ความรู้ ทัศนคติ และการปฏิบัติ ในเรื่องการให้นมแม่อย่างเดียวของกลุ่มผู้หญิงซิลลิแลป เมืองชิลิน จังหวัดไฮดอง ประเทศเวียดนาม

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KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT EXCLUSIVE BREASTFEEDING AMONG WOMEN IN CHILILAB IN CHI LINH TOWN, HAI DUONG PROVINCE, VIETNAM

Mr. Tuan Duong Kim

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Public Health Program in Public Health

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ความรู้ ทัศนคติ และการปฏิบัติ ในเรื่องการเลี้ยงลูกด้วยนมแม่อย่างเดียวของกลุ่มผู้หญิงชิลลิแลป เมืองชิลิน จังหวัดไฮดอง ประเทศเวียดนาม. (KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT EXCLUSIVE BREASTFEEDING AMONG WOMEN IN CHILILAB IN CHI LINH TOWN, HAI DUONG PROVINCE, VIETNAM) **อาจารย์ที่ปรึกษา: โรเบิร์ต ชปแมน,** 83 **หน้า.**

การศึกษานี้มีวัตถุประสงค์เพื่อระบุระดับของความรู้ ทัศนคติและการปฏิบัติในกา รเลี้ยงลูกด้วยนมแม่อย่างเดียวในช่วง 6 เดือนแรกหลังคลอด ในกลุ่มมารดาที่ทารกมีอายุตั้งแต่ 6 เดือนถึง 18 เดือนใน CHILILAB, จิ Linh เมือง Hai Duong จังหวัด เวียดนาม มีผู้เข้าร่วมการศึกษา 223 คน การศึกษา ครั้งนี้ใช้วิธีการสุ่ มอย่างง่ายจากฐานข้อมูลของสำนักงาน CHILILAB เป็นการศึกษาแบบภาคตัดขวาง ผู้เข้าร่วมทั้งหมดทำแบบสอบถามสัมภาษณ์ตัวต่อตัวรวม 55 คำถาม 48% ของผู้เข้าร่ว มมีการเลี้ยงลูกด้วยนมแม่อย่างเดียวในช่วง 6 เดือนแรกหลังคลอด แต่มีเพียง 29% ได้มีการปฏิบัติอย่างเคร่งครัดในใน การเลี้ยงลูกด้วยนมแม่อย่างเดียว ขณะที่ ค วามรู้และ ทัศนคติใน การเลี้ยงลูกด้วยนมแม่อย่างเดียวมี 51.1% และ 20.2% ตามลำดับ มีความสัมพันธ์อย่างมีนัยสำคัญระหว่างระดับการศึกษาและอาชีพกับระดับความรู้ (Chi-square, p = 0.002 และ 0.038 ตามลำดับ) ในขณะ ที่กลุ่มอา ยุมีความสัมพั นธ์อย่างมีนัยสำคัญกับระดับทัศนคติ (Chi-square, p = 0.012) ระดับการศึกษาและอา ชีพของผู้เข้า ร่วมมีความสัมพัน ธ์อย่างมีนัยสำคัญ กับการปฏิบัติในกา รเลี้ยงลูกด้ว ยนมแม่อย่างเดียว (Chi-square, p <0.05) ระดับทัศนคติมี ความสัมพันธ์อย่า งมีนัยสำคัญ กับการปฏิบัติใ นการเลี้ยงลูก ไม่เฉพาะ นมแม่อย่างเดียวและการเลี้ยงลูกด้วยนมแม่อย่า งเดียว (Chi-square, p <0.001 และ p <0.05) มีความ สัมพันธ์อย่างมีนัยสำคัญ อย่าง มากระหว่า งผู้เข้าร่วมที่ มีน้ำนมไม่เพียงพอสำหรับเลี้ยงทารก กับการป ฏิบัติในการเลี้ยงลูกไม่เฉพาะนมแม่อย่างเดียวและการปฏิบัติที่เลี้ยงลูกด้วยนมแม่อย่างเดียว (Chi-square, p<0.001) สุดท้ายนี้ การศึกษา แน ะนำ ควรที่จะปฏิบั ติในการเลี้ยงลู กด้วยนมแม่อย่างเดียวในระยะ 6 เดือนแรกหลังคลอด

สาขาวิชาระบบสาธารณสุขการพัฒนา ลายเซ็นของนักเรียน .....

ปีการศึกษา: 2554 ลายเซ็นอาจารย์ที่ปรึกษาของ:.....

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KEYWORDS: KAP SURVEY/ EXCLUSIVE BREASTFEEDING/ BREAST MILK/ VIETNAM

TUAN DUONG KIM: KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT EXCLUSIVE BREASTFEEDING AMONG WOMEN IN CHILILAB IN CHI LINH TOWN, HAI DUONG PROVINCE, VIETNAM. THESIS ADVISOR: ROBERT SEDGWICK CHAPMAN, M.D, M.P.H, 83pp.

This study was conducted to identify the level of knowledge, attitude and practice regarding exclusive breastfeeding (EBF) during the first 6 months after birth among mothers of babies aged 6-18 months in CHILILAB, Chi Linh town, Hai Duong province, Vietnam. There were 223 participants selected to join this study by simple random sampling from the CHILILAB office database. In this cross-sectional study, all participants were interviewed face to face, using a standardized questionnaire with 55 questions. 48% of participant reported that they breastfed exclusively during the first 6 months after birth, but only 29% did so under a strict definition of exclusive breastfeeding. Prevalence of high knowledge and positive attitude were 51.1% and 20.2% respectively. The high education participants intended to have more knowledge about EBF than the low education participants and the participants who work for government or services or trading also had more knowledge about EBF than others jobs (Chi – square test, p=0.002 and 0.038 respectively) while the 26 – 30 age group intended to be more positive attitude with EBF than others age groups (Chi – square test, p=0.012). The lower education participants and the famer both intended to self – reported EBF more than the higher education participants and others jobs (Chi – square test, $p<0.05$). Knowledge was not significantly associated with exclusive breastfeeding. There was highly significant association between the participants who were not enough breast milk for the baby with both self-reported EBF and strict practice EBF (Chi – square test, $p<0.001$). Lastly, recommendations are given to help improve practice of exclusive breastfeeding during the first 6 months after birth in this study area.

Field of Study: Public Health Student's Signature……..

Academic Year: 2011 Advisor's Signature……..

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LIST OF ABBREVIATIONS

BF:	Breastfeeding
EBF	Exclusive Breastfeeding
CHILILAB:	The Demographic – Epidemiology Surveillance System belong to Hanoi School of Public Health in Chi Linh town, Hai Duong province, Vietnam.
INDEPTH:	The International Network for the Demographic Evaluation of Populations and Their Health in Developing Countries
KAP:	Knowledge, attitudes and practice.
MICS:	Vietnam Multiple Indicator Cluster Survey 2006
SPSS:	Statistical Package for the Social Science
UNICEF:	The United Nations Children's Fund
VND:	Vietnam Dong (currency of Vietnam)
WHO:	World Health Organization

CHAPTER I

INTRODUCTION

1.1 Background and Rational

Breastfeeding (BF) is very well acknowledged for short- and long-term health benefits. Breastfed infants grow better, experience less sickness and have better survival rates than infants who are not properly breastfed or who are not breastfed at all. Studies from developing countries show that infants who are not breastfed are 6 to 10 times [1] more likely to die in the first months of life than breastfed infants. Diarrhea and pneumonia [2] are more common and more severe in children who are artificially fed, and are responsible for many of these deaths. It was also recognized that BF significantly contributes to cognitive development of children and adults.

As a global public health recommendation, infants should be put to the breast immediately or within one hour after birth, exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond. UNICEF and WHO estimated appropriate BF can prevent 1.3 million deaths among children under five each year in the world. There is evidence that breastfeeding confers significant protection against illness and death associated with diarrhea [3]. Additionally, in developed nations, the rate of severe respiratory tract illness requiring hospitalization was more than tripled between the infants who were not breastfed with those who were exclusively breastfed for the first 4 months after birth [4]. Although UNICEF is committed to the protection, promotion and support of breastfeeding and it has been working closely [5] but unfortunately, poor BF practices are reportedly widespread, it is estimated that only 34.8% [6] of infants worldwide are exclusively breastfed for the first

6 months of life. The proportion varies considerably from region to region [7, 8]; it is as high as 30% sub-Saharan Africa and down to 19% in Europe.

Many factors influencing BF practice are reported in the research literature. BF is related to religion, quality of health care, ethnics, residential areas and household economic status. It is also associated with individual factors like education/occupation of mother, BF knowledge, attitude and intention of mother [9, 10]. Research has shown that many factors can influence the initiation and maintenance of BF. These include the mother's early breastfeeding intentions, family and partner's views, sexual factors, the mother's education, social-economic status and experiences throughout the pregnancy period [11, 12].

In Vietnam, the promotion of BF was started in the early 1980s, mostly integrated into national health programs including maternal and child health or anti-malnutrition. The *Baby-friendly Hospital Initiative* has been well received in hospitals and maternal facilities. At the community level, BF is promoted mostly amongst mothers during many events such as antenatal health consultations, at births, child immunization, Vitamin-A supplementation, anti-malnutrition campaigns, in the forms of individual counseling, group training/communication or mass media done by commune (professional) or village (non-professional/voluntary) health workers. In terms of policies, some considerable improvement has been made such as permanent allocation of national resources for BF promotion and support, basics training package for maternal and pediatric health staff including BF promotion contents, standardization of Baby Friendly Hospitals or Health Facilities, regulations regarding maternal leave or additional breaks for working lactating mothers. Although many great efforts have been made, achievements in reality are quite modest and sorely lower than expected. The Ministry of Health in 2008 revealed that percentages of early BF initiation and exclusive BF up to six months are relatively low and have not increased over the recent years, 58% and 16.9% respectively for the whole country [UNICEF]. Data of the National Nutrition Institute in 2007 [13] similarly estimated 18.9% of mothers nationwide exclusively breastfeed their children up for six months, the proportion is higher in rural area (20.8%) compared that in urban area

(16.2%). Meanwhile 38.7% of infants were reported to receive foods other than breast-milk during the first week of life.

CHILILAB is a Demographic Surveillance System, a member of INDEPTH network, established in Chi Linh district located to the north-east of Hai Duong, a northern province of Vietnam. Administratively, CHILILAB consists of 4 (rural) communes and 3 townships (semi-rural communes). Demographic characteristics of the CHILILAB are similar to that of the whole country [14]. In 2006, a cross sectional study in CHILILAB revealed that the overall prevalence of underweight and stunting in children under three years old were 19.1% and 14.4% respectively [15]. A preliminary survey in August, 2009 involving 289 mother-child (under 10 months old) pairs in the district presented a proportion of 28% of infants exclusively breast fed within the first week of life, while 68% of them were reported to be partly or fully formula-fed during the first three days. Additionally, only 56% of the mothers acknowledged to be ever advised about BF by commune or village health workers. Another qualitative survey was done in the district to explore fathers' perception about BF and their roles to support it. The father's perception about BF was also studied in Vietnam by Stina Almroth et al, although a majority of respondents showed poor understanding about BF with a number of misconceptions as above mentioned, all of them appeared to be very enthusiastic in child care and eager to learn how to best practice it.

To the best of my knowledge, there is not yet any study about breastfeeding in CHILILAB. So this study is expected to collect some information about the KAP of women in CHILILAB.

1.2 Objectives

1. To describe knowledge and attitude regarding breastfeeding among women with babies from 6 months to 18 months old in CHILILAB, Vietnam.
2. To describe breastfeeding practices, especially exclusive breastfeeding in the first 6 months after birth, among these women.
3. To identify associations between exclusive breastfeeding practice during the first 6 months and social-demographic factors, knowledge regarding breastfeeding and attitude regarding breastfeeding in these women
4. To identify barriers to exclusive breastfeeding practice during the first 6 months in these women, and the association between barriers with exclusive breastfeeding practice during the first 6 months after birth among these women

1.3 Research questions

Research addressed 4 research questions regarding BF status in CHILILAB:

- Question 1: What are the level of knowledge and attitude regarding breastfeeding among women with babies from 6 months to 18 months old in CHILILAB, Vietnam?
- Question 2: What is exclusive breastfeeding practice during the first 6 months after birth among these women?
- Question 3: Is there association between exclusive breastfeeding practice during the first 6 months after birth and social-demographic factors, knowledge regarding breastfeeding and attitudes regarding breastfeeding in these women?
- Question 4: Is there any barrier to exclusive breastfeeding practice during the first 6 months after birth, and is there association between barriers with exclusive breastfeeding practice during the first 6 months after birth among these women?

1.4 Hypotheses

1. There is association between exclusive breastfeeding practice during the first 6 months after birth and social-demographic factors, knowledge regarding breastfeeding and attitudes regarding breastfeeding in these women with babies from 6 months to 18 months old in CHILILAB, Vietnam.

2. There are some barriers to exclusive breastfeeding practice during the first 6 months after birth in these women, and there is association between barriers with exclusive breastfeeding practice during the first 6 months after birth among these women.

