Exclusive Breastfeeding Self-Efficacy of mothers in Lao PDR

Rattanaxay Inthilath[1*], Khampheng Phongluxa[2], Cuong Pham V[3]

Abstract

Background: Exclusive breastfeeding is the most effective form of infant feeding for the first six months of life. Many mothers in different countries prematurely discontinue breastfeeding and Lao mothers are no exception. Maternal breastfeeding self-efficacy has been highlighted as an important psychometric factor for improving breastfeeding outcomes. However, self-efficacy in exclusive breastfeeding has not been extensively studied in Laos. As such, this study was carried out to assess self-efficacy and related factors on exclusive breastfeeding among mothers in Xaythany district, Laos.

Method: This was a cross-sectional study of mothers with children under one year of age in Xaythany district, Vientiane Capital. Multistage sampling techniques were used to select 151 mothers to participate in this study. The data was collected through face-to-face interviews using a structured questionnaire. Univariate and multiple logistic regressions were performed using STATA software.

Results: The average total score gained from the Breastfeeding Self-Efficacy Scale-Short Forms (BSES-SF) were determined as 56.52 ± 8.22, min = 31, max = 70. Slightly more than half (57%) of the respondents had high self-efficacy in exclusive breastfeeding. Factors associated with a high level of self-efficacy in exclusive breastfeeding were: the number receiving antenatal care (ANC) ($p<0.05$), mothers learning the benefits of exclusive breastfeeding ($p<0.001$), maternity leave ($p<0.01$), and mothers' expectation to breastfeed exclusively ($p<0.05$).

Conclusion: Exclusive breastfeeding self-efficacy amongst this sample was influenced by ANC services, an education in antenatal exclusive breastfeeding, the mothers' working status and the mothers' expectation to exclusively breastfeed. The findings of this study showed the need to support exclusive breastfeeding education for mothers during pregnancy. In particular, the benefits of exclusive breastfeeding are an opportunity to improve mothers' knowledge, attitudes, expectations and self-efficacy.

Keywords: Self-efficacy, factors influencing exclusive breastfeeding, mothers in Laos

[1]MPH student, Faculty of Public Health, University of Health Sciences, Lao PDR; Department of Inspection, Ministry of Health, Vientiane, Lao PDR
*Corresponding author: Rattanaxay INTHILATH, email: rattanaxay85@gmail.com
Full list of author information is available at the end of the article

Background

Exclusive breastfeeding is the most efficacious form of infant feeding for the first six months of life. If the baby was breastfed exclusively for six months, it will be healthier because breast milk provides all the energy and nutrients an infant needs. Moreover, breastmilk increases immunity to disease and nutrient resistance, prevents disease and does not cause malnutrition or obesity. Meanwhile breastfeeding establishes a strong physical and emotional link between mother and baby [1]. Studies have shown breastfeeding can reduce child mortality from preventable diseases by 13%, especially in children under five [2]. Its well documented salutary effects have resulted in international and national organizations promoting the initiation of breastfeeding and continuation exclusively for at least six months postpartum [3]. According to evidence, it brings numerous benefits [4] and indicates that exclusive practice is the most important preventive intervention with potentially the single largest impact on reducing child mortality. Sadly, only 38% of children aged under six months worldwide are exclusively breastfed [5].

In the Lao PDR, the government has launched several strategies and policies in an effort to improve exclusive breastfeeding since 2006. The Exclusive Breastfeeding Campaign was strongly promoted during 2009-2010 to improve child survival rates and enhance the development of children by increasing the proportion of mothers who exclusively breastfeed their new-borns for six months. Although Laos has made considerable progress toward improving the number of mothers who exclusively breastfeed their children up to six months of age, only 44.9%of babies receive this important good start in life [6], an increase of 4.5% compared to 2012. In 2017, Khammuane province showed the lowest number (14.4%) of infants exclusively breastfed for six months, followed by Savannakhet province (16.8%) and Vientiane Capital (21%) [6]. Additionally, the mortality rate for children under one year of age is still very high, almost 57 per 1,000 live births [6].

