by family members according to medical professionals' suggestions, infant feeding counseling must be family oriented participation approach in which HIV positive mother, her husband and other influential family members should attend and discuss one another openly and friendly with medical professionals or counseling psychologists.

Another important recommendation is helping HIV positive mothers to have more time staying at home and to earn money at home up to six months of age of infant in order to create favorable economic condition and to provide more time at home to feed their baby with medical professionals' suggested exclusive infant feeding practices. So, it is needed to provide vocational trainings, and to lend loan to HIV positive mothers to promote home business by HIV positive mothers during six months after delivery.

The final suggestion is that it is needed to establish CBOs or INGOs or government's hospital project to provide house based care and support for HIV positive mothers concerning with infant feeding practices at the same time with hospital based family oriented participation approached two ways interactive infant feeding counseling with medical professionals or counseling psychologists.

5.3.2 Recommendation for further studies

This research is an early exploratory in-depth qualitative research with limitations to conduct as an evaluative research on 'HIV and Infant Feeding' project. So, this research recommends conducting further evaluative researches on medical professional-client relationship issue since AN care service to the six months of age of infant. And it is also recommended to conduct health care service and system evaluation and analysis research concerned with infant feeding practices among HIV positive mothers by using public policy and administration approach and public health care approach, also to conduct sociology approached quantitative research to explore diverse views on determinants of HIV and infant feeding practices, and finally to conduct health psychology oriented research based on Lewin's field theory, health seeking behavior model, attribution theory, perception, motivation, locus of control, self efficacy and leaning theories, and personality theory, etc.

Moreover, it was accidentally found that although most of all HIV positive mothers practiced cultural mixed feeding patterns to feed their under six months babies, most of their babies rarely suffered serious illnesses and diseases. But, 3 out of 30 infants born to 29 HIV positive mothers were hospitalized for serious diarrhea. So, it is strongly recommended to conduct clinical randomized control studies and clinical epidemiology researches concerning under six months infant feeding practices among HIV positive mothers in Myanmar because there were very limited number of clinical studies with limited numbers of HIV positive mother sample size in Myanmar.

Finally, this research would like to recommend medical researchers to conduct more clinical researches on mixed infant feeding practices in which HIV positive mothers practice formula milk feeding and other foods feeding because some illnesses and diseases of the infants mixed fed by their HIV positive mothers, who chose to practice EFF might be associated with sanitation of foods and drinks that were fed to the baby, instead of feeding those kinds of foods hygienically while mixed infant feeding practices together with HIV positive mothers' breastfeeding is accepted absolutely with "Gut Theory" for more risks of HIV transmission to the HIV exposed baby born to HIV positive mothers.

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APPENDICES

APPENDIX A
TABLE CAPTION

1. Table 1 2010 WHO Principles and Recommendations on HIV and Infant Feeding

2. Table 2 Nutritional Status, Breastfeeding and Child Mortality percentage in Myanmar (2009-2010)

Table 1 2010 WHO Principles and Recommendations on HIV and Infant Feeding

Balancing HIV prevention with protection from other causes of child mortality Infant feeding practices recommended to mothers known to be HIV-infected should support the greatest likelihood of HIV-free survival of their children and not harm the health of mothers. To achieve this, prioritization of prevention of HIV transmission needs to be balanced with meeting the nutritional requirements and protection of infants against non-HIV morbidity and mortality.
Integrating HIV interventions into maternal and child health services National authorities should aim to integrate HIV testing, care and treatment interventions for all women into maternal and child health services. Such interventions should include access to CD4 count testing and appropriate antiretroviral therapy or prophylaxis for the woman's health and to prevent mother-to-child transmission of HIV.
Setting national or sub-national recommendations for infant feeding in the context of HIV National or sub-national health authorities should decide whether health services will principally counsel and support mothers known to be HIV-infected to either: • breastfeed and receive ARV interventions, **or,** • avoid all breastfeeding, as the strategy that will most likely give infants the greatest chance of HIV-free survival.