1.5 Conceptual Framework

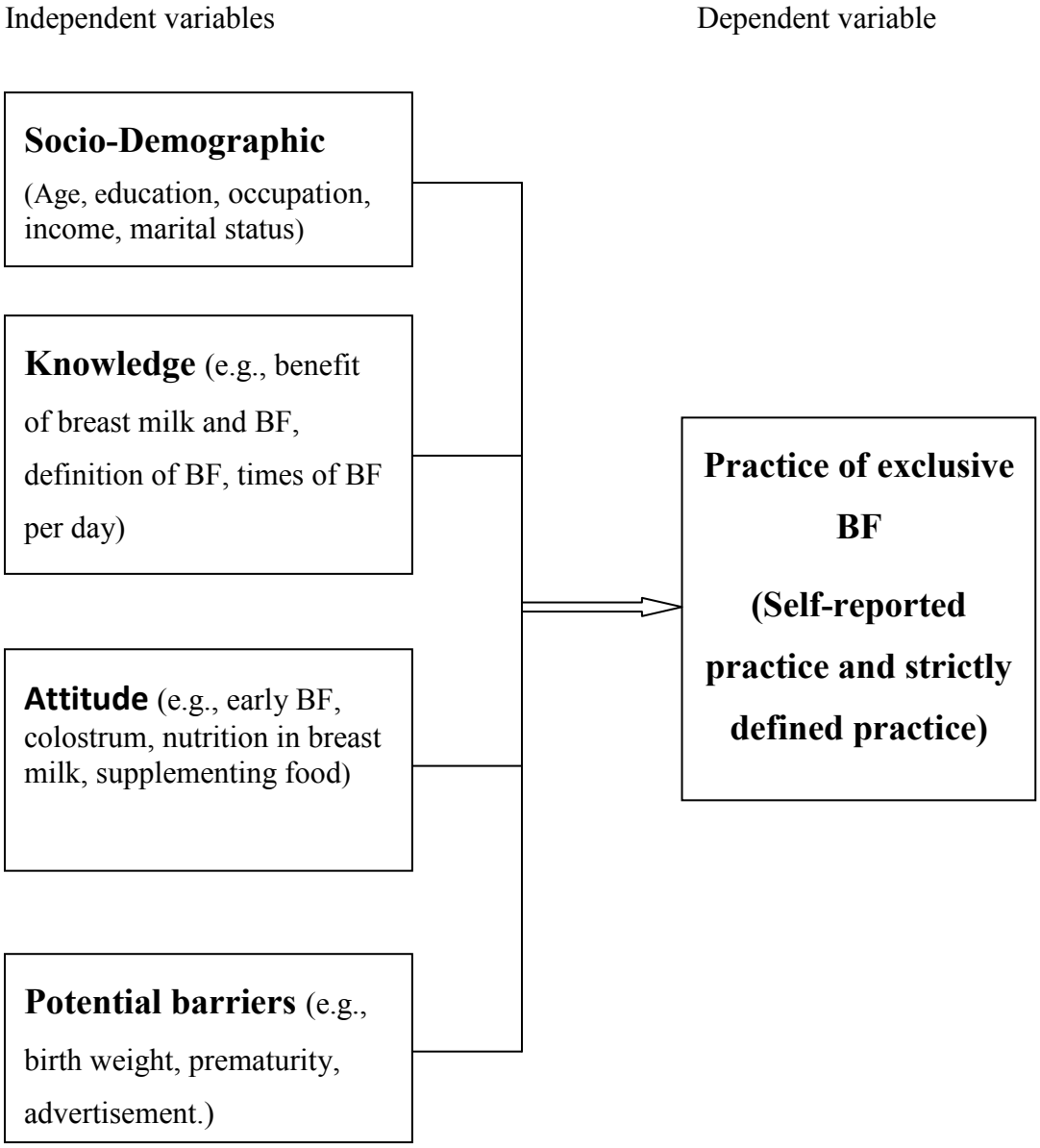

Figure 1: Conceptual Framework

1.6 Operational Definitions

- **Mother's age:** calculated at the time of calculating the sample size.

- **Education:** refers to the level highest of school the mother attended, it is measured in six categories: "Cannot write and read", "literacy classes only', "Primary school", "Secondary school", "High school" and "College or University".
- **Occupation:** shows the main job of the mother at the time of interview and it is measured in five categories: "Farmer", "Government staff", "trading/services", "housewife" and "jobless".
- **Family status** refers to the current marital status. It is measured in six categories: "Married", "Separated", "Divorced", "Widow", "Single" and "Cohabitant".
- **Income:** Calculated by average income of family per month (1USD = 20.000 VND)
- **Knowledge**: Understand benefits of BF, time to initiate BF, total duration of exclusive BF and continued BF.
- **Attitude**: attitudes of the mothers towards importance of early BF initiation, time to initiate BF, total duration of exclusive and continued BF.
- **Practice exclusive BF**: The infant was breastfed only by mother's breast milk and with no other food or any drink (even water), no formula milk except medicines, vitamins and oral rehydration solution.
    - Self-reported EBF: Participants answered they practiced EBF during the first 6 months after birth (answered "yes" to question 33 -- see Appendix).
    - Strict practice EBF: Had self-reported EBF (answered "yes" to question 33) and their babies did not eat or drink anything except breast milk and did not use pacifier during 6 months after birth (answered "no" to questions 36 and 37). Additionally, the total time for EBF was 6 months at least (question 38).
- **Early BF**: The infant was breastfed as soon as possible after birth, at least 1 hour after birth.

- **Barrier**: The factor negatively influence to exclusive breastfeeding in the first 6 months after birth

CHAPTER II

LITERATURE REVIEW

2.1 Breastfeeding

By WHO/UNICEF [41], Breastfeeding and exclusive BF were defined:

Breastfeeding: The child has received breast milk direct from the breast or expressed. **Exclusive breastfeeding**: The infant has received only breast milk from the mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements, or medicines.

And there are some criteria to evaluate the BF practices based on 10 steps to successful BF [39], includes:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.

2. Train all health care staff in skills necessary to implement this policy.

3. Inform all pregnant women about the benefits and management of breastfeeding.

4. Help mothers initiate breastfeeding within a half-hour of birth.

5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.

6. Give newborn infants no food or drink other than breast milk unless medically indicated.

7. Practice rooming in - allow mothers and infants to remain together - 24 hours a day.

8. Encourage breastfeeding on demand.

9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.

10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Breastfeeding babies immediately after birth can prevent a significant number of neonatal deaths in developing countries (UNICEF 2007). “Breastfeeding is one of the most effective interventions to save lives of young children, contributing to prevent 13% of all under 5 deaths,” said UNICEF Viet Nam Health and Nutrition Chief, Marjatta Tolvanen-Ojutkangas. “Breastfeeding within the first hour of birth and exclusive breastfeeding for the following six months would reduce 22% of all neonatal deaths in Viet Nam. These are the first and most vital steps towards reducing infant and under 5 mortalities, and form a solid foundation for good child health and growth.”

Exclusive breastfeeding for six months has many benefits for the infant and the mother. Chief among these is protection against gastro-intestinal infections which is observed not only in developing but also in industrialized countries. Early initiation of breastfeeding, within one hour of birth, protects the newborn from acquiring infections and reduces newborn mortality. The risk of mortality due to diarrhea and other infections can increase in infants who are either partially breastfed or not breastfed at all.

Breast milk is also an important source of energy and nutrients in children 6 to 23 months of age. It can provide one half or more of a child's energy needs between 6 and 12 months of age, and one third of energy needs between 12 and 24 months. Breast milk is also a critical source of energy and nutrients during illness and reduces mortality among children who are malnourished (WHO 2002)

To enable mothers to establish and sustain exclusive breastfeeding for six months, WHO and UNICEF [39] recommended:

- Initiation of breastfeeding within the first hour of life;
- Exclusive breastfeeding - that is, the infant only receives breast milk without any additional food or drink, not even water;
- Breastfeeding on demand - that is, as often as the infant want, day and night.
- Never give artificial teat of pacifiers to breastfeeding for the infant.

2.2 Previous research

There is much research on KAP concerning to breastfeeding. In Malaysia, Adlina has carried out study about KAP among mother in the Pre-baby friendly hospital initiative implementation at seven private hospitals in 2002. This study shows that for most mothers, breastfeeding was combined with supplementary feeds of formula milk, with only 30% breastfed exclusive. Almost mothers knew that breast-milk contained antibodies and can prevent illness but many were unaware of breastfeeding's contraceptive effect if practiced exclusively. Only 7% breastfed exclusively at 4 months and almost zero at 6 months [16]. Interestingly, this study also showed that medical students, as future healthcare providers may also play important role to the success of breastfeeding. Another study conducted in a public university in Malaysia reported that only 37% of the medical students had adequate knowledge concerning breastfeeding. More than half of the student had positive attitude toward breastfeeding while 42.9% of them showed negative attitude. For the result of study in Jamaica [34], there are four reasons made the women supplemented breast milk before the recommended period of six months: fear or anxiety that exclusive BF not sufficient for babies, others competing engagements (study, occupation...), babies did not like BF and breast milk did not flow in sufficient quantity. However, this study had finding that there were no different in the level of knowledge and attitudes regarding BF benefit between exclusively and partially beastfeeding mothers.

In 2006, Caroline has conducted a study about the association between breastfeeding duration and the Decrease of respiratory tract infection in US children. They compared between 4 groups based on the duration of exclusive breastfeeding: 7 days, 61 days, 122 days and 182 days (6 months). Its result affirmed that infant in full breastfeeding group (6 months) were at less risk for having had pneumonia in the past year than those in others groups. Breastfeeding duration has also shown to have an effect.

In 2009, an others study in Cambodia [19] showed that a mother's decision not to breastfeed/to discontinue BF is largely influenced by social inequalities in her environment.

In India, a developing country, a study was carried out in 2008 showed that only 21% urban mother and 35% rural mother have early breastfed for their infants within 1 hour after birth [20]. The rate of formula milk feeding is very high in the urban, it was explained by the formula was very easily available to the mothers. This study also identified some factors influence to exclusive BF such as: perceived insufficiency of milk (36% - 47%) in the first 3.5 months, perceived baby not satisfied after feeding (37% – 62%) in baby aged between 3.5 months to 6 months, feeding water to prevent drying of lips in summer.

About the factors influencing to BF practice, research in Brazil [22] indicated that the grandmothers (include maternal grandmother and paternal grandmother) may have a negative influence on BF (both duration of BF and exclusive BF). The influencing of grandmothers can be illustrated by: advised use other milk, advised adding water and teas for feeding infant. In other study in South Africa [23], the mothers thought that if the BF alone did not keep the infant happy then solid food were immediately added to prevent hunger and to keep them happy. This study also showed that 63% of mothers started feeding their babies by solid foods and drinks from age of 2-3 months.

A study in Indonesia in 2010 also illustrated that all mothers admitted the father was the most supportive family member to their decision to breastfeed [27]. Besides,

good breast milk production had seemed to serve as a motive factors to increase exclusively BF. Additional, the formal education combined with a good level of BF knowledge and attitudes as found in this study indicated that maternal self-efficacy to practice BF appropriately increases the mother's confident in the current practice. The exclusive BF mothers were also exposed to environment unsupportive to the BF practice: prelacteal feeds, formula sample received from health centre, insults for neighbors… these factors were negative environment for BF practice. Furthermore, a Nigeria study also added a factor which influenced to BF practices was antenatal clinic visit. Mothers who had four of more antenatal clinic visit were significantly more likely to engage in exclusive BF [30]. The result is same as a research carried out in Sri Lanka in 2007, the results also identified there was a significant different regarding BF practices between mothers who lived in rural area with mothers who lived in urban [31].

Also concerning the factors influencing to BF practices, a study in Taiwan in 2006 had identified two factors influencing to BF practices. The maternal education was associated with initiation of BF, the high education level was initiation of BF higher 3.8 time than the low level. Besides, employed Taiwanese mothers were earlier than others as weaning [32]. While the study in Greece [36] had illustrated the rate of initiative BF is high (89.7%) but only 16.7% of mothers continued BF until the sixth month after delivered and only 10.2% of whom exclusively BF. The factors negative affecting exclusively BF were the lack of BF previous offspring, tobacco use, low education, early re-employment and prematurity.

In Vietnam, the research conducted by Pranee C in Ho Chi Minh city have also shown that there are some themes representing Vietnamese mothers attitudes and practice emergencies: breastfeeding but not exclusive, cultural and traditional beliefs (dietary precaution, flowing mother or mother-in-law or grandmother, used traditional medicines), infant feeding is influences by media and advertisements [18].

Another study in Bac Giang province (Vietnam), the same border with Hai Duong province, have illustrated the prevalence of exclusively BF during 4 months is only 21.3%, and this prevalence declined very rapidly as at 6 months, there was no child who had been exclusively breastfed [21].

In 2005, a study in Quang Xuong district, a rural area in Vietnam, observed that exclusively BF declined from 83.6% at week 1 to 43.6% at week 16. Some factors influenced regarding BF practices were identified in this study, such as: father's occupation, father's preferred BF, the influencing of grandmother's knowledge and experiences concerning to BF, influences of providers, women have to return to work shortly after delivery. Especially, poverty was another significant determinant of BF practices [25]. That poverty influenced BF was identified in a study which carried out in Lao PDR, it showed that low-income women were more likely to breastfeed, possibly causes purchasing commercial infant product would represent a greater hardship [33].

Another study in Ho Chi Minh City, Vietnam, in 2002 had shown that although most mothers delivered in hospital but only 57.4% infants were breastfed by breast milk during they stayed in hospital. It was explained by insufficient breast milk supply, the infant's health condition, infant refusing breast milk [35].

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

Cross – sectional quantitative study method was used. Cross – sectional was used for evaluating knowledge, attitudes and practice (KAP) about BF among women whose babies are from 6 months to 18 months old. After that, identify the association between some socio – demographic factors, the potential barriers factors and knowledge, attitudes of mothers with mother's practices regarding to BF.

3.2 Study area

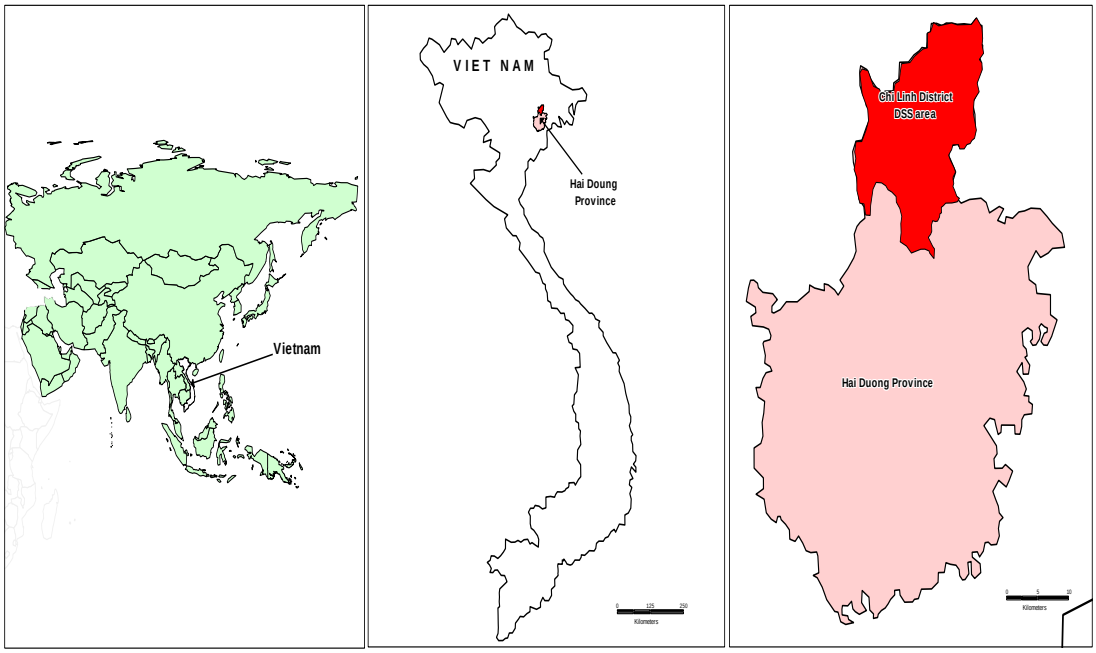

Figure 2: Map of Chi Linh town

CHILILAB is a Demographic Surveillance System, a member of INDEPTH network, established in Chi Linh town located to the north - east of Hai Duong, a northern province of Vietnam. It is far as 80 km from Hanoi. Administratively, CHILILAB consists of 4 (rural) communes and 3 townships (semi-rural communes). Demographic characteristics of the CHILILAB are similar to that of the whole country. In CHILILAB, socio – demographic information is collected every 6 months by data collectors who have been trained by lecturers of Hanoi School of Public Health.