Mothers in many countries prematurely discontinue breastfeeding [7-9], and Lao mothers are not the exception. Recently, maternal breastfeeding self-efficacy has been highlighted as an important psychometric factor for improving breastfeeding outcomes [10]. Self-efficacy in exclusive breastfeeding refers to the mother's ability or confidence to breastfeed her new-born and influences her decisions regarding the 6 months of breastfeeding or how she will tackle any

breastfeeding issues [11]. Maternal breastfeeding confidence or self-efficacy is a modifiable variable that has been shown to predict a longer breastfeeding duration and increased exclusivity. The variable of self-efficacy can be modified and enhanced through prenatal breastfeeding education [12].

Women discontinue breastfeeding exclusively not because of their intention to formula feed, but because they have low self-efficacy [11]. In addition, researchers suggest that a lack of breastfeeding confidence is linked to discontinuing exclusive breastfeeding [13-15]. Few studies were found with research conducted to investigate maternal self-efficacy for exclusive breastfeeding in Laos whereas there were many studies in different countries. However, these earlier studies had radically different socio-economic contexts and cultures when compared to Laos. Therefore, the present study was conducted to determine breastfeeding self-efficacy in Xaythany district in order to identify mothers at risk of breastfeeding discontinuation and factors associated with it and the appropriate interventions that can be applied to maintain healthy behaviours.

Methods

Study setting

The study was performed in Xaythany district, Vientiane Capital, using a community-based sample of children under one year of age. Xaythany is one of nine districts in the Lao capital lying to the north-northeast of the city centre. In 2017 Xaythany had a total population of 196,565 people, with 98,350 females and an estimated 4,325 children under one year of age [16]. A list of all mothers in Xaythany with no maternal and child complications that interfered with breastfeeding was obtained from the community health centres' logbooks. Of these mothers, 151 were randomly selected to participate in the study.

Design and participants

This was a quantitative cross-sectional descriptive study. We randomly selected three community health centres (Dongbang, Xay and Huaxieng) from 13 community health centres in Xaythany district. Then we randomly selected 10 villages from among 21 villages in those areas (Nasala, Nontae and Phonetong villages from around the Dongbang Community Health Center; Danxang, Xay and Dontiw villages from around the Xay Community Health Centre; and Huaxieng,

Dongkuay, Phailom and Sanghuabor villages from around the Huaxieng Community Health Centre). With 452 eligible mothers from the community health centres' logbooks, 151 mothers were selected using a simple random sampling technique. Fifteen mothers were selected from nine villages and 16 from Sanghuabor village.

Measures

Respondents were asked about their socio-demographic profile, obstetric profile, knowledge of exclusive breastfeeding, infant feeding practices and the standard Dennis Breastfeeding Self-Efficacy Scale Short Form (BSES-SF). The BSES-SF contains 14 score items based on the Likert Scale from strongly agree (score 5) to strongly disagree (score 1). The tool was designed with positive statements as all the sentences begin with "I can always". The minimum and maximum breastfeeding self-efficacy scores were 14 and 70, respectively. If the score was above average, it meant that the person had a high breastfeeding self-efficacy [17].

Data collection

Data was collected through face-to-face interviews using a standard questionnaire with questions about factors associated with breastfeeding self-efficacy and the BSES-SF. The questionnaire was translated into the Lao language using forward and backward procedures. A pilot study with 30 eligible samples was conducted to determine the reliability of the scale and it yielded 0.94 for its Cronbach's alpha coefficient before the actual study. This study was approved by the Institutional Ethical Review Board of the Hanoi University of Public Health and by the Ethical Committee of the University of Health Sciences Laos. All mothers were read the informed consent form and then signed it before being interviewed.

Data analysis

Data entry was carried out using Epidata software. The data was then transferred to STATA software Version 14 which cleaned and analysed the data. For descriptive statistics, univariate and multiple logistic regressions were used to analyse the data. A 95% confidence interval (95% CI) and a significance level of $p \leq 0.05$ were set.

Results

Socio-demographic characteristics

The mean age of mothers participating in the study was 26.9±5.70 years. Among the participants, 91.4% were ethnic Lao with the remaining 8.6% being ethnic Hmong and all were literate in the Lao language. More than two thirds (66.9%) of the participants were housewives and 22.5% of them received a household income per year of less than 10,000,000 LAK (1,100 USD).

Exclusive breastfeeding self-efficacy

The mean and standard deviation of the exclusive breastfeeding self-efficacy score of mothers was 56.52±8.22 (Table 1).