This decision should be based on international recommendations and consideration of the: – socio-economic and cultural contexts of the populations served by maternal and child health services; – availability and quality of health services; – local epidemiology including HIV prevalence among pregnant women; and, – main causes of maternal and child under- nutrition and infant and child mortality.
When antiretroviral drugs are not (immediately) available, breastfeeding may still provide infants born to HIV-infected mothers with a greater chance of HIV-free survival Every effort should be made to accelerate access to ARVs for both maternal health and also prevention of HIV transmission to infants. While ARV interventions are being scaled up, national authorities should not be deterred from recommending that HIV-infected mothers breastfeed as the most appropriate infant feeding practice in their setting. *Even when ARVs are not available, mothers should be counseled to exclusively breastfeed in the first six months of life and continue breastfeeding thereafter unless environmental and social circumstances are safe for, and supportive of, replacement feeding*. In circumstances where ARVs are unlikely to be available, such as acute emergencies, breastfeeding of HIV-exposed infants is also recommended to increase survival.
Informing mothers known to be HIV-infected about infant feeding alternatives Pregnant women and mothers known to be HIV-infected should be informed of the infant feeding practice recommended by the national or sub-national authority to improve HIV-free survival of HIV-exposed infants and the health of HIV-infected mothers, and informed that there are alternatives that mothers might wish to adopt.
Providing services to specifically support mothers to appropriately feed their infants Skilled counseling and support in appropriate infant feeding practices and ARV

interventions to promote HIV-free survival of infants should be available to all pregnant women and mothers.
Avoiding harm to infant feeding practices in the general population Counseling and support to mothers known to be HIV-infected, and health messaging to the general population, should be carefully delivered so as not to undermine optimal breastfeeding practices among the general population.
Advising mothers who are HIV uninfected or whose HIV status is unknown ***Mothers who are known to be HIV uninfected or whose HIV status is unknown*** should be counseled to exclusively breastfeed their infants for the first six months of life and then introduce complementary foods while continuing breastfeeding for 24 months or beyond. ***Mothers whose status is unknown*** should be offered HIV testing. ***Mothers who are HIV uninfected*** should be counseled about ways to prevent HIV infection and about the services that are available such as family planning to help them to remain uninfected.
Investing in improvements in infant feeding practices in the context of HIV Governments, other stakeholders and donors should greatly increase their commitment and resources for implementation of the Global strategy for infant and young child feeding, the United Nations HIV and infant feeding framework for priority action and the Global scale-up of the prevention of mother-to-child transmission of HIV in order to effectively prevent postnatal HIV infections, improve HIV-free survival and achieve relevant United Nations General Assembly Special Session goals.
1. Ensuring mothers receive the care they need *Mothers known to be HIV-infected* should be provided with lifelong antiretroviral therapy or antiretroviral prophylaxis interventions to reduce HIV transmission through breastfeeding according to WHO recommendations.
In settings where national authorities have decided that the maternal and child health services will principally promote and support breastfeeding and antiretroviral interventions as the strategy that will most likely give infants born to mothers known to be HIV-infected the greatest chance of HIV-free