3.3 Study population

CHILILAB has over 17,500 household with roughly 60,000 residents. In a time, the mothers with babies from 6 months to 18 months old are about 800 mothers.

The mothers who were selected to this study had inclusive criteria such as:

- They have at least a baby with 6 – 18 months old.
- Non caesarean.
- Did not have any disease (HIV/AIDS, cardiovascular disease, cerebrovascular accident) or injury for preventing breastfeeding during first 6 months.
- Their babies did not have any innate defect (example: harelip) to prevent breastfeeding.
- Willing to participate and able to answer questionnaire.

3.4 Sample size formulation

The sample size was calculated by formulas

$$N = (Z/e)^2 p(1-p)$$

with Z = 1.96 for CI% = 95%, accepted error is 5% so e = 0.05, the proportion of good exclusively BF practice in Vietnam was estimated at 17% (29) (40) so p = 0.17, N was calculated as 240 (includes plus 10% for refusal).

3.5 Sampling Technique

To create a sample frame based on the database of CHILILAB with about 827 mothers with babies are from 6 months to 18 months old. After that, using random sample selection to select 240 women from sample frame (use RAND function in Microsoft Excel get each one random value range 0 to 1 from each case of list of 827 women, then sort by highest value to lowest value, after that select 240 higher cases). This method provided a random sample.

3.6 Measurement Tool

The information about socio – demographic was added from routine database of CHILILAB. The KAP questionnaire was adapted from research in Cambodia [19] and based on 10 steps to successful BF [28][37], the questionnaire is also prepared consistent with the objective of this research and checked by two experts of College of Public Health Sciences, Chulalongkorn University. The questionnaire was developed to collect knowledge, attitude, barrier factors and practice regarding BF among women.

A, Questionns to evaluate knowledge:

1. What can we do to ensure mothers have enough breast milk for baby?
2. What is benefit of breast milk?
3. Does formula feeding provide the same nutritional benefits as breastfeeding?
4. When is the first breastfed after birth?
5. What is benefit of early BF initiation?
6. How is exclusive BF for six months?
7. Can the baby use medicine of doctor’s medical instruction when he/she is in exclusive BF status?
8. What is benefit of exclusive BF?
9. How long is the recommended time for exclusive BF?

10. How many times should the baby be breastfed per day?
11. Should the baby use artificial teats of pacifiers for BF?
12. Should the baby continue breastfeeding when he/she is diarrhea?
13. Should the baby continue breastfeeding when he/she is other sickness?

Each item use to evaluate a part of knowledge about BF and scoring "1" or "0" score. The score of each mother is total of 13 questions and divided to 3 levels about BF: "high" level if total score is 9 – 13; "moderate" level if total score is 8; "low" level if total score is 0 – 7.

B, Questions to evaluate attitudes and BF practice: Used Likert scale to evaluate the attitudes of mothers. Likert scale with 11 positive items for evaluate, includes positive and negative items. Each positive item has 5 levels to score: "strongly agree" will get 5 scores, "agree" will get 4 scores, "neutral" will get 3 scores, "disagree" will get 2 scores and "strongly disagree" will get 1 scores. And reverse scoring was done for negative items. The attitudes of mothers will calculate by total score then measure with 3 levels: 45 – 55 is the positive level; 41 – 44 is the neutral level and 11 – 40 is the negative level.

C, Questions to evaluate BF practice: There are 10 questions for evaluation about the BF practices of mothers. Each item use to evaluate a part of mother's practices about BF. The mother was considered to report exclusive breastfeeding if she answered "yes" to question 33 ("Did you breastfeed exclusively your baby in the first 6 months after birth?"). If the mother did practice exclusive breastfeeding, there are 3 questions to evaluate if they strictly practice EBF or not, includes to answer "no" to questions 36 and 37 ("Did the baby eat or drink anything before first breastfeeding?", and "Did the baby use the artificial teat of pacifiers to breastfeeding during first 6 months?", respectively). Furthermore, it was necessary to report at least 6 months of exclusive breastfeeding in question 38 ("How long did you breastfed the baby exclusively by breast milk?").

D, There were 14 questions regarding potential barriers to BF

1. How many times did you go to antenatal clinic during period of pregnancy? (The barrier was identified if the time was less than three times).
2. How weigh was your baby at birth? (The barrier was identified if the baby's weigh was less than 2500 gram at birth).
3. Was your baby born full term or prematurity? (Full term was no barrier and prematurity was barrier).
4. Does your husband help you for looking after the baby? (If participant answered "yes", it means no barrier and if participant answered "no", it means barrier).
5. Were you sufficient breast milk for the baby in first 6 months? (If participant answered "yes", it means no barrier and if participant answered "no", it means barrier).
6. Did you have to return for work before your baby was 4 months old after birth? (If participant answered "yes", it means barrier and if participant answered "no", it means no barrier).
7. Was your baby usually satisfied after breastfeeding? (If participant answered "yes", it means no barrier and if participant answered "no", it means barrier).
8. Have you ever seen any advertisement on television about formula milk? (If participant answered "yes", it means barrier and if participant answered "no", it means no barrier).
9. Did you get any free formula milk sample at hospital during antenatal or delivered? (If participant answered "yes", it means barrier and if participant answered "no", it means no barrier).
10. Did you get any information from doctors, nurses or midwifes about the benefits and management of BF? (If participant answered "yes", it means no barrier and if participant answered "no", it means barrier).

11. Did the health staff (doctors, nurses or midwifes) help you initiate BF within half-hour after delivered? (If participant answered “yes”, it means no barrier and if participant answered “no”, it means barrier).
12. Had you been trained how to breastfeed and how to maintain lactation by health staff (doctors, nurses or midwifes)? (If participant answered “yes”, it means no barrier and if participant answered “no”, it means barrier).
13. Did you see any poster or get any flyer, notebook, mother’s card regarding BF in health center or your community? (If participant answered “yes”, it means no barrier and if participant answered “no”, it means barrier).
14. Have you ever joined any BF support group in your community or hospital or clinic? (If participant answered “yes”, it means no barrier and if participant answered “no”, it means barrier).

3.7 Data collection

Selected 11 interviewers who have been working for CHILILAB office. Training for them the questionnaire then all interviewers collected KAP information by face to face interview.

3.8 Data analysis

EpiData software was used for entry of data.

SPSS 16.0 software was used to analyze the data. For descriptive statistics, measure the contribution of socio-demographic, KAP of mothers (numbers, mean, percentage and standard deviation)

For inferential statistic, Chi - square was used to test the association between socio-demographic characteristics, knowledge and attitudes with Practice EBF and strict practice EBF. Pearson correlation was also used to test the relationship between

knowledge of participants with attitude of participants as continuous scores. Additionally, logistic regression was used to test the relationship between socio-demographic characteristics, knowledge, attitudes, and potential barriers with self-reported EBF and strictly defined EBF.

3.9 Ethical consideration

The study was approved by Hanoi School of Public Health Ethical Review Board. The mothers could refuse whenever during interview. Before the interview, participants had to sign an agreement consent form.

3.10 Limitation

- Because the sample includes all mothers with babies are from 6 months to 18 months old, so the time of recall was different among the mothers.
- This study did not collect the information about the pregnant history of mothers. This maybe a factor have influenced to BF of mothers.
- This study eliminated the women with C-section although C-section maybe is a factors negatively influenced to exclusive breastfeeding.
- 11 collectors collected directly at household, so there was some possibility of interviewer bias.

3.11 Expected benefit

Based on determination of some potential barriers to exclusive breastfeeding, women can overcome to have better practice regarding exclusive breastfeeding, promote health for themselves and for their babies. Additionally, the research results can provide some significant evidence for policy maker in Chi Linh town to plan the appropriate policy about Health strategy for people.

CHAPTER IV

RESEARCH RESULTS

This chapter presented a detailed description of the results of this research. The variables were described as simple percentages, means and standard deviation as appropriateness depends on the nature of the variables. It started with the demographic data followed by the responses for each section of the questionnaire. The level of knowledge and attitude score were then presented followed by the results of Chi-square test used as appropriate whether there is any association between socio demographic characteristic, potential barriers and practice of exclusive breastfeeding. Besides, correlation was used to show the relationship between knowledge score and attitude score among the mothers in the research. Additionally, logistic regression was used to test the relationship between socio-demographic characteristics, knowledge, attitudes, and potential barriers with self-reported EBF and strictly defined EBF.

4.1 Social – Demographic Information

The research was conducted in 7 villages and towns of Chilinh district located in the north - east of Hai Duong, a northern province of Vietnam. There were two hundred and twenty three women with baby from 6 months to 18 months (n=223) were consented to complete the questionnaire, the process was collected by 11 data collectors belong to CHILILAB office. Almost participants were married (99.6%). The age ranges from 19 to 42 years old, the average age of participant was 28.7 years old with a standard deviation of 4.4. The majority of participants were in the range 26 - 30 (47.5%), the rate of range 19 - 25 was 22% while the range of 31 - 42 was 30.5%. Table 1 showed that 47% of participants were educated high-school and higher, while 53% participants were educated secondary or primary school. About the occupation of participants, table 1 also showed that more than half of participant (59%) work for government of work in the area of

trading or service. There were only 14% participants were housewife and 27% participants were farmer. There were 20% participant have family income less than 2,000,000 VND (100 USD) per month while the family income of 2,000,000 VND – 4,000,000 VND or more than 4,000,000 VND were 35% and 43% respectively.

Table 1 Socio-demographic characteristics of study participants

Characteristics	**Number (n=223)**	**Percentage (%)**
Marital status		
Married	222	99.6
Cohabitant	1	0.4
Age of mother		
19 - 25	49	22.0
26 - 30	106	47.5
31 - 42	68	30.5
Mean ± SD = 28.7 ± 4.4	**Range = 19 to 42**	
Education level		
Primary school	8	3.6
Secondary school	110	49.3
High school	52	23.3
College, University	53	23.8
Job		
Farmer	60	26.9
Government staff	91	40.8
Trading/service	41	18.4
Housewife	31	13.9
Income (VND per month) *		
<2,000,000	50	22.4
2,000,000 - 4,000,000	78	35.0
>4,000,000	95	42.6

* 1 USD = 20,000 VND

4.2 Knowledge about exclusive breastfeeding on the first six months after birth

Knowledge of participants was accessed by answering 13 questions. Each question was given 1 point if participant had correct answer. The average knowledge score from the participant was 8.33 (SD = 1.22) of maximum 13 points. The lowest score was 4 points and the highest score was 12 point, nobody was able to answer correctly all questions.

Total score was divided with 3 level of knowledge: "high knowledge" with the score from 9 – 13, "Moderate knowledge" with the score by 8 and "low knowledge" with the score from 0 – 7. Table 2 shows that half of participants had "high knowledge" with the rate was 51.1%, while the rate of "moderate knowledge" and "low knowledge" were 30.5% and 18.4% respectively.

Table 2 Distribution of knowledge level about exclusive breastfeeding

Knowledge level	Number (n=223)	Percentage (%)
High knowledge (9 - 13 points)	114	51.1
Moderate knowledge (8 points)	68	30.5
Low knowledge (0 – 7 points)	41	18.4

Table 3 shows the distribution concerning to exclusive breastfeeding. There were only 8.1% of participants knew what to do to ensure enough breast milk for their baby and the same proportion (7.2%) of them understood fully about the benefit of breast milk. Many participants (91%) knew that formula feeding does not provide the same nutritional benefits as breastfeeding and also 91% of participant knew when should to make the first breastfeeding after birth. Especially, almost participant (92%) knew what is exclusive breastfeeding but there were only 3% knew what is the benefits of exclusive breastfeeding. Roughly 4/5 participants answered exactly how long is the recommended

for exclusive breastfeeding and totally 97% participants knew how many time for breastfeeding per day in the first 6 months. And a high proportion of participants knew that the baby should continue breastfeeding when she/he is diarrhea or other sickness (95.1% and 98.7% respectively).

Table 3 Participants had correct answer for each question about EBF knowledge

Items	**Number (n=223)**	**Percentage (%)**
1. The ways to do to ensure mothers have enough breast milk for baby.	18	8.1
2. The benefit of breast milk.	16	7.2
3. Formula feeding provides the same nutritional benefits as breastfeeding.*	203	91.0
4. Time for the first breastfed after birth.	203	91.0
5. The benefit of early breastfeeding initiation.	7	3.1
6. Definition of exclusive breastfeeding.	205	91.9
7. The baby use medicine of doctor's medical instruction when he/she is in exclusive BF status.	189	84.8
8. The benefit of exclusive breastfeeding.	7	3.1
9. Total recommended time for exclusive breastfeeding.	172	77.1
10. The times the baby should be breastfed per day in the first 6 months?	216	96.9
11. The baby should use artificial teats of pacifiers for BF in the first 6 months. *	190	85.2
12. The baby should continue breastfeeding when he/she is diarrhea in the first 6 months.	212	95.1
13. The baby should continue breastfeeding when he/she is other sickness in the first 6 months.	220	98.7

* Negative statement: the number and percentage of participants answer "No"

4.3 Attitude about exclusive breastfeeding on the first six months after birth

Participants answered 11 questions with the score for each question from 1 to 5, so the maximum score for all questions is 55 and the minimum score for all questions is 11. The score of attitude range from 32 to 55, and the average attitude score for all participants is 42.79 (SD = 3.84). The attitude was divided with 3 levels: "positive", "neutral" and "negative", depend on the total score which each participant was given. Based on table 4, many participants had "neutral attitude" with the rate of 53.4%. Besides, there was only 20.2% participants had "positive attitude" while a higher number of participants had "negative attitude" (26.5%).

Table 4 Distribution of attitude level about exclusive breastfeeding

Level of attitude	**Number (n = 223)**	**Percentage (%)**
Positive (45 – 55 scores)	45	20.2
Neutral (41 – 44 scores)	119	53.4
Negative (11 – 40 scores)	59	26.5

According to table 5, it shows that 100% of participants agreed with the statement that early breastfeeding is better for health of the baby. Approximately 20% of participants agreed that baby should drink sweet water before breastfeeding. And almost participants agreed that breastfeeding earlier than 1 hour after birth is very important. However, there were 26% of participants agreed that supplementing food for baby before 6 months is better.