Table 1: Self-Efficacy in Exclusive Breastfeeding

The mean and SD of exclusive breastfeeding self-efficacy score	n	The minimum score	The maximum score
56.52±8.22	151	31	70

Slightly more than half (57%) of the participants had a high self-efficacy in exclusive breastfeeding.

Maternal age

The mean age of participants was 26 years and the age range was 18 to 43 years. Slightly fewer than half of the mothers (46.7%) were aged between 18 to 25 years old and 54.3% were between 26 to 43 years old. A significant association was found between the mother's age and the level of breastfeeding self-efficacy. When we compared by using the mean age we found that the mothers who were older had better self-efficacy in exclusive breastfeeding than younger mothers by two times, COR=2, p=0.039, CI (1.03 - 3.83) (Table 2).

Number of mothers attending ANC sessions

Most participants (95%) attended ANC sessions four or more times. Mothers who recieved antenatal care four or more times had lower self-efficacy in exclusive breastfeeding than those

who attended fewer than four times, COR=0.4, p=0.021, CI (0.15 - 0.85) and AOR=0.3, p=0.025, CI (0.12-0.86) (Table 2).

Mothers who learnt the benefits of exclusive breastfeeding during ANC

A clear majority (59.0%) of the participants reported joining a class about the benefits of exclusive breastfeeding during ANC. Those mothers who had learnt about the benefits of exclusive breastfeeding during ANC had higher self-efficacy in exclusive breastfeeding than mothers who had not, COR=4.6, p=0.000, CI (2.32 - 9.33) and AOR=12.58, p=0.000, CI (4.43-35.67) (Table 2).

Mothers who learnt how to breastfeed during pregnancy

More than half (54%) of the participants reported they had not learnt how to breastfeed during pregnancy. Responses showed that those who had learnt were nearly two times higher in self-efficacy than those who had not, COR=1.9, p=0.044, CI (1.01-3.79) (Table 2).

Mothers who returned to work

In this study, one quarter of the participants were employed. From this group only 10.0% reported that they returned to work after their baby's age reached six months, while 15% returned to work between four to six months. More than two thirds (71.0%) of mothers who returned to work thought that they could continue exclusively breastfeeding. Mothers who had to return to work after six months had a lower self-efficacy than the unemployed mothers, COR=0.2, p=0.009, CI (0.06 - 0.67) and AOR=0.1, p=0.002, CI (0.02-0.41) (Table 2).

How long mothers expected to give breast milk to their babies

Two thirds (66%) of the participants expected that they could breastfeed exclusively for more than six months, while 29.0% were undecided and only 5.0% were concerned they could not succeed in exclusive breastfeeding. The exclusive breastfeeding self-efficacy score among mothers who expected to give breast milk to their babies for six months and above was higher than mothers who did not , AOR=3,5, p=0.015, CI (1.27-9.98) (Table 2).

Table 2: Predictive Factors Associated with Self-Efficacy in Exclusive Breastfeeding

Factors	Self-Efficacy (n = 151)		COR (95% CI)	P value	AOR (95% CI)	P value
	Low (%)	High (%)				
Age						
< 26	36 (52.2)	33 (47.8)	1		1	
≥ 26	29 (35.4)	53 (64.6)	2.0 (1.03-3.83)	0.039	-	-
Attended ANC during pregnancy						
< 4 times	9 (25.7)	26 (74.3)	1		1	
≥ 4 times	56 (48.3)	60 (51.7)	0.4 (0.15-0.85)	0.021	0.3 (0.12-0.86)	0.025
Learned the benefits of exclusive breastfeeding during ANC						
No	40 (64.5)	22 (35.5)	1		1	
Yes	25 (28.1)	64 (71.9)	4.6 (2.32-9.33)	0.000	12.5 (4.43-35.67)	0.000
Learned how to breastfeed during pregnancy						
No	41 (50.6)	40 (49.4)	1		1	
Yes	24 (34.3)	46 (65.7)	1.9 (1.01-3.79)	0.044	-	-
Mother returned to work outside						
Unemployed	43 (38.0)	70 (62.0)	1		1	
Before 6 months	10 (45.5)	12 (54.5)	0.7 (0.29 - 1.85)	0.516	-	-
After 6 months	12 (75.0)	4 (25.0)	0.2 (0.06-0.67)	0.009	0.1 (0.02-0.41)	0.002
How long the mother expected to give breast milk to baby						
Undecided	20 (45.5)	24 (54.5)	1		1	
< 6 months	7 (87.5)	1 (12.5)	0.1 (0.01-1.05)	0.055	-	-
≥ 6 months	38 (38.4)	61 (61.6)	1.3 (0.65-2.74)	0.427	3.5 (1.27-9.98)	0.015

Hosmer-Lemeshow test: (X^2 = 18.15, p = 0.25). Positive predictive value = 79.52%; Negative predictive value = 70.59%; Correctly classified 75.50%.