survival.
2. Which breastfeeding practices and for how long *Mothers known to be HIV-infected (and whose infants are HIV uninfected or of unknown HIV status)* should exclusively breastfeed their infants for the first 6 months of life, introducing appropriate complementary foods thereafter, and continue breastfeeding for the first 12 months of life. Breastfeeding should then only stop once a nutritionally adequate and safe diet without breast milk can be provided.
3. When mothers decide to stop breastfeeding *Mothers known to be HIV-infected* who decide to stop breastfeeding at any time should stop gradually within one month. Mothers or infants who have been receiving ARV prophylaxis should continue prophylaxis for one week after breastfeeding is fully stopped. Stopping breastfeeding abruptly is not advisable
4. What to feed infants when mothers stop breastfeeding *When mothers known to be HIV-infected* decide to stop breastfeeding at any time, infants should be provided with safe and adequate replacement feeds to enable normal growth and development. Alternatives to breastfeeding include: • *For infants less than six months of age:* – Commercial infant formula milk as long as home conditions outlined in Recommendation 5 below are fulfilled, – Expressed, heat-treated breast milk (see Recommendation 6 below), Home-modified animal milk is not recommended as a replacement food in the first six months of life. • *For children over six months of age:* – Commercial infant formula milk as long as home conditions outlined in Recommendation #5 are fulfilled, – Animal milk (boiled for infants under 12 months), as part of a diet providing adequate micronutrient intake. Meals, including milk- only feeds, other foods and combination of milk feeds and other foods, should be provided four or five

times per day. All children need complementary foods from six months of age.
5. Conditions needed to safely formula feed *Mothers known to be HIV-infected* should only give commercial infant formula milk as a replacement feed to their HIV-uninfected infants or infants who are of unknown HIV status, when specific conditions are met: a. safe water and sanitation are assured at the household level and in the community, and, b. the mother, or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant; and, c. the mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition; and d. the mother or caregiver can, in the first six months, exclusively give infant formula milk; and e. the family is supportive of this practice; and f. the mother or caregiver can access health care that offers comprehensive child health services. *These descriptions are intended to give simpler and more explicit meaning to the concepts represented by AFASS (acceptable, feasible, affordable, sustainable and safe).*
6. Heat-treated, expressed breast milk *Mothers known to be HIV-infected* may consider expressing and heat-treating breast milk as *an interim feeding strategy*: • In special circumstances such as when the infant is born with low birth weight or is otherwise ill in the neonatal period and unable to breastfeed; or • When the mother is unwell and temporarily unable to breastfeed or has a temporary breast health problem such as mastitis; or • To assist mothers to stop breastfeeding; or

• If antiretroviral drugs are temporarily not available.
7. When the infant is HIV-infected *If infants and young children are known to be HIV-infected*, mothers are strongly encouraged to exclusively breastfeed for the first six months of life and continue breastfeeding as per the recommendations for the general population, that is up to two years or beyond.

Ref/ Source: WHO 2010 guidelines on HIV and Infant Feeding practice

Table 2 Nutritional Status, Breastfeeding and Child Mortality percentage in Myanmar (2009-2010)

Summary Table of Findings
Multiple Indicator Cluster Surveys (MICS) and Millennium Development Goals (MDG) Indicators, Myanmar, 2009-2010

Topic	MICS Indicator Number	MDG Indicator Number	Indicator	Value
NUTRITION				
Nutritional status	6	4	Underweight prevalence	
			Moderate	22.6 per cent
			Severe	5.6 per cent
	7		Stunting prevalence	
			Moderate	35.1 per cent
			Severe	12.7 per cent
	8		Wasting prevalence	
			Moderate	7.9 per cent
			Severe	2.1 per cent
Breastfeeding	45		Timely initiation of breastfeeding	75.8 per cent
	15		Exclusive breastfeeding rate	23.6 per cent
	16		Continued breastfeeding rate	
			at 12-15 months	91.0 per cent
			at 20-23 months	65.4 per cent
	17		Timely complementary feeding rate	80.9 per cent
	18		Frequency of complementary feeding	56.5 per cent
	19		Adequately fed infants	41.0 per cent
CHILD MORTALITY				
Child mortality	1	13	Under-five mortality rate	46.1 per thousand
	2	14	Infant mortality rate	37.5 per thousand

Ref: Summary table of findings: Multiple indicator cluster surveys (MICS) and Millennium Development Goals (MDG) indicators, Myanmar (2009-2010). Ref/ Source: MoNPED and MoH: MICS (2011).