Table 5 Attitude about exclusive breastfeeding

Attitude	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
	(%)	**(%)**	**(%)**	**(%)**	**(%)**

1. Need to discard the colostrum before breastfed the baby. *	17.5	75.3	1.3	5.4	0.4
2. Early breastfeeding is better for health of baby.	0.0	0.0	0.0	83.9	16.1
3. Only breastfed baby when mother produces enough breast milk *	9.0	84.3	1.8	4.9	0.0
4. Breastfeeding early is not good for mother's health *	15.7	79.8	0.4	4.0	0.0
5. Baby should drink sweet drink before breastfeeding. *	6.7	57.0	17.5	17.9	0.9
6. It is important to start breastfeeding earlier than 1 hour after birth.	0.4	0.4	1.3	82.1	15.7
7. Breast milk has not enough necessary nutrition for growing of baby during first 6 months *	13.5	81.2	2.7	2.7	0.0
8. During first 6 month, the mother should plan to focus on breastfeeding for baby.	1.3	0.9	2.2	81.6	13.9
9. Supplementing food for baby before 6 months is better.*	4.0	54.7	15.2	26.0	0.0
10. Baby should drink formula milk more during 6 months *	5.4	64.6	13.0	17.0	0.0
11. During first 6 months, breast milk totally respond the need of baby	0.0	4.5	13.0	75.3	7.2

* Negative statement: the best answer is "Strongly disagree" and the best answer is "Strongly agree" for the other statements (Positive statements).

4.4 Potential barriers influencing practice of exclusive breastfeeding on the first 6 months after birth

Each participant was asked to answer 14 questions to identify potential barriers to the practice of exclusive breastfeeding. Each question was given to identify what potential barrier the participants have to face during the process of breastfeeding on the first 6 months after birth.

Table 6 shows that there were two frequent barriers which participants had to face: The husband did not help them for looking after the baby (93.3%) and they have seen advertisement on television about formula milk (92.8%). Another barrier was they have never joined any breastfeeding support group in their community or health center or hospital (68.2%). On the other hand, the proportion of two potential barriers were low (5.4%) about the time participants go to antenatal clinic during period of pregnancy and the baby weigh at birth (5.4%). Roughly half of participants (43.9%) had to return for work before their baby was 4 months old after birth, it was also a barrier for them to exclusive breastfeeding.

Table 6 Potential barriers to exclusive breastfeeding

Barrier	**Rate**	
	Number (n=233)	**Percentage (%)**
1. Go to antenatal clinic less than 3 times during period of pregnancy.	12	5.4
2. The weight of baby at birth less than 2500 gram	12	5.4
3. The baby was born prematurity.	18	8.1
4. The husband did not help wife for looking after the baby.	208	93.3
5. Not sufficient breast milk for the baby in first 6 months.	48	21.5
6. Have to return for work before your baby was 4 months old after birth.	98	43.9
7. The baby was not usually satisfied after breastfeeding.	16	7.2
8. Have ever seen advertisement on television about formula milk.	207	92.8
9. Got free formula milk sample at hospital during antenatal or delivered.	35	15.7

10. Not get any information from doctors, nurses or midwives about the benefits and management of breastfeeding.	43	19.3
11. The health staffs (doctors, nurses or midwifes) did not help you initiate BF within half-hour after delivered.	30	13.5
12. Never been trained how to breastfeed and how to maintain lactation by health staff (doctors, nurses or midwives).	40	17.9
13. Never see any poster or get any flyer, notebook, mother's card regarding BF in health center or your community.	52	23.3
14. Never joined any BF support group in your community or hospital or clinic.	152	68.2

4.5 Practice exclusive breastfeeding on the first 6 months after birth

Two dependent variables for exclusive breastfeeding in the first 6 months were constructed. The first was less strictly defined, and is called "self-reported EBF". For this variable, a mother was considered to have breastfed exclusively if she answered "yes" to question 33 ("Did you breastfeed exclusively your baby in the first 6 months after birth?"). For this variable, there was 48% of participant breastfed exclusively during the first 6 months after birth while the similar proportion (48%) did not. A few participants (4%) did not intend to breastfeed exclusively during the first 6 months (Figure 3)

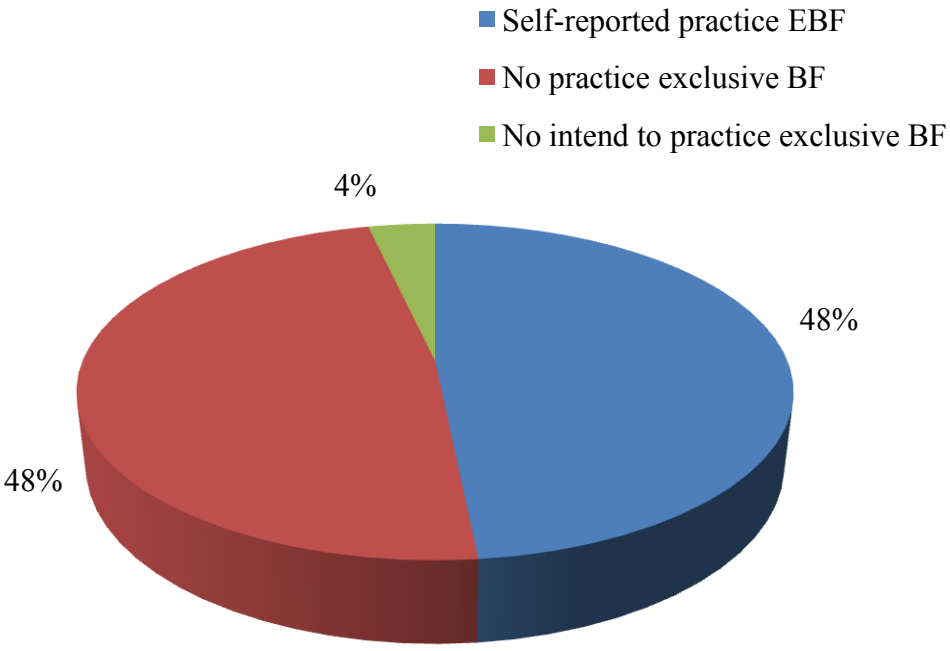

Figure 3: Self-reported practice exclusive breastfeeding

The second variable for exclusive breastfeeding was more strictly defined. To be considered an exclusive breast-feeder, it was necessary to answer "yes" to question 33. It was also necessary to answer "no" to questions 36 and 37 ("Did the baby eat or drink anything before first breastfeeding?", and "Did the baby use the artificial teat of pacifiers to breastfeeding during first 6 months?", respectively). Furthermore, it was necessary to report at least 6 months of exclusive breastfeeding in question 38 ("How long did you breastfed the baby exclusively by breast milk?"). Under this definition, only 29% of participants were exclusive breast-feeders (Figure 4)

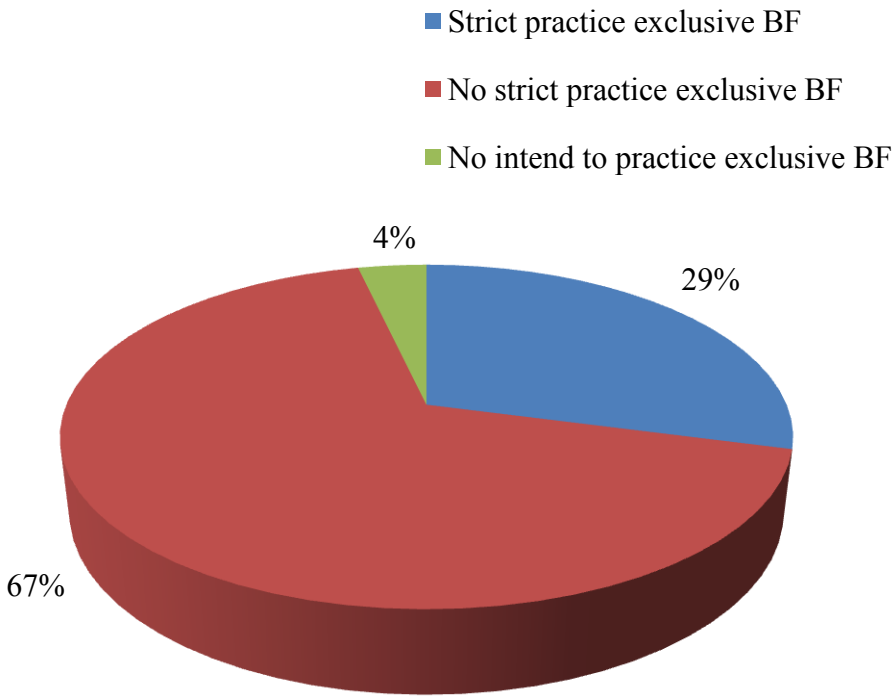

Figure 4 Strict practice exclusive breastfeeding

Table 7 shows some behaviors of participants when practiced exclusive breastfeeding for their baby during the first 6 months, by the less strict definition of exclusive breastfeeding ("yes" to question 33). Among all participants who self-reported exclusive breastfeeding, 78% of participant breastfed the baby during 1 hour after birth but there were only 63% of participants who breastfed the baby during all 6 months after birth. A high proportion of participants breastfed their baby enough time (at least 8 times) per day and breastfed their baby at night with 96.3% and 98.1% respectively. And all participants (100%) still breastfed their baby when he/she was ill.

Table 7 also shows that there were a small numbers of participants (6.5%) discarded the first drop of breast milk before breastfeeding. Besides, the rate of 13% participants said that their baby still ate or drank something before the first breastfeeding.

Table 7 Number of mothers who self-reported exclusive breastfeeding had right behaviors about exclusive breastfeeding.

Behaviors	**Number (n=108)**	**Percentage (%)**
1. Breastfed the baby the first time after birth during one hour.	82	78.0
2. Discard the first drops of breast milk before breastfed the baby.*	101	93.5
3. The baby ate or drank something before first breastfeeding.*	94	87.0
4. The baby used the artificial teat of pacifiers to breastfeeding during first 6 months.*	96	89.0
5. Breastfed the baby exclusively by breast milk during first 6 months.	68	63.0
6. The baby was put to the breast on demand of them or at least 8 times per day.	104	96.3
7. Breastfeed your baby at night.	106	98.1
8. The baby continued to suck when he/she was ill.	108	100.0

* Negative question: the number and percentage of participants answer “No”

4.6 The associations between socio – demographic characteristics with the level of knowledge and attitude

Table 8 shows the statistically significant association between socio – demographic characteristics and the level of knowledge of participants. There was no association between age group and family income of participants with level of knowledge. Besides, the high education participants intended to have more knowledge about EBF than the low education participants and the participants who work for government or services or trading also had more knowledge about EBF than others jobs (Chi – square test, p=0.002 and 0.038 respectively) while the 26 – 30 age group intended to be more positive attitude with EBF than others age groups (Chi – square test, p=0.012)

Table 8 Associations between socio - demographic characteristics and level of knowledge

Characteristics	Level of knowledge			X^2	p-value
	Low No (%)	Moderate No (%)	High No (%)		
Age group				4.72	0.317
19 - 25	6 (12.2)	20 (40.8)	23 (46.9)		
26 - 30	19 (17.9)	29 (27.3)	58 (54.7)		
31 - 42	16 (23.5)	19 (27.9)	33 (48.5)		
Education level				12.29	0.002
Low level	31 (26.3)	37(31.4)	50 (42.3)		
High level	10 (9.5)	31 (29.5)	64 (61.0)		
Occupation				10.18	0.038
Government staff, trading/service	22 (16.7)	32 (24.2)	78 (59.1)		
Farmer	11 (18.3)	26 (43.3)	23 (38.4)		
Housewife	8 (25.8)	10 (32.3)	13 (41.9)		
Income (VND per month)				2.19	0.701
<2,000,000	8 (16.0)	19 (38.0)	23 (46.0)		
2,000,000 - 4,000,000	15 (19.2)	24 (30.8)	39 (50.0)		
>4,000,000	18 (18.9)	25 (26.3)	52 (54.7)		

To identify the association between socio – demographic characteristics and level of attitude, Chi – square test was used. Table 9 shows that likely level of knowledge, there was no association between education, occupation and family income with attitude level of participants. On the contrary, the age of 26-30 group intended to be positive attitude about EBF more than the others group (Chi – square test with $p = 0.012 < 0.05$)

Table 9 Associations between socio - demographic characteristics and level of attitude

Characteristics	Level of attitude			X^2	p-value
	Negative No (%)	Neutral No (%)	Positive No (%)		
Age group				12.78	0.012
19 - 25	10 (20.4)	33 (67.3)	6 (12.3)		
26 - 30	22 (20.8)	58 (54.7)	26 (24.5)		
31 - 42	27 (39.7)	28 (41.2)	13 (19.1)		
Education level				5.21	0.074
Low level	34 (28.8)	67 (56.8)	17 (14.4)		
High level	25 (23.8)	52 (49.5)	28 (26.7)		
Occupation				6.42	0.170
Government staff, trading/service	34 (25.8)	65 (49.2)	33 (25.0)		
Farmer	14 (23.3)	37 (61.7)	9 (15.0)		
Housewife	11 (35.5)	17 (54.8)	3 (9.7)		
Income (VND per month) *				1.59	0.811
<2,000,000	14 (28.0)	26 (52.0)	10 (20.0)		
2,000,000 - 4,000,000	22 (28.2)	38 (48.7)	18 (23.1)		
>4,000,000	23 (24.2)	55 (57.9)	17 (17.9)		

The attitude and knowledge scores of participants were moderate positively correlation with Pearson's correlation was 0.343 and the correlation was significant ($p < 0.001$).

Table 10 Correlation between continuous knowledge score and continuous attitude score

Variable	Attitude	
	Pearson correlation	p - value
Knowledge	0.343	<0.001

4.7 The association between socio – demographic characteristics, knowledge level and attitude level with self-reported practice exclusive breastfeeding and strict practice exclusive breastfeeding.

As will be seen below, overall knowledge score was not significantly associated with exclusive breastfeeding. Even so, some knowledge-related questions were significantly associated with exclusive breastfeeding. Table 11 presented these associations for the less strict definition of exclusive breastfeeding (self-reported EBF). The results of table 11 shows that the participants who knew the definition of EBF and knew the length of recommend time for EBF intended to self-reported practice EBF more than the participants who did not know (Chi – square test with p – value were 0.036 and 0.002, respectively).