Discussion

This study used the BSES-SF to measure breastfeeding self-efficacy among mothers in Xaythany district. The mothers exhibited a moderate to high self-efficacy as indicated by the findings for self-efficacy in exclusive breastfeeding scores. The reliability of the questionnaire, translated from English to Lao, yielded a Cronbach's alpha coefficient of 0.91 when used in the actual study. These results approximate those of the original study in English by Dennis, which had a Cronbach's alpha coefficient for the BSES-SF of 0.94 and a mean score of 55.88 [17].

The examination of the relationship between demographic variables and the self-efficacy score, showed that our results indicate the individual and psychological factors are important in understanding mothers' confidence in their ability to exclusively breastfeed their infants.

Maternal age

Mothers of increasing age had a positive significant association with the level of exclusive breastfeeding self-efficacy, which was consistent with the findings of Dennis (2003) in which mothers who have experience in birthing and have had breastfed before tend to have a high breastfeeding self-efficacy [17]. With regard to the findings of Shorey, Chan, Chong and He (2014) it showed that older mothers tended to have higher parental self-efficacy than younger mothers [18]. Since two thirds of the mothers in this study were housewives, they were sure that they could spend all their time with their infants and breastfeed them. Consequently, they have been able to increase their breastfeeding self-efficacy score.

Number of mothers who received ANC during pregnancy

The results also indicated that mothers who received ANC four or more times presented lower breastfeeding confidence than the mothers who had attended ANC less than four times. This finding was inconsistent with other studies in Spain, Singapore, Sweden and the USA [19-22]. The study in northern Spain showed that the risk of cessation of breastfeeding was twice as high among those attending one to four antenatal classes compared to those attending five or more [19]. This contrasts with the findings of this study as more than half of the mothers who had attended ANC more than four times had low self-efficacy in exclusive breastfeeding. The respondents who had received ANC more frequently might have received a less supportive briefing on exclusive breastfeeding by the health care providers. Moudi et al. have shown that

supportive education provided by health care providers can increase the number of women who feed exclusively with breast milk and causes them to continue exclusive breastfeeding and to increase its duration [23]. In the case of providing breastfeeding education, it would appear that Lao health care providers' skills are in need of improvement so as to consider the needs of mothers better [24].

Mothers learnt the benefits of exclusive breastfeeding during ANC

The present study also found that the mothers' perception of the benefits of exclusive breastfeeding sharply increased with their confidence in their ability to breastfeed exclusively. This is consistent with a finding in Iran where mothers with an awareness of the importance of breastfeeding and the nutritional benefits of exclusive breastfeeding had higher levels of breastfeeding self-efficacy [25]. Other studies in Australia, Canada, and Japan also supported the findings of this study namely that there was a significant association between breastfeeding self-efficacy and breastfeeding education intervention [26-28].

Mothers returned to work

Furthermore, working mothers who had to return to work had lower self-efficacy scores than the mothers who always stayed with their children. Among those mothers, two thirds of the unemployed mothers were more likely to have higher self-efficacy in exclusive breastfeeding while only one quarter of the mothers who had to return to work after six months had high self-efficacy which is inconsistent with the findings of Hmone, Li, Agho, Alam and Dibley (2017) who found a mother's working status and returning to work were the main barriers to exclusive breastfeeding [29]. The findings in our study about work as a barrier to exclusive breastfeeding were similar to some studies which indicated that the longer women delayed returning to work after birth, the more likely they continued breastfeeding for at least four months [30]. Many working mothers planned in advance to stop breastfeeding and bring their babies to be cared for by someone else at another place rather than learn about how to combine breastfeeding and working [31].