APPENDIX B
FIGURE CAPTION

1. Figure 1 HIV new infections by transmission route- Myanmar (2010-2020)
2. Figure 2 Estimated numbers of deaths by cause in children 0-27 days, global and Myanmar percentage graph (2010)
3. Figure 3 Estimated numbers of deaths by cause in children 1 month to 59 months, global and Myanmar percentage graph (2010)

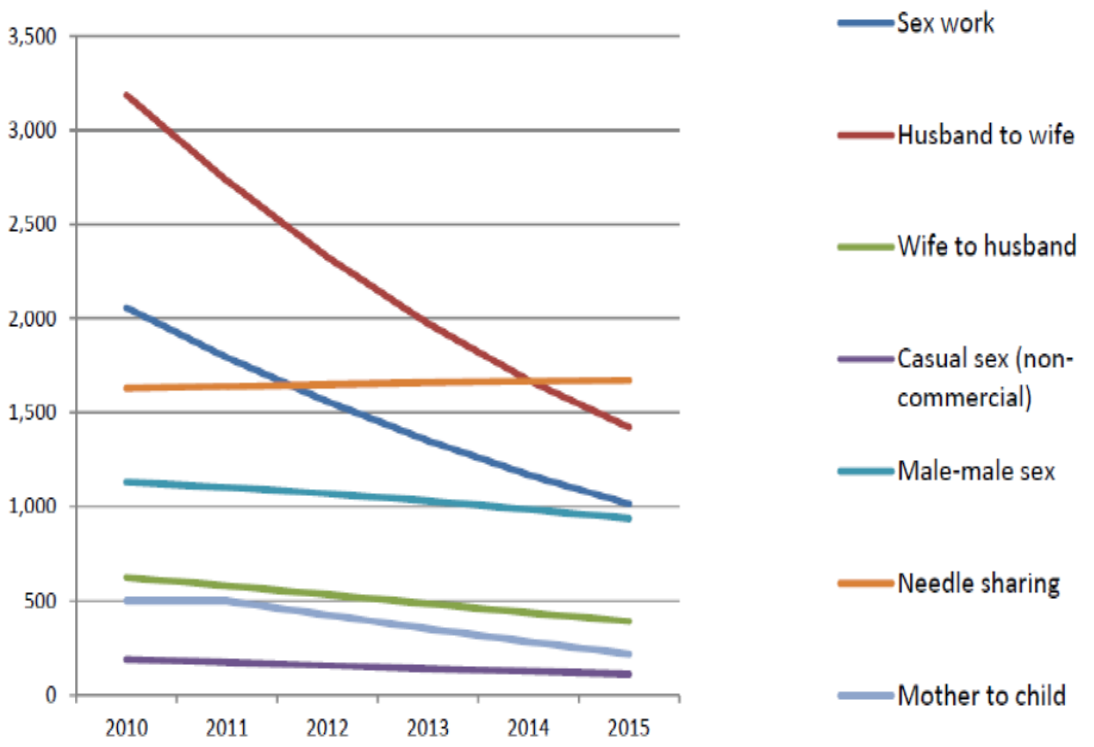

Figure 1 HIV new infections by transmission route- Myanmar (2010-2020)

Reference: National AIDS Programme (2012).Global AIDS Response Progress Report, Myanmar (2012). Source: HIV Estimates and Projections Myanmar (2010-2015)