Table 11 Statistically significant associations between knowledge with self-reported exclusive breastfeeding

Knowledge	Self-reported practice EBF		X^2	p-value
	No No (%)	Yes No (%)		
Definition of exclusive breastfeeding			4.40	0.036
Do not know	12 (75.0)	4 (25.0)		
Know	95 (47.5)	104 (52.5)		
The length of recommend time for exclusive BF			10.06	0.002
Do not know	33 (70.2)	14 (29.8)		
Know	74 (44.0)	94 (56.0)		

Table 12 presentsed the same information for the strict practice EBF. The table 12 shows that the participants, who know the definition of exclusive breastfeeding and the length of recommend time for exclusive breastfeeding also intended to strictly practice

EBF more than the participants who did not know (Chi – square test with p – value were 0.030 and 0.010, respectively).

Table 12 Statistically significant associations between knowledge with strictly defined exclusive BF

Knowledge	Practice exclusive breastfeeding		X^2	p-value
	No No (%)	Yes No (%)		
Definition of exclusive breastfeeding			4.71	0.030
Do not know	15 (93.8)	1 (6.2)		
Know	135 (67.8)	64 (32.2)		
The length of recommend time for exclusive BF			6.71	0.010
Do not know	40 (85.1)	7 (14.9)		
Know	110 (65.5)	58 (34.5)		

Tables 13 and 14 show significant associations between specific attitude-related questions and exclusive breastfeeding, under the self-reported practice EBF and the strict practice EBF, respectively. From the result in table 13 and table 14, both self-reported practice exclusive breastfeeding and strict practice exclusive breastfeeding were highly significant association with 4 attitudes concerning to exclusive breastfeeding (includes: drink sweet drink before BF; supplementing food before 6 months; use formula milk during the first 6 months; breast milk totally responds the needs of babies during the first 6 months after birth).

Table 13 Statistically significant associations between attitude with self-reported exclusive breastfeeding (less strict definition)

Variables	Self-reported practice EBF		X^2	p-value
	No No (%)	Yes No (%)		

Baby should drink sweet drink before breastfeeding*			27.71	<0.001
Negative	24 (60.0)	16 (40.0)		
Neutral	30 (85.7)	5 (14.3)		
Positive	53 (37.9)	87 (62.1)		
Supplementing food for baby before 6 months is better*			17.07	<0.001
Negative	36 (69.2)	16 (30.8)		
Neutral	21 (63.6)	12 (26.4)		
Positive	50 (38.5)	80 (61.5)		
Baby should drink formula milk more during 6 months*			21.44	<0.001
Negative	29 (78.4)	8 (21.6)		
Neutral	17 (68.0)	8 (32.0)		
Positive	61 (39.9)	92 (60.1)		
During first 6 months, the baby can get sufficient breast milk from the mother			13.13	0.001
Negative	8 (88.9)	1 (11.1)		
Neutral	18 (75.0)	6 (25.0)		
Positive	81 (44.5)	101 (55.5)		

* Negative statement: the best answer is "Strongly disagree", and the best answer is "Strongly agree" for the other statements (Positive statements)

Table 14 Statistically significant associations between attitude with strict practice exclusive breastfeeding

Variables	**Strict practice EBF**		**X^2**	**p-value**
	No **No (%)**	**Yes** **No (%)**		
Baby should drink sweet drink before breastfeeding*			8.00	0.018
Negative	29 (72.5)	11 (27.5)		
Neutral	31 (88.6)	4 (11.4)		
Positive	90 (64.3)	50 (35.7)		
Supplementing food for baby before 6			10.56	0.005

months is better*				
Negative	43 (82.7)	9 (17.3)		
Neutral	27 (81.8)	6 (18.2)		
Positive	80 (61.5)	50 (38.5)		
Baby should drink formula milk more during 6 months*			10.25	0.006
Negative	32 (86.5)	5 (13.5)		
Neutral	21 (84.0)	4 (16.0)		
Positive	97 (63.4)	56 (36.6)		
During first 6 months, the baby can get sufficient breast milk from the mother			6.93	0.031
Negative	9 (100.0)	0 (0.0)		
Neutral	20 (83.3)	4 (16.7)		
Positive	121 (66.5)	61 (33.5)		

* Negative statement: the best answer is "Strongly disagree", and the best answer is "Strongly agree" for the other statements (Positive statements)

Continue using Chi – square test to evaluate the association between age group, education level, occupation, family income, knowledge level and attitude level with self-reported practice exclusive breastfeeding. Table 15 shows that the lower education participants and the famer both intended to self – reported EBF than the higher education participants and others jobs (Chi – square test, $p<0.05$) and there was no association between age group and family income with practice exclusive breastfeeding during the first 6 months of participants.

The result in table 15 also shows that the participants who had positive or neutral attitude about EBF intended to self-reported practice EBF more than the participants with negative attitude (Chi – square test with p – value was less than 0.001) while there was no association between knowledge level of participant with their practice exclusive breastfeeding.

Table 15: Association between socio - demographic, knowledge level, attitude level with self-reported exclusive BF

Variables	Self-reported practice EBF		X^2	p-value
	No No (%)	Yes No (%)		
Age group			3.86	0.145
19 - 25	25 (52.1)	23 (47.9)		
26 - 30	44 (43.1)	58 (56.9)		
31 - 42	38 (58.5)	27 (41.5)		
Education			5.07	0.024
Low education	49 (42.6)	66 (57.4)		
High education	58 (58.0)	42 (42.0)		
Occupation			7.68	0.022
Government staff, trading/service	73 (57.5)	54 (42.5)		
Farmer	22 (36.7)	38 (63.3)		
Housewife	12 (42.9)	16 (57.1)		
Family income*			0.65	0.723
<2,000,000	27 (54.0)	23 (46.0)		
2,000,000 - 4,000,000	35 (46.7)	40 (53.3)		
>4,000,000	45 (50.0)	45 (50.0)		
Knowledge levels			0.8	0.670
Low knowledge	21 (55.3)	17 (44.7)		
Moderate knowledge	30 (46.2)	35 (54.8)		
High knowledge	56 (50.0)	56 (50.0)		
Attitude levels			16.06	<0.001
Negative	39 (73.6)	14 (26.4)		
Neutral	50 (42.7)	67 (57.3)		
Positive	18 (40.0)	27 (60.0)		

* 1USD = 20,000 VND

The result in table 16 illustrates there was no significant association between the socio – demography characteristics with the strict practice exclusive breastfeeding. Besides, the knowledge level was also no association with the strict practice exclusive breastfeeding while the participants who had positive or neutral attitude about EBF intended to strict practice EBF more than the participants with negative attitude (Chi – square test with p – value was 0.023).

Table 16 Association between socio - demographic, knowledge level, attitude level with strict practice exclusive BF

Variables	Strict practice exclusive breastfeeding		X^2	p-value
	No No (%)	Yes No (%)		
Age group			0.44	0.802
19 - 25	34 (70.8)	14 (39.2)		
26 - 30	69 (67.6)	33 (32.4)		
31 - 42	47 (72.3)	18 (27.7)		
Education			0.28	0.599
Low education	82 (71.3)	33 (28.7)		
High education	68 (68.0)	32 (32.0)		
Occupation			0.51	0.776
Government staff, trading/service	89 (70.1)	38 (29.9)		
Farmer	43 (71.7)	17 (28.3)		
Housewife	18 (64.3)	10 (35.7)		
Family income*			2.31	0.316
<2,000,000	38 (76.0)	12 (24.0)		
2,000,000 - 4,000,000	54 (72.0)	21 (28.0)		
>4,000,000	58 (64.4)	32 (35.6)		
Knowledge levels			1.94	0.378
Low knowledge	30 (78.9)	8 (21.1)		
Moderate knowledge	45 (69.2)	20 (30.8)		

High knowledge	75 (67.0)	37 (33.0)		
Attitude levels			7.59	0.023
Negative	44 (83.0)	9 (17.0)		
Neutral	80 (68.4)	37 (31.6)		
Positive	26 (57.8)	19 (42.2)		

* 1USD = 20,000 VND

For comparison the relationship between socio – demographic characteristics, knowledge level, attitude level with self-reported practice EBF and strict practice EBF, table 17 shows that age group, family income and knowledge levels of participants were no relationship with both self-reported practice and strict practice exclusive breastfeeding. On the contrary, the attitude levels of participants were significant relationship with both self-reported practice and strict practice exclusive breastfeeding (OR are 2.01 and 2.06, p – value are 0.004 and 0.006, respectively). The participants, who are farmer, were relationship with self-reported practice EBF more than the other occupation (OR is 2.34). Besides, although education levels of participants were negatively associated with self-reported practice EBF (OR was 0.54 and p – value was 0.025) but it was not related with strict practice EBF (OR was 1.17)

Table 17 Comparison the association of socio-demographic with self-reported practice and strict practice EBF

	Practice on the definition of EBF			
	Self-reported		**Strict practice**	
	OR	p-value	OR	p-value
Age group	0.85	0.391	0.95	0.814
Family income	1.06	0.740	1.34	0.136
Knowledge level	1.06	0.743	1.30	0.198
Attitude level	2.01	0.004	2.06	0.006
Occupation		0.023		0.777
• Farmer	2.34		0.93	

• Housewife	1.80		1.30	
Education level	0.54	0.025	1.17	0.599

Chi – square test continued to use to analyze the association between potential barriers with self-reported practice exclusive breastfeeding of participants. Almost factors, which were identified the barrier for self-reported practice exclusive breastfeeding, were no significant association with practice exclusive breastfeeding. These factors include: the time go to antennal clinic less than 3 times; the baby weigh was less than 2.500 gram; prematurity; the help of husband for looking after their baby; return for work before 4 months; the baby were not satisfied after breastfeeding; see advertisement on television; not get information from health staffs; never been trained how to breastfed and maintain lactation by health staffs; never been seen poster or flyer about breastfeeding (Table 18).

Table 18 also shows that the participants, who were helped to initiate breastfeeding within half-hour after delivered, intended to self-reported practice exclusive BF higher than the participant who did not get the help although the different was not significant (Chi – square test with p – value was 0.060)

In the opposite, the finding also showed that the participants who were not enough breast milk for the baby intended to self-reported practice exclusive breastfeeding less than the participants who were enough breast milk (Chi – square test with p – value was less than 0.001). Beside, the participants who have got free formula milk sample at hospital also intended to self-reported practice exclusive breastfeeding less than the participants who did not get (Chi – square with p – value was 0.018). Lastly, there was a significant association between the participants who never joined any breastfeeding support group in their community or hospital or clinic and practice exclusive breastfeeding with p – value is 0.045 in Chi – square test (Table 18)

Table 18 Association between the potential barriers with self-reported practice exclusive breastfeeding (less strict definition)

Variables	Self-reported practice EBF		X^2	p-value
	No No (%)	Yes No (%)		
1. Go to antenatal clinic less than 3 times during period of pregnancy.			<0.01	0.988
Yes (Barrier)	5 (50.0)	5 (50.0)		
No (No barrier)	102 (49.8)	103 (50.2)		
2. The weight of baby at birth less than 2500 gram			0.11	0.745
Yes (Barrier)	6 (54.5)	5 (45.5)		
No (No barrier)	101 (49.5)	103 (50.5)		
3. The baby was born prematurity.			<0.01	0.984
Yes (Barrier)	9 (50.0)	9 (50.0)		
No (No barrier)	98 (49.7)	99 (50.3)		
4. The husband did not help wife for looking after the baby.			0.06	0.803
Yes (Barrier)	100 (50.0)	100 (50.0)		
No (No barrier)	7 (46.7)	8 (53.3)		
5. Not sufficient breast milk for the baby in first 6 months.			24.79	<0.001
Yes (Barrier)	36 (83.7)	7 (16.3)		
No (No barrier)	71 (41.3)	101 (58.7)		
6. Have to return for work before your baby was 4 months old after birth.			1.68	0.195
Yes (Barrier)	52 (54.7)	43 (45.3)		
No (No barrier)	55 (45.8)	65 (54.2)		
7. The baby was not usually satisfied after breastfeeding.			1.84	0.175
Yes (Barrier)	10 (66.7)	5 (33.3)		
No (No barrier)	97 (48.5)	103 (51.5)		
8. Have ever seen advertisement on television about formula milk.			2.37	0.124

Yes (Barrier)	102 (51.3)	97 (48.7)		
No (No barrier)	5 (31.2)	11 (68.8)		
9. Got free formula milk sample at hospital during antenatal or delivered.			5.62	0.018
Yes (Barrier)	11 (31.4)	24 (68.6)		
No (No barrier)	96 (53.3)	84 (46.7)		
10. Not get any information from doctors, nurses or midwives about the benefits and management of breastfeeding.			0.32	0.573
Yes (Barrier)	21 (53.8)	18 (46.2)		
No (No barrier)	86 (48.9)	90 (51.1)		
11. The health staffs (doctors, nurses or midwifes) did not help you initiate BF within half-hour after delivered.			3.53	0.060
Yes (Barrier)	18 (66.7)	9 (33.3)		
No (No barrier)	89 (47.3)	99 (52.7)		
12. Never been trained how to breastfeed and how to maintain lactation by health staff (doctors, nurses or midwives).			1.75	0.186
Yes (Barrier)	21 (60.0)	14 (40.0)		
No (No barrier)	86 (47.8)	94 (52.2)		
13. Never see any poster or get any flyer, notebook, mother's card regarding BF in health center or your community.			0.04	0.842
Yes (Barrier)	25 (51.0)	24 (49.0)		
No (No barrier)	82 (49.40)	84 (50.6)		
14. Never joined any BF support group in your community or hospital or clinic.			4.03	0.045
Yes (Barrier)	80 (54.4)	67 (45.6)		
No (No barrier)	27 (39.7)	41 (60.3)		

Similar to the result with the proportion of self-reported practice exclusive breastfeeding, the result in table 19 shows that most potential barriers in this study were not associated with the strict practice exclusive breastfeeding. However, the participants who were not enough breast milk for the baby intended to self-reported practice exclusive

breastfeeding less than the participants who were enough breast milk (Chi – square test with p – value was less than 0.001). Additionally, the participants who have to return for work before 4 months after birth intended to strict practice EBF less than the participants who did not have to return (Chi – square test with p – value was 0.044) while this barrier was no association with self-reported practice exclusive breastfeeding (Table 19).