How long mothers expected to give breast milk to their babies

The present study also found a relationship between the mothers' expectation for the length of time they would be giving breast milk to their babies and breastfeeding self-efficacy. A tripling

in the level of self-efficacy was found among mothers who expected to exclusively breastfeed their children compared to the undecided mothers. Slightly fewer than half of the mothers who had not decided presented a higher level of self-efficacy. Interestingly, two thirds of the mothers who expected to breastfeed exclusively for more than six months presented a higher self-efficacy in exclusive breastfeeding. Hence, they did not regard it as a negative burden, but rather a maternal duty. Regarding predictors for breastfeeding self-efficacy, the findings from our study are consistent with a study by Hinic (2016) who found that mothers intending to exclusively breastfeed and for a period of six or more months were both significant predictors of prenatal breastfeeding self-efficacy [32]. Meanwhile mothers who intended to breastfeed for less than six months were 2.4 times more likely to stop breastfeeding in 4 months than those who intended to breastfeed for more than 12 months [33]. Other studies have also shown that the effect of the intention to breastfeed is stronger when the decision to exclusively breastfeed is made before the birth compared to after the birth [34, 35]. This finding is consistent with the self-efficacy theory and the development of self-efficacy: the stronger the self-efficacy a woman has in her ability to be able to maintain exclusive breastfeeding, the higher her motivation is likely to be to initiate exclusive breastfeeding [36, 37].

Limitations of the study

Due to this study's cross-sectional nature, we were not able to draw conclusions about the casual effects in the relationship between self-efficacy and socio-demographic variables. The small sample size and representation from just ten villages in three community health centres in one geographic region limits the generalizability of our study results. The Khmu ethnic group was not represented even though they represented a significant portion locally and nationally of the population. Hence the sample group studied might not be representative of all mothers for the whole country. The amount of time that passed between the mothers' decisions and our study could result in recall bias. Although existing studies regarding the educational level of the mothers found a significant association between education levels and breastfeeding self-efficacy, this study did not focus on mothers with higher education, such as college or university, which can be interpreted as another limitation in this study.

Conclusion

The main outcome is the significant association between exclusive breastfeeding self-efficacy and the number of times a mother attended antenatal care sessions during pregnancy and learning the benefits of exclusive breastfeeding during pregnancy. Exclusive breastfeeding self-efficacy increased following a routine antenatal breastfeeding education intervention. In this study, breastfeeding self-efficacy was found to be low among mothers who did not learn the benefits of breastfeeding. This indicates that support in the antenatal period appears to be an important factor in determining breastfeeding self-efficacy and duration, and thus warrants further exploration. Therefore, the BSES-SF scale is a necessary tool for nurses and midwives at mother and childcare units to assess if mothers have low breastfeeding self-efficacy. Consequently, those identified can then be supported with antenatal exclusive breastfeeding education, especially regarding the benefits of exclusive breastfeeding and breast milk. Furthermore, mothers returning to work after six months were found to have a significant negative association with the level of self-efficacy in exclusive breastfeeding. However, among unemployed mothers the exclusive breastfeeding self-efficacy rate was found to be high. Maternity leave extending beyond 105 days after birth and the provision of breastfeeding rooms at the workplace will encourage mothers to increase their breastfeeding self-efficacy and influence mothers to continue breastfeeding for at least six months. Moreover, the mother's intention to breastfeed exclusively showed a significant positive association with self-efficacy in exclusive breastfeeding. Among mothers who expected to exclusive breastfed longer than six months there was a higher level of self-efficacy than mothers who did not. Practical programs can be developed to enhance the health workers' capacity to support women to become confident in exclusive breastfeeding.

The findings of this study can serve as the basis for further investigations of the gap in antenatal care services and the exclusive breastfeeding education program so as to improve the health care system in Laos, especially to enhance the rate of infants who are exclusively breastfed.

Abbreviations

ANC: Antenatal Care; AOR: Adjusted Odds Ratio; BSES-SF: Breastfeeding Self-Efficacy Scale-Short Form; CI: Confidence Interval; COR: Crude Odds Ratio; HUPH: Hanoi University of Public Health; ID: Identity Document; IRB: Institutional Ethical Review Board; LAK: Lao kip;

PDR: People's Democratic Republic; SD: Standard Deviation; USA: United States of America; USD: US dollar; WHO: World Health Organization.