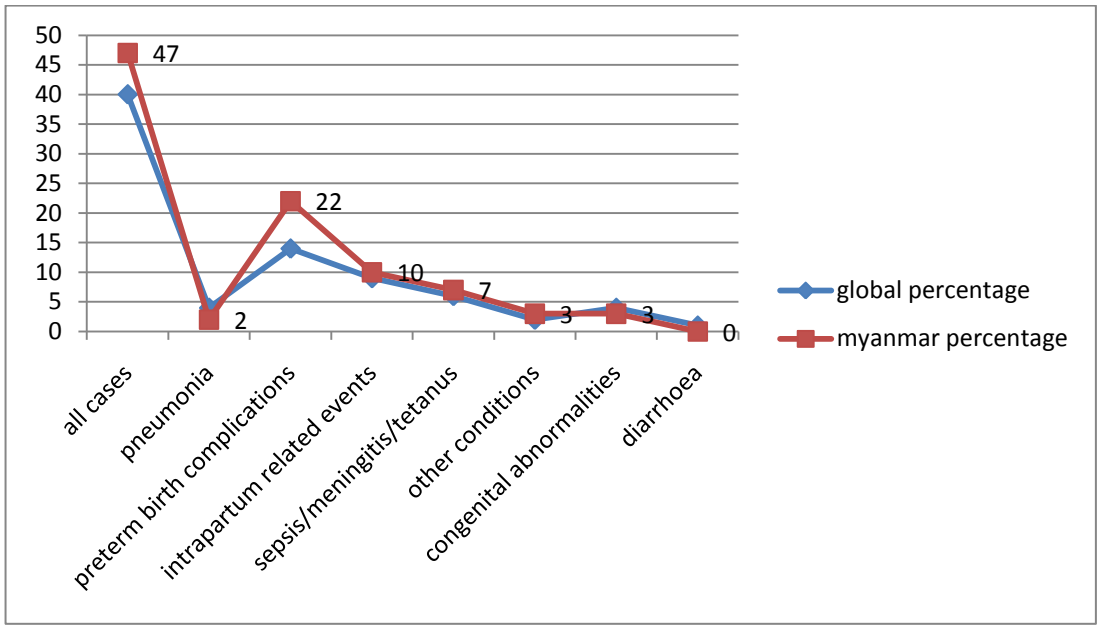

Figure 2 Estimated numbers of deaths by cause in children 0-27 days, global and Myanmar percentage graph (2010)

Source of data: WHO/CHERG (2011)

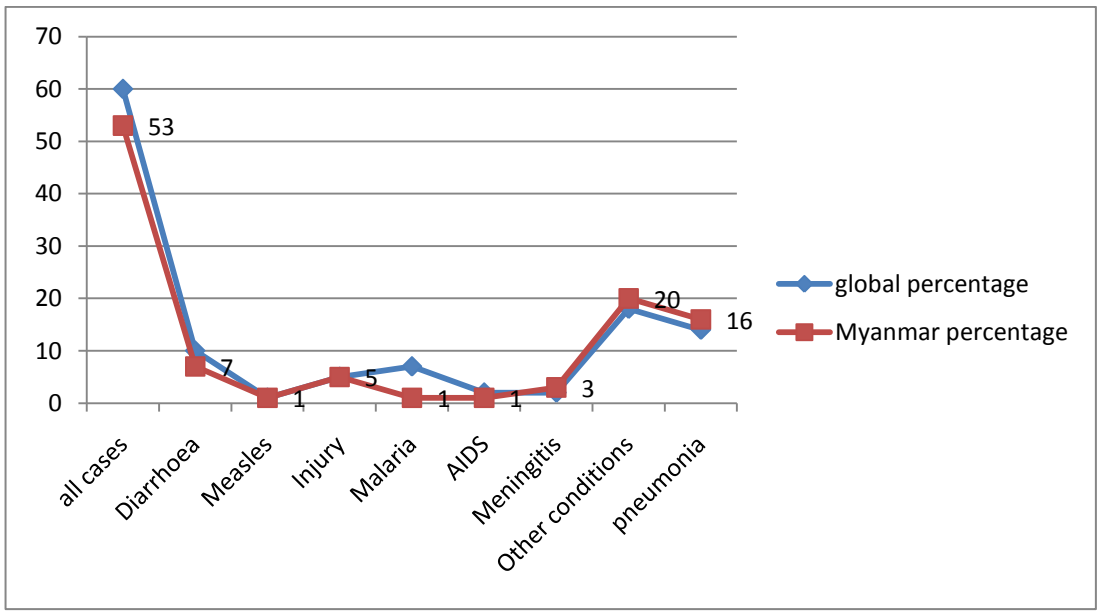

Figure 3 Estimated numbers of deaths by cause in children 1 month to 59 months, global and Myanmar percentage graph (2010)