Table 19 Association between the potential barriers with strict practice exclusive breastfeeding

Variables	Strict practice exclusive breastfeeding		X^2	p-value
	No No (%)	Yes No (%)		
1. Go to antenatal clinic less than 3 times during period of pregnancy.			0.52	0.471
Yes (Barrier)	8 (80)	2 (20)		
No (No barrier)	142 (69.3)	63 (30.7)		
2. The weight of baby at birth less than 2500 gram			0.05	0.826
Yes (Barrier)	8 (72.7)	3 (27.3)		
No (No barrier)	142 (69.6)	62 (30.4)		
3. The baby was born prematurity.			0.09	0.765
Yes (Barrier)	12 (66.7)	6 (33.3)		
No (No barrier)	138 (70.1)	59 (29.9)		
4. The husband did not help wife for looking after the baby.			0.07	0.786
Yes (Barrier)	140 (70.0)	60 (30.0)		
No (No barrier)	10 (66.7)	5 (33.3)		
5. Not sufficient breast milk for the baby in first 6 months.			19.86	<0.001
Yes (Barrier)	42 (97.7)	1 (2.3)		
No (No barrier)	108 (62.8)	64 (37.2)		
6. Have to return for work before your baby was 4 months old after birth.			4.04	0.044
Yes (Barrier)	73 (76.8)	22 (23.2)		

No (No barrier)	77 (64.2)	43 (35.8)		
7. The baby was not usually satisfied after breastfeeding.			0.080	0.371
Yes (Barrier)	12 (80.0)	3 (20.0)		
No (No barrier)	138 (69.0)	62 (31.0)		
8. Have ever seen advertisement on television about formula milk.			1.50	0.221
Yes (Barrier)	141 (70.9)	58 (29.1)		
No (No barrier)	9 (56.2)	7 (43.8)		
9. Got free formula milk sample at hospital during antenatal or delivered.			0.03	0.866
Yes (Barrier)	24 (68.6)	11 (31.4)		
No (No barrier)	126 (70.0)	54 (30.0)		
10. Not get any information from doctors, nurses or midwives about the benefits and management of breastfeeding.			0.48	0.490
Yes (Barrier)	29 (74.4)	10 (25.6)		
No (No barrier)	121 (68.8)	55 (31.2)		
11. The health staffs (doctors, nurses or midwifes) did not help you initiate BF within half-hour after delivered.			2.01	0.156
Yes (Barrier)	22 (81.5)	5 (18.5)		
No (No barrier)	128 (68.1)	60 (31.9)		
12. Never been trained how to breastfeed and how to maintain lactation by health staff (doctors, nurses or midwives).			2.08	0.150
Yes (Barrier)	28 (80.0)	7 (20.0)		
No (No barrier)	122 (67.8)	58 (32.2)		
13. Never see any poster or get any flyer, notebook, mother's card regarding BF in health center or your community.			0.60	0.439
Yes (Barrier)	32 (65.3)	17 (34.7)		
No (No barrier)	118 (71.1)	48 (28.9)		
14. Never joined any BF support group in your community or hospital or clinic.			0.02	0.888
Yes (Barrier)	103 (70.1)	44 (29.9)		

No (No barrier)	47 (69.1)	21 (30.9)

The results almost identical when using logistic regression to compare the relationship between some potential barriers with self-reported and strict practice EBF (Table 20). The factor "Not sufficient breast milk for the baby in first 6 months" was highly significant relationship with both practice and strict practice EBF with OR were 7.32 and 24.89, p – value were less than 0.001 and 0.002, respectively. Besides, 3 factors "The baby was not usually satisfied after breastfeeding", "The health staffs (doctors, nurses or midwifes) did not help you initiate BF within half-hour after delivered" and "Have ever seen advertisement on television about formula milk" were also relationship with both practice and strict practice exclusive breastfeeding but this different were not significant. The factor "Got free formula milk sample at hospital during antenatal or delivered" was negatively significant relationship with practice EBF. However, it was not relationship with strict practice exclusive breastfeeding.

Table 20 Comparison the association of potential barriers with self-reported EBF and strict practice EBF

	Practice on the definition of EBF			
	Self-reported EBF		**Strict practice EBF**	
	OR*	p-value	OR*	p-value
1. Go to antenatal clinic less than 3 times during period of pregnancy.	1.01	0.988	1.78	0.476
2. The weight of baby at birth less than 2500 gram	1.22	0.745	1.16	0.826
3. The baby was born prematurity.	1.01	0.984	0.86	0.765
4. The husband did not help wife for looking after the baby.	1.14	0.803	1.17	0.786
5. Not sufficient breast milk for the baby in first 6 months.	7.32	<0.001	24.89	0.002
6. Have to return for work before your baby was 4 months old after birth.	1.43	0.195	1.85	0.046
7. The baby was not usually satisfied after breastfeeding.	2.12	0.183	1.80	0.377

8. Have ever seen advertisement on television about formula milk.	2.31	0.133	1.89	0.227
9. Got free formula milk sample at hospital during antenatal or delivered.	0.40	0.020	0.94	0.866
10. Not get any information from doctors, nurses or midwives about the benefits and management of breastfeeding.	1.22	0.574	1.32	0.491
11. The health staffs (doctors, nurses or midwifes) did not help you initiate BF within half-hour after delivered.	2.23	0.065	2.06	0.164
12. Never been trained how to breastfeed and how to maintain lactation by health staff (doctors, nurses or midwives).	1.64	0.188	1.90	0.155
13. Never see any poster or get any flyer, notebook, mother's card regarding BF in health center or your community.	1.07	0.842	0.77	0.440
14. Never joined any BF support group in your community or hospital or clinic.	1.81	0.046	1.05	0.888

* Odds ratios are for the "no barrier" response to the questions on potential barriers, as compared to the "barrier" response. Please see tables 18 and 19 for specific responses. As an example, the OR for self-reported EBF in mothers with sufficient breast milk (the "no barrier" situation) was 7.32, as compared to OR=1 for mothers with not sufficient breast milk (the "barrier" situation).

CHAPTER V

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

This study was conducted in Chi Linh town, Hai Duong province, Vietnam to assess the knowledge, attitude and practice about exclusive breastfeeding on the first 6 months after birth and identify some barriers could influence the practice.

In this chapter, the discussion based on a brief description of the major findings and its limitations

5.1.1 Socio – demographic information

The socio – demographic in this study includes marital status, age group, education level, occupation and the family income of 223 mothers with baby from 6 months to 18 months. There was no different among participants about marital status because almost of them were married (99.6%). The major age group is 26 – 30 years old (47.5%) and range from 19 – 42 years old, it was similar with some previous studies in Vietnam (Almroth S et al., 2008). No participants cannot read or write and all participants graduated primary school or secondary school or higher, it is explained all participants were under 43 years old so they lived when Vietnam had to universalize education from 1976.

It were the same proportion between participant who work for government (40.8%) and participants do not work for government (43.3%), because the study area includes 3 towns and 4 villages.

Over half of participants (57.4%) had family income under 4,000,000 VND per month (200 USD) while the average earning in Vietnam is about 100 USD per year (Asian Development Bank 2008). With living condition in Vietnam, this family income class is low.

5.1.2 Knowledge about exclusive breastfeeding on the first six months after birth

Knowledge is initial part of changing behavior. The result of study showed that there was 51.1% participants have high level of knowledge about exclusive breastfeeding while only 18.4% participants have low level. This proportion is lower as compare with the result of a study in Ho Chi Minh city, Vietnam (Liubai, 2000) which the proportion of moderate level and high level were 94.1% and also lower than the result of a study in Jamaica with 98% (Leia, 2004). The different of study finding could be explained by the different way to divide or score the knowledge. Besides, the study area includes urban and rural area, not like Ho Chi Minh city, an urban area, the biggest city of Vietnam.

Although the rate of participants, who have fully knowledge about the benefits of breast milk and the benefits of breastfeeding, were very low with only 7.2% and 3.1% respectively but more than 90% participants answered exactly the definition of exclusive breastfeeding and 77% participants knew the total recommend time for exclusive breastfeeding is 6 months. It can be influenced to good practice of participants.

Besides, there was a very low rate about the knowledge "How to do to ensure mother have enough breast milk for their baby during the first 6 months" with the rate of 8.1%. It should focus this issue because if the mother did not have sufficient breast milk for their baby, unavoidable they would have to feed baby by the other food as formula milk. The result can suggest what need to improve about exclusive breastfeeding for women in this area.

5.1.3 Attitude about exclusive breastfeeding on the first six months after birth

There are three levels divided when evaluate the attitude of participants about exclusive breastfeeding, it includes: positive, neutral and negative. The score of attitude range from 32 to 55, and the average attitude score for all participants is 42.79 (SD = 3.84). There was 53.4% of participants had the neutral attitude about exclusive breastfeeding while roughly same rate of them have positive attitude (20.2%) and negative attitude (26.5%).

The proportion of 100% participants have positive attitude with the statement "Early breastfeeding is better for health of baby" and the finding also shows that 97.8% participants have positive attitude with the statement "It is important to start breastfeeding earlier than 1 hour after birth" but the lower proportion (82.5%) have positive attitude with the statement "During first 6 months, breast milk totally respond the need of baby".

Besides, there were 17.5% participants had neutral attitude and 18.8% participants had negative attitude with the statement "Baby should drink sweet drink before breastfeeding". These gaps could be influenced to practice exclusive breastfeeding of participants and it can be a suggestion for improving more knowledge about how is good practice exclusive breastfeeding.

In general, with almost participants (83%) in this study had neutral attitude about exclusive breastfeeding during the first 6 months after birth, it is so important to change their attitude from neutral to positive, it should be done by education, communication in the community or the health center.

5.1.4 Barrier influenced to practice exclusive breastfeeding on the first 6 months after birth

The barrier in this study means factors which can prevent or negatively influence to good practice exclusive breastfeeding of participants during the first six months after birth. Beside knowledge and attitude of participants, these barriers would also be influenced to practice exclusive breastfeeding during the first 6 months after birth. The finding of some previous studies showed that the rate of practice could be reduced by these barriers.

The result shows that there was 21.5% participants did not have enough breast milk for their baby during the first 6 month after birth. This barrier was maybe the consequence of low knowledge about "How to do to ensure mother have enough breast milk for their baby during the first 6 months". (8.1%). This result was obviously different with the finding of study carried out by Liua in Ho Chi Minh city in 2002, with the

proportion of women insufficient breast milk was 61.8%. As an important finding in this study, the proportion of participants, who ever seen advertisement about formula milk on television, were 92.8%. It is because of this study was performed in CHILALAB where almost households have one television at least, and there were many advertisements about formula milk on television per day in Vietnam, and the policy in Vietnam permit advertisement formula milk on television. This finding intended consistent with the result of study in Laos, a neighbor country of Vietnam (Pornpai, 2009).

There was 43.9% participants had to return for work before 4 months after birth, it really related the job of participants (40.8% participants were government staffs), this finding was approximately consistent with the study result in Ho Chi Minh city with 30.9% (Luibai, 2000) because of the law in Vietnam stipulated that the government staff have only 4 months for rest after birth. This law caused difficulty for women who want to practice exclusive breastfeeding during the first 6 months. Besides, there was roughly 25% of participants never saw any poster or flyer about breastfeeding in their community or health centre, this finding suggested for process of communication in community and health centre to improve women's knowledge. On the other hand, some factors which maybe is barriers were low proportion in the finding study: go to antenatal clinic less than 3 times (5.4%); the baby weight at birth less than 2500 gram (5.4%). Especially, there were still 13.5 % and 19.3% participants who did not get the help from health staff for initiate BF within half-hour after delivered or did not get any information from doctors, nurses or midwives about the benefits and management of breastfeeding although these are two important steps of 10 steps in order to the recommendation of UNICEF/WHO for successfully breastfeeding (UNICEF/WHO, 2006).

5.1.5 Practice exclusive breastfeeding on the first 6 months after birth

The proportion was similar (48%) between self-reported participants with or without practice exclusive breastfeeding during the first 6 months after birth while 8% others did not intend to practice exclusive breastfeeding. However, the finding also showed that the strict practice exclusive breastfeeding was only 29%, this rate is higher to

compare with a result finding in Greece with the rate of 16.7% (Ladomenou, 2007) and also higher to compare with the exclusive breastfeeding in Vietnam (17%, UNICEF, 2006) while the prevalence in Laos is 19% (Pornpai, 2007).

To evaluate the way participants had practiced exclusive breastfeeding, some deeply questions had been used. According the recommendation of WHO/UNICEF, breastfeeding in the first 1 time after birth is very important for the health of mother and baby. In the study's finding, there was 78% participants did breastfeed in the first 1 hour after birth, this finding were consistent as a study's result in Jamaica (Leia, 2004) with the rate of 79%. Besides, almost participants had breastfed at least enough 8 times per day (96.3%) and breastfed the baby inclusively at night (98.1%) during the first 6 months after birth. These finding is meaningful for ensure mother have sufficient breast milk and provide enough nutrition for the baby.

5.1.6 The associations between socio – demographic characteristics with the level of knowledge and attitude.

The finding of this study showed that there was statistically significant association between 2 socio - demographic characteristics (education level and occupation) of participants with knowledge level when using Chi – square test with p – value were 0.002 and 0.038, respectively. The participants, who had more high education level, would be high knowledge level, it is simple to understand because if they were high education, they would had more chance to approach with document, training… about exclusive breastfeeding and the same result with occupation of participants. The finding also showed that there was no significant association between age group and family income of participants with knowledge level.

Concerning to attitude level of participants, the finding also showed that attitude level was only significant association with the age group of participants with p – value was 0.012 in Chi – square test. The others socio – demographic characteristics were not significant association with attitude level.

To identify the correlation between knowledge scores and attitude scores of participants, the Person correlation test had been used. The result illustrated that knowledge score had moderate correlation with attitude scores of participants about exclusive breastfeeding during the first 6 months with p – value was less than 0.001.

5.1.7 The association between socio – demographic characteristics, knowledge level and attitude level with self-reported practice exclusive breastfeeding and strict practice exclusive breastfeeding.

Concerning to practice exclusive breastfeeding during the first 6 months after birth of participants, the finding in this study illustrated that there were 2 important knowledge significantly associated with self-reported practice exclusive breastfeeding, includes: "definition of exclusive breastfeeding" and "the length of recommended time for exclusive breastfeeding" with p – value were 0.036 and 0.002 respectively in Chi – square test. The participants knew correctly about these concepts would intended to self-reported practice exclusive breastfeeding for their babies. It was also similar to identify the association between this knowledge with strict practice exclusive breastfeeding with p – value were 0.030 and 0.010 respectively in Chi – square test. It looks logical because they had to know before they could practice exactly. Additionally, the finding also showed both self-reported practice EBF and strict practice EBF were significant association with the similar of 4 attitudes: drink sweet drink before BF; supplementing food before 6 months; use formula milk during the first 6 months; breast milk totally responds the needs of babies during the first 6 months after birth. It means the participants who were positive with 4 attitudes would intend to self-reported practice exclusive breastfeeding and strict practice exclusive breastfeeding.

