

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

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ABSTRACT: This study was conducted to identify and assess association between the socio-demographic characteristics, the potential barriers, 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 participants reported that they breastfed exclusively during the first 6 months after birth, but only 29% did so under a strict definition of exclusive breastfeeding. 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 ($p=0.002$ and 0.038 , respectively) while the 26 – 30 age group intended to have more positive attitude about EBF than other age groups ($p=0.012$). The lower education participants and the famer both intended to higher self – reported EBF more than the higher education participants and others jobs ($p<0.05$). 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 ($p<0.001$). Lastly, the study found out some recommendation need to do to improve practice exclusive breastfeeding during the first 6 months after birth in this study area, like as: continue communication about strict exclusive breastfeeding, limit or forbid the advertisement about formula milk, suggest for changing the labor law about the length of rest time after birth.

KEY WORDS: exclusive breastfeeding, CHILILAB

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INTRODUCTION

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. UNICEF and WHO estimated appropriate BF can prevent 1.3 million deaths among children under five each year in the world. Exclusive breastfeeding for six months has many benefits for the infant and the mother. Chief among these is protection against gastrointestinal 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. 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 [2, 3].

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 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]. Following the result of study in Bac Giang province (Vietnam), the prevalence of exclusively BF during 4 months was only 21.3%, and this prevalence declined very rapidly as at 6 months, there was no child who had been exclusively breastfed [4]. Another study observed that exclusive BF declined from 83.6% at week 1 to 43.6% at week 16. Some factors that influenced BF practices were identified in this study, such as: father's occupation, father's involvement to support mother for BF, the influencing of grandmother's knowledge and experiences concerning to BF, influences of providers, women have to return to work shortly after delivery. Poverty was another significant determinant of BF practices [5].

MATERIALS AND METHODS

CHILILAB is a Demographic Surveillance System, established in Chi Linh town located to the northeast of Hai Duong, a northern province of Vietnam. CHILILAB consists of 4 (rural) communes and 3 townships (semi-rural communes). CHILILAB has over 17,500 household with roughly 60,000 residents. In the time of this study, the mothers with babies from 6 months to 18 months old were 827 mothers. Simple random sampling was used to select 240 inclusive participants for the study. Participants were collected information by answering 55 questions in the questionnaire. The questionnaire was adapted from research in Cambodia [6] and based on 10 steps to successful BF [7], 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 included five parts: 1, Socio-demographic characteristics 2, Knowledge about EBF 3, Attitude about EBF 4, Potential barriers to EBF 5, Practice of exclusive breastfeeding.

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 self-reported practice EBF and strict practice EBF (Strict practice EBF includes: 1, reporting self to have practiced exclusive EBF. 2, did not feed the baby to drink or eat anything except breast milk. 3, the baby did not use artificial teat or pacifiers to BF during first 6 months. 4, the length time for EBF was six months at least). 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.

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

RESULTS

There were 223 women with baby from 6 months to 18 months who consented to complete the questionnaire. Almost all participants were married (99.6%). The age ranged from 19 to 42 years, the average age of participants was 28.7 years old with a standard deviation of 4.4. The greatest number of participants was 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 shows 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 shows that more than half of participant (59%) work for government of work in the area of trading or service. 14% participants were housewives and 27% were farmers.

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 \pm SD = 28.7 \pm 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

Table 2 shows that 51.1% of participants had high knowledge while the rates of moderate knowledge and low knowledge were 30.5% and 18.4%, respectively.

Table 2 Distribution of knowledge level about exclusive breastfeeding

Knowledge level (possible score ranges from 0 to 13)	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

As shown in table 3, 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 3 Distribution of attitude level about exclusive breastfeeding

Level of attitude (possible score ranges from 11 to 55)	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

The proportion of self-report practice EBF was 48% while the proportion of strict practice EBF was only 29%. For comparison the relationship between socio – demographic characteristics, knowledge level, attitude level with self-reported practice EBF and strict practice EBF, table 4 showed 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 were 2.01 and 2.06, $p=0.004$ and 0.006 , respectively). The participants, who are farmer, were relationship with self-reported practice EBF more than the other occupation (OR was 2.34, $p=0.023$). 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=1.17, $p=0.559$)

Table 4 Comparison the association of socio-demographic characteristics with self-reported practice and strictly defined EBF

Practice regarding exclusive 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

Using logistic regression to compare the relationship between some potential barriers with self-reported and strict practice EBF (Table 5), 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 midwives) 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 5 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 grams	1.22	0.745	1.16	0.826

3. The baby was born prematurely.	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 midwives) 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. For 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).