Source of data: WHO/CHERG (2011)

APPENDIX C
GUIDELINES AND QUESTIONS/TOPICS

1. Guidelines and questions/Topics for in depth interviewing
2. Guidelines and questions/Topics for focus group discussion
3. Guidelines and questions/Topics for participant observation

1. Guidelines and questions/Topics for in depth interviewing

I. Key informant in depth interviewing questions:

With HIV positive mothers' infant feeding peer counselors, nurse and medical doctors with above mentioned criteria:

To achieve demographic data:

- Name: I am…, Good to see you and thanks for your participation in my research and May I know your name?
- Age: May I know your age if you do not mind to mention?
- Sex: According to physical appearance, voice and body movements.
- Occupation or rank: May I know your professional job and position?

Semi-structured in depth interview questions:

1) May I know recommendations for HIV positive mothers' infant feeding practice in Myanmar?

2) What do you think about those recommendations for HIV positive mothers' infant feeding practices in real field? (Acceptable, feasible, affordable, sustainable and safe (AFASS)?

3) How many percentages of HIV positive mothers do you think can follow and practices the national HIV and infant feeding recommendation and guidelines?

4) How many kinds of HIV positive mothers' infant feeding patterns have you experienced or heard?

5) How do you think why those infant feeding patterns are being practiced by HIV positive mothers?

6) Do you know and how do you think about HIV positive mothers' local concepts and explanation about exclusive breast feeding and breast milk?

7) Do you know and how do you think about HIV positive mothers' local concepts and explanation about exclusive replacement feeding, formula milk, infant feeding substitutes?

8) Do you know and how do you think about HIV positive mothers' local concepts and explanation about mixed feeding practices?

9) What socio economic conditions are forcing HIV positive mothers to do so? (E.g. paid job, household chores, maternal leave and paternal leave, poverty, stigma and discrimination, families', friends' and society's pressure and support, mother status in the family and society, gender and seniority, etc.)

10) What cultural beliefs and practices are forcing HIV positive mothers to do so? (E.g. cultural concepts about motherhood, mother role in the family and society, traditional food and child health, growth and development, etc.)

11) Have you heard about foods used and fed to the infants as preventive drugs for mother to child HIV transmission prevention, local childhood illness prevention and/or to promote infant health, growth and development?

12) If you have heard, please, mention foods and their related local concepts of disease prevention?

13) Have you heard about social foods for newborn infants among HIV positive mothers? If yes, can you mention those practices?

14) What do you think about impacts of formula milk or infant feeding substitute advertisement, trading and easy availability?

15) What do you think which support or strategies can help HIV positive mothers to follow and practice national HIV and infant feeding recommendation and guidelines more easily?

II. Informants', HIV positive mothers', in depth interviewing questions:

With HIV positive mothers with above mentioned criteria:

To achieve demographic data:

- Name: I am …Nice to meet you, and may I know your name?
- Age: Sister, you look young and may I know how old you are?
- Ethnic group: May I know your ethnicity?
- Marital status: Where is your husband? Go to work? (to know the marital status: widow, married or divorced or just living with partners)
- To know the age of children relating with infant feeding practices: according to selection criteria, the informants will have at least one child age of up to six months of age: your kid is so cute, and how old is he/she? Any other children? How old are they?
- Religion: Which religion do you pray?
- Education level: What standard have you attended? High school level? Degree holder? Can you read and write?
- Job: are you doing household chores only? Any other jobs? Which kind of jobs? It is convenient for your infant feeding and care?
- Economic status: the researcher will see the status of living place of informants or physical appearance of informants because some are sensitive to tell income. If it is convenient to ask, is your family income just enough for living and eating? Can you save money? Who is the most responsible person for family income?