In this study, the finding showed that there was significant association between education level and occupation of participants with self-reported practice exclusive breastfeeding (Chi – square test with p – value were 0.024 and 0.022, respectively), the low education level participants tended to self-reported practice exclusive breastfeeding more than the high education level participants while the participant worked for

government or trading/service tended less than the others who were farmer or housewife. This finding was consistent with the finding in a study conducted in Thanh Hoa province, Vietnam by Dat V Duong et all (2005) On the other hand, this finding of study also showed that there was no association between all socio – demographic characteristics with strict exclusive breastfeeding. It means some socio – demographic characteristics could influence to mothers to self-reported practice exclusive breastfeeding but it is no relation to their true of false practice exclusive breastfeeding.

The finding also showed that there were no association between knowledge level of participant with both self-reported practice exclusive breastfeeding and strict practice exclusive breastfeeding. On the contrary, the attitude level was significant association with both self-reported practice exclusive breastfeeding and strict practice exclusive breastfeeding in Chi – square with p – value was less than 0.001 and was 0.023, respectively. This finding is different with the result of study in Jamaica in which the attitude is no association with practice exclusive breastfeeding (Leia et all, 2004)

Besides socio – demographic characteristics, knowledge and attitude could influence to self-reported practice and strict practice exclusive breastfeeding during 6 months after birth of participants, some factors were also relation with the prevalence of self-reported practice and strict practice exclusive breastfeeding. In the finding of this study, there was very highly significant association between the factor “Not sufficient breast milk for the baby in first 6 months” with both self-reported practice and strict practice exclusive breastfeeding with p – value were both less than 0.001 in Chi – square test. It looks so easy to understand because if the mother has not sufficient breast milk for their baby, they need for formula milk to ensure the growth of infant, but this problem can also indicate that the needs of improve knowledge of participants “How to do to ensure mothers have enough breast milk for baby”.

Two factors which significant associated with self-reported practice exclusive breastfeeding were “Got free formula milk sample at hospital during antenatal or delivered” and “Never joined any BF support group in your community or hospital or

clinic" with p – value were 0.018 and 0.045, respectively while there was only factor "Have to return for work before your baby was 4 months old after birth" significant associated with strict practice exclusive breastfeeding when using Chi – square test with p – value was 0.044. The study result in Thanh Hoa province also found that women, who had to return for work early, would influence negatively with practice exclusive breastfeeding during the first 6 months after birth (Dat VD, 2005).

5.2 Conclusions

This study was conducted to identify the level of knowledge, attitude and practice exclusive breastfeeding during the first 6 months after birth among mother who have baby with age from 6 months to 18 months in CHILILAB, Chi Linh town, Hai Duong province, Vietnam. There were 223 participants selected to join this study by simple random sampling from databases of CHILILAB office. Using cross – sectional study, all participants were interviewed face to face with the questionnaire includes 55 questions. The finding of study found there was 48% of participant breastfed exclusively during the first 6 months after birth but the proportion of strict practice was only 29% participants. The finding also showed that there was significant association between education level and occupation of participants with knowledge level in Chi – square test with p –value were 0.002 and 0.038 respectively while there was only age group was significant association with attitude level of participants (Chi – square test, p – value was 0.012). Concerning to practice exclusive breastfeeding, the knowledge about "definition of exclusive breastfeeding" and "the length of recommended time for exclusive breastfeeding" were significant association with both practice exclusive breastfeeding and strict exclusive breastfeeding (Chi – square test with p – value was less than 0.05). The finding of study also found that education level and occupation of participants were significant association with their practice exclusive breastfeeding in Chi – square test with p – value were 0.024 and 0.022 respectively. Otherwise, there was no significant association between socio – demographic characteristics of participants with strict practice exclusive breastfeeding. The finding showed that the knowledge level was no

association with both practice exclusive breastfeeding and strict practice exclusive breastfeeding. On the contrary, the attitude level of participants was significant association with both practice exclusive breastfeeding and strict exclusive breastfeeding (Chi – square test with p – value was less than 0.001 and p – value was 0.024, respectively). About the factor influenced to practice exclusive breastfeeding, the finding showed that there was highly significant association between the participants who were not enough breast milk for the baby with practice exclusive breastfeeding in Chi – square test with p – value was less than 0.001. Additionally, there was significant association between the participants who never joined any breastfeeding support group in their community or hospital or clinic and participants who got free formula milk sample at hospital during antenatal or delivered with practice exclusive breastfeeding with p – value were 0.018 and 0.045 respectively in Chi – square test. Lastly, there was highly statistically significant association between the barrier "No sufficient breast milk for the baby in first 6 months" with the strict practice exclusive breastfeeding (Chi – square test with p – value was less than 0.001). Besides, there was significant association between the barrier "Have to return for work before your baby was 4 months old after birth" with the strict practice exclusive breastfeeding (Chi – square test with p – value was 0.044).

5.3 Recommendations

In general, the proportion of strict practice exclusive breastfeeding during the first six months after birth is higher than the finding in some others studies. Based on some finding of the study, some recommendations were suggested for improve the prevalence of practice exclusive breastfeeding during the first 6 months after birth.

5.3.1 To continue to improve the knowledge of women about the benefit of breast milk and the benefit of exclusive breastfeeding, especially educate them how to do to ensure the mother have sufficient breast milk for their baby during the first 6 months after birth.

5.3.2 To continue communication about strict exclusive breastfeeding, not only for women in pregnancy age, but also all family members with each household to improve their knowledge and attitude about exclusive breastfeeding

5.3.3 To limit or forbid the advertisement about formula milk on television. Especially, forbid the giving free formula milk in the hospital or clinic or heath centre.

5.3.4 To set up group of mother within the age of pregnancy to discuss each other about breastfeeding, how to care the baby better.

5.3.5 To suggest for changing the labor law about the length of rest time for women after delivered from 4 months to 6 months.

5.4 Further study

Although breastfeeding were more and more popular in Vietnam and in the world but there were so different between the finding studies in other areas. Besides, some factors influenced negatively exclusive breastfeeding during the first 6 months after birth have not yet studied carefully. Additionally, some important factors were not included in this study like: 1, did not collect information about baby's age to divide some group of recall mothers with same baby's age. 2, mother's pregnancy history was also factors can influence to mother's practice exclusive breastfeeding. 3, exclude the C-section mother out of sample although C-section was also factors to negatively influence to sufficient breast milk early after birth. Therefore, future research should be concerned about the increasing the prevalence of exclusive breastfeeding and some main factors would be influenced negatively this prevalence beside socio – economic characteristics, knowledge and attitude.

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APPENDICES

Appendix A Consent form

Title of Research: **Knowledge, attitude and practice about breastfeeding among women in CHILILAB in Chi Linh town, Hai Duong province, Vietnam**

Researcher: Duong Kim Tuan, MD, Hanoi School of Public Health

I am …….., working for CHILILAB office, belong to Hanoi school of Public Health. We are doing research on the KAP of breastfeeding in CHILILAB. We would like to understand your KAP regarding to breastfeeding by giving you some questions and invite you to answer. We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will lock that information up with a lock and key. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain.

There will be no direct benefit to you, but your participation is likely to help us find out more about KAP regarding to breastfeeding in your community. You will also not be provided any incentive to take part in the research. However, we will give you a present for your baby.

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate all the services you receive from administration will continue and nothing will change.

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact directly to Mr **Duong Kim Tuan**, MD, Hanoi School of Public Health, cell phone: 0912311453.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study

Name of Participant_____

Signature of Participant _____

Date _____

Appendix B Budget

Order	Content	Quantity	Cost per unit (Baht)	Total (Baht)
1	Plane ticket (round-trip)	1	8000	8,000
2	Training for data collectors	10	500	5,000
3	Collecting data	240	100	24,000
4	Gift for household	240	50	12,000
5	Travel and accommodation			15,000
6	**Total**			64,000

Appendix C Time Schedule

Activities	2011						2012				
	7	8	9	10	11	12	1	2	3	4	5
Proposal Writing	x	x	x	x	x	x					
Ethical Approval						x					
Field work and Pre_test							x				
Training for data collectors								x			
Collecting data								x	x		
Analysis and writing report									x	x	x

Appendix D Cross-sectional study questionnaire (English)

Date:

Interviewer:

Household ID number: ☐☐☐☐☐☐☐☐☐

Individual ID number: ☐☐☐☐☐☐☐☐☐☐☐

A, Socio Demographic questions

Order	Question	Answer
Q1	What is your name?	
Q2	How old are you?	
Q3	What is the highest level of education you are completed? (ONLY SELECT ONE ANSWER)	1. Cannot write and read. 2. Literacy classes only 3. Primary school. 4. Secondary school. 5. High school. 6. College, University
Q4	What is your job? (the major job what you spend most time for it) (ONLY SELECT ONE ANSWER)	1. Farmer 2. Government staff 3. Trading/services 4. Housewife 5. Jobless 6. Other:……
Q5	What is your marital status? (ONLY SELECT ONE ANSWER)	1. Married 2. Separated 3. Divorced 4. Widowed 5. Single 6. Cohabitant
Q6	What is your average family income per month?	(VND)/month
Q7	How is your baby now?	1. Good 2. Illness: ……..

B, Knowledge

Order	Question	Answer
Q8	What can we do to ensure mothers have enough breast milk for baby? (CAN SELECT MULTIPLE ANSWERS)	1. Enjoy a wide variety of nutritious foods 2. Try to rest, do only essential housework 3. Make time to relax, avoid stress factors. 4. Supplement vitamin and mineral. 5. Do not know/ no answer
Q9	What is benefit of breast milk? (CAN SELECT MULTIPLE ANSWERS)	1. Always natural, fresh, clean and right temperature. 2. Protect baby against illnesses, allergies and diseases. 3. Free. 4. Do not know/ no answer
Q10	Does formula feeding provide the same nutritional benefits as breastfeeding?	1. Yes 2. No 3. Do not know/ no answer
Q11	When should the first breastfed after birth? (ONLY SELECT ONE ANSWER)	1. Within the first half-hour of birth 2. As soon as possible after birth 3. After the first half-hour of birth 4. Do not know/ no answer
Q12	What is benefit of early breastfeeding initiation? (CAN SELECT MULTIPLE ANSWERS)	1. Baby can get colostrum 2. Mother can produce more breast milk. 3. Make baby to be more warmer 4. To defecate meconium more quickly. 5. Do not know/ no answer
Q13	What is exclusive BF? (ONLY SELECT ONE ANSWER)	1. Only use breast milk 2. Use breast milk and water. 3. Use breast milk and fruit water 4. Use breast milk and

		formula milk 5. Do not know/ no answer
Q14	Can the baby use medicine of doctor's medical instruction when he/she is in exclusive BF status?	1. Yes 2. No 3. Do not know/ no answer
Q15	What is benefit of exclusive BF? (CAN SELECT MULTIPLE ANSWERS)	1. Baby grow better 2. Protect baby 3. Cheaper than using formula milk. 4. Increase the relationship between mother and baby. 5. To avoid pregnancy. 6. Do not know/ no answer
Q16	How long is the recommend time for exclusive BF?	(months)
Q17	How many times should the baby be breastfed per day in the first 6 months? (ONLY SELECT ONE ANSWER)	1. BF on demand of the baby 2. >= 8 times 3. < 8 times 4. Do not know/ no answer
Q18	Should the baby use artificial teats of pacifiers for BF in the first 6 months?	1. Yes 2. No 3. Do not know/ no answer
Q19	Should the baby continue breastfeeding when he/she is diarrhea in the first 6 months?	1. Yes 2. No 3. Do not know/ no answer
Q20	Should the baby continue breastfeeding when he/she is other sickness in the first 6 months?	1. Yes 2. No 3. Do not know/ no answer

C, Attitude

Order	Attitudes	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	Early initiation breastfeeding.					
Q21	Need to discard the colostrum before breastfed the baby.	1	2	3	4	5
Q22	Early breastfeeding is better for health of baby.	1	2	3	4	5
Q23	Only breastfed baby when mother produces enough breast milk	1	2	3	4	5
Q24	Breastfeeding early is not good for mother's health	1	2	3	4	5
Q25	Baby should drink sweet drink before breastfeeding.	1	2	3	4	5
Q26	It is important to start breastfeeding earlier than 1 hour after birth.	1	2	3	4	5
	Exclusive breastfeeding for 6 months.					
Q27	Breast milk has not enough necessary nutrition for growing of baby during first 6 months	1	2	3	4	5
Q28	During first 6 month, the mother should plan to focus on breastfeeding for baby.	1	2	3	4	5
Q29	Supplementing food for baby before 6 months is better.	1	2	3	4	5
Q30	Baby should drink formula milk more during 6 months	1	2	3	4	5

Order	Attitudes	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q31	During first 6 months, breast milk totally respond the need of baby	1	2	3	4	5

D, Practice. (*All questions is focus to the youngest child in the family***)**

Order	Question	Answer
Q32	Did you intend to exclusively breastfeed your baby for 6 months during pregnancy or immediately after delivered?	1. Yes 2. No → Q42 3. Do not know/ no answer
Q33	Did you breastfeed exclusively your baby in the first 6 months after birth?	1. Yes 2. No → Q42 3. Do not know/ no answer
Q34	How long did you breastfed the baby the first time after birth?	
Q35	Did you discard the first drops of breast milk before breastfed the baby?	1. Yes 2. No 3. Do not know/ no answer
Q36	Did the baby eat or drink anything before first breastfeeding?	1. Yes 2. No 3. Do not know/ no answer
Q37	Did the baby use the artificial teat of pacifiers to breastfeeding during first 6 months?	1. Yes 2. No 3. Do not know/ no answer
Q38	How long did you breastfed the baby exclusively by breast milk?	……months ……..weeks
Q39	How many times per 24 hours was the baby put to the breast? (ONLY SELECT ONE ANSWER)	1. BF on demand of the baby 2. >= 8 times 3. < 8 times 4. Do not know/ no answer
Q40	Did you breastfeed your baby at night?	1. Yes 2. No 3. Do not know/ no answer
Q41	Did your baby continue to suck when he/she was ill?	1. Yes 2. No 3. Do not know/ no answer