DISCUSSION

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 [8] 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% [9]. There was roughly same rate of them have positive attitude (20.2%) and negative attitude (26.5%), while half of participants (53.3%) 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. 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 different with the finding of study carried out by Liua in Ho Chi Minh city in 2002 [8], 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 [10].

The finding 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% [11] and also higher to compare with the exclusive breastfeeding in Vietnam (17%, UNICEF, 2006) while the prevalence in Laos is 19% [10]. 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 [5]. 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 [5].

Breastfeeding is becoming more and more popular in Vietnam and elsewhere. Even so, more research is needed on factors associated with breastfeeding. For example, some factors which influenced negatively to exclusive breastfeeding during the first 6 months after birth have not identified clearly and not studied carefully yet. Additionally, some potentially relevant factors were not assessed in the present study. These were: 1, did not collect information about baby's age. Thus, possible recall bias associated with baby's age could not be assessed; 2, mother's pregnancy history, which could influence breastfeeding behavior, was not assessed; 3, mothers with C-sections were excluded from this study, so potential effects of C-section history on breastfeeding [12] could not be assessed. For example, C-section may negatively influence sufficiency of breast milk early after birth. Therefore, future research should investigate why there are the different about EBF between others areas to have suitable intervention for each area.

Finally, associations of socio-demographic factors and potential barriers were quite different for self-reported EBF and for strictly defined EBF. The findings strongly suggest that strictly defined EBF is a more reliable measure of EBF, as women, especially less-educated ones, may tend to over-report exclusive breastfeeding.

ACKNOWLEDGEMENT

This publishing with partial support provided by the funds made available under the Higher Education Research Promotion and National Research University Project of Thailand, Office of the Higher Education (Project AS1148A).

REFERENCES

- [1] WHO Collaborative Study Team: Role of Breastfeeding on the Prevention of Infant Mortality - Effect of breastfeeding on infant and childhood mortality due to infectious diseases in less developed countries: a pooled analysis. Lancet 355 (2000): 451-455.
- [2] Almroth S, Arts M, Quang ND, Hoa PT, Williams C. Exclusive breastfeeding in Vietnam: an attainable goal. Acta Paediatr 97 (2008): 1066-1069.
- [3] Awi DD, Alikor EA. Barriers to timely initiation of breastfeeding among mothers of healthy full-term babies who deliver at the University of Port Harcourt Teaching Hospital. Niger J Clin Pract 9 (2006): 57-64.

- [4] Nakamori M, Nguyen XN, Nguyen CK, Cao TH. Nutritional status, feeding practice and incidence of infectious diseases among children aged 6 to 18 months in northern mountainous Vietnam. *J Med Invest.* 57 (2010 Feb): 45-53.
- [5] Dat VD, Andy H, Colin W. Determinants of breastfeeding within the first six months post-partum in rural Vietnam. *J Pediatr Child Health.* 41 (2005): 338–343.
- [6] Hilary Wren. Knowledge, attitude and practice of breastfeeding women in Krong Kep Municipality, Cambodia. [Online] 2009. Available from: [<http://proquest.umi.com/pqdlink?did=1701676891&Fmt=14&VType=PQD&VInst=PRO D&RQT=309&VName=PQD&TS=1325076504&clientId=79356>].
- [7] Randa S, James A. Ten steps to successful breastfeeding: A summary of rationale and Scientific evidence. *Birth.* 23 (1996): 3.
- [8] Liubai L, Lan DTP, Hoa NT, Hiroshi U. Prevalence of breastfeeding and its correlate in Ho Chi Minh City, Vietnam. *Pediatrics International.* 44 (2002): 47-54.
- [9] Leia M, Hamisu M. Influences of knowledge and attitudes on exclusive breastfeeding practice among rural Jamaica mothers. *Birth.* 31 (2004): 4
- [10] Pornpai P, Moazzam A, Chiaki I, Panome V. Factors influencing breastfeeding in children less than 2 years of age in Laos PDR. *Journal of Paediatrics and Child Health.* 45 (2009): 487-492.
- [11] Fani L, Anthony K, Emmanoil G. Risk factors related to intention of breastfeed, early weaning and suboptimal duration of breastfeeding. *Acta Peadiatrica.* 96 (2007): 1441-1444.
- [12] Chia FH, Jung CF, Cheng YL, Huey SL. Factors influencing breast symptoms in breastfeeding women after Cesarean Section Delivery. *Asian Nursing Research.* 5 (2011): 88-98.