Semi-structured in depth interview questions:

1) What are your medical doctor's or infant feeding counselor's or peer counselors' explanation and advices for your infant feeding practices?

- They recommend only breast milk or formula milk or some other foods? Can you mention and explain details?

2) Are those advices and explanation are clear and can you freely make your infant feeding choices?

- Can you understand all explanations and advices?
- Did they force you to obey what they recommend? Or did you decide infant feeding freely?
- They are friendly and supportive?

3) What do you think about those recommendations for your infant feeding in real practice? (Acceptable, feasible, affordable, sustainable and safe (AFASS)?

- Culturally acceptable and feasible?
- Socially acceptable and feasible?
- Economically affordable? Are you ok to invest your time for those recommendations while earning money with outside jobs and/or doing house chores?

4) Can you mention your infant feeding practices to your infant?

- Breast milk only? Formula milk only or substitute only? Any other foods? How you feed? Now, your baby seems hungry, would you like to feed him/her? If you want to feed, it is ok! And please feed the child! (will observe with observation guidelines)

5) Can you mention why you are practicing those infant feeding patterns?

- What socio economic conditions are forcing you to do so? (E.g.
- Paid job: are you ok with your job to care and feed the baby?
- Household chores: how about household chores and your infant feeding?
- Maternity leave and paternity leave: are you ok with your leave to look after the baby after delivery?

- Poverty: If you do not work and earn money, you can feed the baby more and take care more time, but it is ok for your living and your family?
- Stigma and discrimination: what will happen or did happen to you when you disclose your health status to your family or when the neighbors know your health status? It can affect your infant feeding patterns?
- Family, society's pressure and support: Can it affect your infant feeding patterns? How? Why? Have you experienced these, can you explain more?

- What cultural beliefs and practices are forcing HIV positive mothers to do so? (E.g. cultural concepts about motherhood, mother role in the family and society, traditional food and child health, growth and development, etc.)
  - Mother status and role, and seniority in the family and society: How do you think about motherhood in your opinion relating with infant care and feeding? Can you explain about family and society opinion and concepts on this? How do you treat and are you treated concerning with seniority in the family and in your community? Etc.)

6) Have you fed your infant with foods for the infant health, growth and development?

- May I know foods that you think they are good for infants?

7) How do you think about your local causation of local childhood diseases and prevention relating to foods as preventive drugs?

- May I know local childhood diseases and illnesses?
- Local explanation about causation of those diseases and illnesses?
- How you will prevent those illnesses not to happen to your infant? Is there any preventive measure that can prevent those by feeding foods to the infants?

8) How do you think about mother to child HIV transmission and prevention relating to foods given to your infant?

- How do you think about mother to child HIV transmission and prevention?
- How you will prevent this virus not to transmit to your infant? Is there any preventive measure that can prevent virus by feeding foods to the infants?

9) Have you heard about social foods for newborn infants among HIV positive mothers? If yes, do you usually practice those patterns and how?

- Have you received or offered foods to the new born infants for various reasons such as to encourage infant's health or infant's mother?
- If yes, which kind of foods do you usually use and please explain why?

10) Can you explain your thoughts and beliefs about breast milk, exclusive breast feeding relating with your motherhood, your body, your daily life and your infant health?

- What do you think about breast milk in the context of HIV positive mother's health status and body?
- Breast milk and motherhood?
- Exclusive breast feeding and your daily life?
- Breast milk, exclusive breast feeding and your infant health?

11) Can you explain your thoughts and beliefs about animal milk, animal milk feeding relating with your motherhood, your body, your daily life and your infant health?

- What do you think about animal milk in the context of HIV positive mother's health status and body?
- Animal milk and motherhood?
- Animal milk feeding and your daily life?
- Animal milk, animal milk feeding and your infant health?