E, Barriers

Order	Question	Answer
Q42	How many times did you go to antenatal clinic during period of pregnancy? (ONLY SELECT ONE ANSWER)	1. >= 3 times. 2. 1 – 2 times. 3. 0 time 4. Do not know/ no answer
Q43	How weigh was your baby at birth? (ONLY SELECT ONE ANSWER)	1. >= 2500 gram 2. < 2500 gram 3. Do not know/ no answer
Q44	Was your baby born full term or prematurity? (ONLY SELECT ONE ANSWER)	1. Full term 2. Prematurity 3. Do not know/ no answer
Q45	Does your husband help you for looking after the baby?	1. Yes 2. No 3. Do not know/ no answer
Q46	Were you sufficient breast milk for the baby in first 6 months?	1. Yes 2. No 3. Do not know/ no answer
Q47	Did you have to return for work before your baby was 4 months old after birth?	1. Yes 2. No 3. Do not know/ no answer
Q48	Was your baby usually satisfied after breastfeeding?	1. Yes 2. No 3. Do not know/ no answer
Q49	Have you ever seen any advertisement on television about formula milk?	1. Yes 2. No 3. Do not know/ no answer
Q50	Did you get any free formula milk sample at hospital during antenatal or delivered?	1. Yes 2. No 3. Do not know/ no answer
Q51	Did you get any information from doctors, nurses or midwifes about the benefits and management of BF?	1. Yes 2. No 3. Do not know/ no answer
Q52	Did the health staff (doctors, nurses or midwifes) help you initiate BF within half-hour after delivered?	1. Yes 2. No 3. Do not know/ no answer
Q53	Had you been trained how to breastfeed and how to maintain lactation by health	1. Yes 2. No 3. Do not know/ no answer

	staff (doctors, nurses or midwifes)?	
Q54	Did you see any poster or get any flyer, notebook, mother's card regarding BF in health center or your community?	1. Yes 2, No 3, Do not know/ no answer
Q55	Have you ever joined any BF support group in your community or hospital or clinic?	1. Yes 2. No 3. Do not know/ no answer

Appendix E Cross-sectional study questionnaire (Vietnamese)

PHIẾU PHỎNG VẤN

Ngày:

Người phỏng vấn:

Mã hộ: ☐☐☐☐☐☐☐☐☐

Mã cá nhân: ☐☐☐☐☐☐☐☐☐☐☐

A, Thông tin chung

STT	**Câu hỏi**	**Trả lời**
Q1	Họ tên chị là gì?	
Q2	Tuổi	
Q3	Trình độ học vấn? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Mù chữ. 2. Đọc và viết 3. Cấp 1. 4. Cấp 2. 5. Cấp 3. 6. Trung cấp, cao đẳng, đại học và sau đại học
Q4	Nghề nghiệp chính của chị là gì? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Làm ruộng 2. Công nhân, viên chức 3. Buôn bán, dịch vụ 4. Nội trợ 5. Thất nghiệp 6. Khác (ghi rõ) ……
Q5	Tình trạng hôn nhân? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Kết hôn 2. Ly thân 3. Ly dị 4. Góa 5. Chưa kết hôn 6. Sống cùng
Q6	Thu nhập trung bình của gia đình chị là bao nhiêu một tháng?	(VND)/tháng
Q7	Sức khỏe của cháu bé nhà mình hiện	1. Tốt

	nay thế nào?	2. Ốm (ghi rõ bệnh): …….

B, Kiến thức

STT	Câu hỏi	Trả lời
Q8	Cần phải làm gì để có đủ sữa mẹ cho con bú? (CÓ THỂ CHỌN NHIỀU CÂU TRẢ LỜI)	1. Ăn uống đầy đủ các chất 2. Nghỉ ngơi, tránh làm việc nặng. 3. Tránh căng thẳng. 4. Bổ sung vitamin và khoáng chất. 5. Không biết/ Không trả lời
Q9	Sữa mẹ có những lợi ích gì? (CÓ THỂ CHỌN NHIỀU CÂU TRẢ LỜI)	1. Luôn tự nhiên, tươi, sạch và nhiệt độ thích hợp. 2. Giúp trẻ phòng tránh bệnh tật. 3. Miễn phí. 4. Không biết/ Không trả lời
Q10	Sữa bột có đầy đủ lợi ích giống như sữa mẹ không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q11	Trẻ nên bắt đầu bú mẹ khi nào sau sinh? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Trong vòng nửa giờ đầu sau sinh 2. Càng sớm càng tốt sau sinh 3. Sau nửa giờ đầu sau sinh 4. Không biết/ Không trả lời
Q12	Lợi ích của việc bú sớm là gì? (CÓ THỂ CHỌN NHIỀU CÂU TRẢ LỜI)	1. Trẻ nhận được nguồn sữa non từ mẹ. 2. Mẹ sẽ có nhiều sữa cho trẻ hơn. 3. Giữ ấm cho trẻ sớm. 4. Giúp mẹ co hồi tử cung sớm. 5. Không biết/ Không trả lời
Q13	Thế nào là BÚ SỮA MẸ HOÀN TOÀN? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Trẻ chỉ bú sữa mẹ 2. Trẻ bú sữa mẹ và nước lọc. 3. Trẻ bú sữa mẹ và nước hoa quả 4. Trẻ bú sữa mẹ và sữa bột 5. Không biết/ Không trả lời

Q14	Trẻ có thể dùng thuốc theo đơn của bác sỹ trong khi trẻ BÚ SỮA MẸ HOÀN TOÀN không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q15	Lợi ích của BÚ SỮA MẸ HOÀN TOÀN là gì? (CÓ THỂ CHỌN NHIỀU CÂU TRẢ LỜI)	1. Trẻ phát triển tốt hơn. 2. Bảo vệ trẻ khỏi bệnh tật tốt hơn 3. Rẻ. 4. Tăng tình cảm mẹ con. 5. Tránh thai. 6. Không biết/ Không trả lời
Q16	Thời gian BÚ SỮA MẸ HOÀN TOÀN là bao lâu?	(tháng)
Q17	Trẻ nên bú mẹ bao nhiêu lần một ngày trong 6 tháng đầu? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Bú theo nhu cầu của trẻ 2. >= 8 lần 3. < 8 lần 4. Không biết/ Không trả lời
Q18	Trẻ có nên dùng ti giả hoặc bú bình trong 6 tháng đầu không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q19	Trẻ có nên tiếp tục bú mẹ khi bị tiêu chảy không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q20	Trẻ có nên tiếp tục bú mẹ khi bị ốm không?	1. Có 2. Không 3. Không biết/ Không trả lời

C, Thái độ

STT	Quan điểm	Rất không đồng ý	Không đồng ý	Trung lập	Đồng ý	Rất đồng ý
	Bú sữa mẹ sớm.					
Q21	Cần phải vắt bỏ sữa non trước khi cho trẻ bú lần đầu tiên.	1	2	3	4	5
Q22	Bú mẹ sớm rất tốt cho trẻ.	1	2	3	4	5
Q23	Chỉ cho trẻ bú khi mẹ có đủ sữa về.	1	2	3	4	5
Q24	Cho trẻ bú sớm không tốt cho sức khỏe của mẹ	1	2	3	4	5
Q25	Trẻ nên uống ít nước đường hoặc mật ong trước khi bú mẹ lần đầu.	1	2	3	4	5
Q26	Bú mẹ sớm trong vòng 1 giờ đầu là rất quan trọng	1	2	3	4	5
	Bú sữa mẹ hoàn toàn trong 6 tháng đầu					
Q27	Sữa mẹ không đủ chất dinh dưỡng cho sự phát triển của trẻ trong 6 tháng đầu	1	2	3	4	5
Q28	Người mẹ nên sắp xếp công việc để tập trung cho con bú trong 6 tháng đầu	1	2	3	4	5
Q29	Ăn dặm cho trẻ trước 6 tháng là rất cần thiết.	1	2	3	4	5
Q30	Trẻ nên uống sữa bột trong 6 tháng đầu	1	2	3	4	5
Q31	Trong 6 tháng đầu, mẹ hoàn toàn có đủ sữa cho con bú.	1	2	3	4	5

D, Thực hành cho con bú. (Chú ý là phần này hỏi về thực hành cho đứa trẻ có trong danh sách)

STT	Câu hỏi	Trả lời
Q32	Khi chị mang thai hoặc ngay sau khi sinh, chị đã có ý định cho bé bú mẹ hoàn toàn trong 6 tháng đầu không?	1. Có 2. Không → Q42 3. Không biết/ Không trả lời
Q33	Chị có cho bé bú sữa mẹ hoàn toàn trong 6 tháng đầu không?	1. Có 2. Không → Q42 3. Không biết/ Không trả lời
Q34	Bao lâu sau khi sinh thì chị cho bé bú?	
Q35	Chị có vắt bỏ mấy giọt sữa đầu trước khi cho bé bú lần đầu tiên không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q36	Bé có ăn, uống gì trước khi bú mẹ lần đầu tiên không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q37	Bé có dùng ti giả hay bú bình trong 6 tháng đầu tiên không?	3. Có 4. Không 3. Không biết/ Không trả lời
Q38	Bé bú sữa mẹ hoàn toàn trong bao lâu?	…….tháng ……..tuần
Q39	Bé bú bao nhiêu lần một ngày trong 6 tháng đầu? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Bú khi trẻ đói 2. >= 8 lần 3. < 8 lần 4. Không biết/ Không trả lời
Q40	Chị có cho bé bú vào ban đêm trong 6 tháng đầu không?	1. Có 2. Không 3. Không biết/ Không trả lời
Q41	Khi bé bị ốm trong 6 tháng đầu thì chị có cho bé bú không?	1. Có 2. Không

		3. Không biết/ Không trả lời

E, Rào cản

STT	Câu hỏi	Trả lời
Q42	Chị đi khám thai tất cả bao nhiêu lần trong quá trình mang thai? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. >= 3 lần. 2. 1 – 2 lần. 3. Không đi khám 4. Không biết/ Không trả lời
Q43	Bé khi sinh nặng bao nhiêu? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. >= 2500 gram 2. < 2500 gram 3. Không biết/ Không trả lời
Q44	Bé sinh non hay đủ tháng? (CHỈ CHỌN MỘT CÂU TRẢ LỜI)	1. Đủ tháng 2. Sinh non 3. Không biết/ Không trả lời
Q45	Chồng chị có giúp chị trong việc chăm sóc bé không?	1. Không 2, Có 3, Không biết/ Không trả lời
Q46	Chị có đủ sữa cho bé bú trong 6 tháng đầu không?	1. Có 2, Không 3, Không biết/ Không trả lời
Q47	Chị có phải trở lại làm việc khi bé được 4 tháng không?	1. Có 2, Không 3, Không biết/ Không trả lời

Q48	Bé có thường xuyên hài lòng (ngoan) sau khi được bú mẹ trong 6 tháng đầu không?	1. Có 2, Không 3, Không biết/ Không trả lời
Q49	Chị đã bao giờ xem quảng cáo về sữa bột dành cho trẻ trên truyền hình chưa?	1. Có 2, Không 3, Không biết/ Không trả lời
Q50	Chị đã bao giờ được nhận sữa bột dành cho trẻ em để dùng thử khi đi khám thai hoặc sau khi sinh tại cơ sở y tế chưa?	1. Có 2, Không 3, Không biết/ Không trả lời
Q51	Chị đã bao giờ nhận được thông tin về lợi ích của sữa mẹ từ cán bộ y tế chưa?	1. Có 2, Không 3, Không biết/ Không trả lời
Q52	Cán bộ y tế có giúp chị cho trẻ bú sớm trong vòng nửa giờ đầu sau khi sinh không?	1. Có 2, Không 3, Không biết/ Không trả lời
Q53	Cán bộ y tế đã bao giờ hướng dẫn chị cách cho bé bú hoặc cách để có đủ sữa cho bé bú trong 6 tháng đầu sau sinh không?	1. Có 2, Không 3, Không biết/ Không trả lời
Q54	Chị đã bao giờ nhìn thấy poster hoặc được phát tờ rơi liên quan đến việc cho con bú tại cơ sở y tế không?	1. Có 2, Không 3, Không biết/ Không trả lời
Q55	Chị đã bao giờ tham gia nhóm, hội nào về hỗ trợ cho con bú ở địa phương không ?	3. Có 4. Không 3. Không biết/ Không trả lời

Appendix F Ethical Review Board Approved

MINISTRY OF HEALTH
HANOI SCHOOL OF PUBLIC HEALTH

No.: 008/2012/YTCC-HD3
Subject: Ethical Approval

SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom - Happiness

Ha Noi, February 13, 2012

DECISION

On Ethical approval for research involving human subject participation

THE CHAIR OF THE ETHICAL REVIEW BOARD FOR BIOMEDICAL RESEARCH
HANOI SCHOOL OF PUBLIC HEALTH

- Based on Decision No. 645/QD-YTCC by the Dean of Hanoi School of Public Health on Establishment of The Institutional Ethical Review Board of Hanoi School of Public Health; 07 November 2003 ;
- Based on decision No. 491/QĐ-YTCC by the Dean of Hanoi School of Public Health on the Issuing Regulation of the Insitutional Ethical Review Board of Hanoi School of Public Health; 24 September 2004;
- After reviewing research ethics application No. **012-008/DD-YTCC**;
- And based on the memo dated **February 09, 2012.**

DECIDED

Article 1. Grant ethical approval for ethnographic study project:

- Project Title: Knowledge, attitude and practice about exclusive breastfeeding among women in CHILILAB in Chi Linh town, Hai Duong Province, Vietnam
- Principal Investigator : **Duong Kim Tuan**- Student in MPH
  College of Public Health Sciences, Chualalongkorn University, Thailand
- Research site: Hai Duong province, Vietnam
- Data collection time: from 02/22/2012 to 03/10/2012
- Project Time: from 11/01/2011 to 06/01/202

Article 2. This decision is effective from **02/13/2012**

Article 3. Principle Investigator should notify the Institutional Ethical Review Board of Hanoi School of Public Health (IRB of HSPH) immediately of any adverse effects arising from this study (e.g. unexpected adverse outcomes, unexpected community/subject risk factors or complaints, etc.). Active research projects are subject to random audit by the IRB of HSPH.

CHAIR OF INSTITUTIONAL ETHICAL REVIEW BOARD
(Signature and full name)

Nguyen Thanh Huong

SECRETARY
(Signature and full name)

Nguyen Thi Minh Thanh

BIOGRAPHY

Mr. Duong Kim Tuan was born on December 23rd 1980 at Chi Linh town, Hai Duong Province, Vietnam. Mr. Tuan graduated as Medical Doctor from Hanoi Medical University in 2004. After that, he worked for CHILILAB office and Scientific Research Management Department, belong to Hanoi School of Public Health. In 2011, Mr. Tuan continued to study the Master of Public Health at College of Public Health Sciences, Chulalongkorn University in Thailand with the support from Hanoi School of Public Health. He graduated the Master Degree in 2012.