12) Can you explain your thoughts and beliefs about formula milk, exclusive replacement feeding relating with your motherhood, your body, your daily life and your infant health?

- What do you think about formula milk in the context of HIV positive mother's health status and body?
- Formula milk, exclusive replacement feeding and motherhood?
- Exclusive replacement feeding and your daily life?
- Formula milk, exclusive replacement feeding and your infant health?

13) Can you explain your thoughts and beliefs about mixed feeding relating with your motherhood, your body, your daily life and your infant health?

- Mixed feeding and motherhood?
- Mixed feeding and your daily life?
- Mixed feeding and your infant health?

14) What do you think about impacts of formula milk or infant feeding substitute advertisement, trading and easy availability on your infant feeding practices and daily life?

- Have you seen formula milk or infant feeding substitute advertisements on TV or newspapers or journals or magazines or somewhere?
- What do you think about those formula milk and infant feeding substitute? Good for your infant health? Good for your daily life activities and jobs?
- Can you buy those easily and cheaply?

15) What do you think which support or strategies can help you to follow and practice national HIV and Infant Feeding recommendation and guidelines more easily?

- Do you believe and do you want to follow and practice medical professionals' advices and recommendations on HIV positive mothers' infant feeding?
- If yes, which help and support do you need from them or the projects or from public health policy makers?

2. Guidelines and questions/Topics for focus group discussion

With informants (HIV positive mothers with above mentioned criteria)

Focus group discussion questions/topics for HIV positive mothers group

1) Under six months infant feeding practices and patterns among HIV positive mothers

2) Cultural beliefs and explanation about under six months infant feeding patterns and foods for infants among HIV positive mothers relating with infant health, growth and development, prevention of local childhood diseases, prevention of mother to child HIV transmission.

3) Social foods for new born babies of HIV positive mothers

4) Socio-economic factors figuring under six months infant feeding practices among HIV positive mothers

5) Family, peer and community support and pressure and under six months infant feeding practices among HIV positive mothers

6) Formula milk advertisement and availability and under six months infant feeding practices among HIV positive mothers

7) Medical doctors'/ infant feeding counselors'/infant feeding peer counselors' advices and recommendations for HIV and Infant Feeding practice and HIV positive mothers' opinions and understanding upon it and its applicability in real HIV positive mothers' life.

8) Opinions and suggestions for HIV and Infant Feeding recommendations and project implementation.

3. Guidelines and questions/Topics for participant observation

I. Participant observation on HIV positive mothers' infant feeding practices to their infants

- ✓ Observing relationship and communication among informant and family members concerning infant feeding practices
- ✓ Observing infant feeding patterns and infant care by HIV positive mothers during in depth interviewing with informants
- ✓ Observing which kinds of food fed to the infant
- ✓ Observing in which ways the infant is being fed
- ✓ Observing infant feeding items such as formula milk bottles for infant sucking, formula milk tin or package, infant feeding substitute tin or package in the house where the sight of the researcher could reach.
- ✓ Observing, note-taking and photo-taking of IEC (Information, Education and Communication) materials of PMTCT projects, if available
- ✓ Shopping at the grocery stores near informant's house and observing availability and asking price of formula milk or infant feeding substitutes.

II. Participant observation on infant feeding counselors' health education about "Pregnancy and Infant Care'' to general population of mothers with or without HIV

- ✓ Observing the interaction and communication between counselors/educator and participants
- ✓ Observing and listening the counselors'/educators' advices, recommendation and supports to the participants concerning infant feeding practices
- ✓ Observing, note-taking and photo-taking of IEC materials about health education topic, if available
- ✓ Serving as an infant feeding health educator to know and to achieve the deeper understanding on mothers' infant feeding practices, barriers prohibiting to follow infant feeding guidelines and to understand the difficulties and challenges for counselors to educate the mothers to follow infant feeding guidelines.

BIOGRAPHY

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