Ethics and consent

This study was applied for and approved by the Ethical Committee of the University of Health Sciences Laos under ID number 111/19 and by the Institutional Ethical Review Board of the Hanoi University of Public Health (IRB of HUPH) under ID number 474/2018/YTCC-HD3. All mothers were informed about the purpose of the study and written informed consent was obtained from all participants before data collection.

Consent for publication

Not applicable

Availability of data and materials

The datasets and/or questionnaire of the study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests

Funding

This research supported by the Medical Committee Netherlands Vietnam (MCNV) in Laos and the European Commission.

Authors' contributions

RI, KP, and PVC designed the study, RI collected the data, analysed and interpreted the data, and drafted the manuscript; KP and PVC assisted in the statistical analysis and contributed to the final manuscript. All authors read and approved the final manuscript.

Acknowledgments

We appreciate the Medical Committee Netherlands Vietnam, the Hanoi University of Public Health, the Lao Tropical Medicine and Public Health Institute, the University of Health Sciences and all the mothers who cooperated with us in this study.

Authors' information

[1]MPH student, Faculty of Public Health, University of Health Sciences, Lao PDR; Department of Inspection, Ministry of Health, Vientiane, Lao PDR. [2]Department of coordination and research information management, Lao Tropical and Public Health Institute, Ministry of Health, Vientiane, Lao PDR. Email: khampheng_p@hotmail.com. [3]Center for Injury Policy and Prevention Research, Department of Public Health Informatics, Hanoi University of Public Health, Hanoi, Vietnam. Email: pvc1@huph.edu.vn.

***Corresponding author: Rattanaxay INTHILATH, email: rattanaxay85@gmail.com**

References:

1. WHO: **Infant and young child feeding: model chapter for textbooks for medical students and allied health professionals**. 2009.
2. Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, De Bernis L, Team LNSS: **Evidence-based, cost-effective interventions: how many newborn babies can we save?** *The Lancet* 2005, **365**(9463):977-988.
3. WHO: **Report of the expert consultation of the optimal duration of exclusive breastfeeding, Geneva, Switzerland, 28-30 March 2001**. 2001.
4. Grummer-Strawn LM, Rollins N: **Summarising the health effects of breastfeeding**. *Acta Paediatrica* 2015, **104**:1-2.
5. WHO: **Global targets 2025 to improve maternal infant and young child nutrition**. In.; 2018.
6. Lao Statistics Bureau: **Lao Social Indicator Survey II 2017**. In.; 2017.
7. Dennis CL: **Breastfeeding initiation and duration: A 1990-2000 literature review**. *Journal of Obstetric, Gynecologic, & Neonatal Nursing* 2002, **31**(1):12-32.
8. Mukuria AG, Kothari MT, Abderrahim N: **Infant and young child feeding update**. 2006.
9. Ryan AS: **The resurgence of breastfeeding in the United States**. *Pediatrics* 1997, **99**(4):e12-e12.
10. Meedya S, Fahy K, Kable A: **Factors that positively influence breastfeeding duration to 6 months: a literature review**. *Women and birth* 2010, **23**(4):135-145.
11. Dennis C-L: **Theoretical underpinnings of breastfeeding confidence: a self-efficacy framework**. *Journal of Human Lactation* 1999, **15**(3):195-201.
12. Eidman CK: **Enhancing breastfeeding self-efficacy through prenatal education**. 2011.
13. Taveras EM, Li R, Grummer-Strawn L, Richardson M, Marshall R, Rêgo VH, Miroshnik I, Lieu TA: **Opinions and practices of clinicians associated with continuation of exclusive breastfeeding**. *Pediatrics* 2004, **113**(4):e283-e290.
14. Taveras EM, Capra AM, Braveman PA, Jensvold NG, Escobar GJ, Lieu TA: **Clinician support and psychosocial risk factors associated with breastfeeding discontinuation**. *Pediatrics* 2003, **112**(1):108-115.
15. Li R, Fein SB, Chen J, Grummer-Strawn LM: **Why mothers stop breastfeeding: mothers' self-reported reasons for stopping during the first year**. *Pediatrics* 2008, **122**(Supplement 2):S69-S76.

16. Lao Statistics Bureau: **Results of population and housing census 2015**. *Vientiane: Lao Statistics Bureau* 2016.
17. Dennis CL: **The breastfeeding self-efficacy scale: Psychometric assessment of the short form**. *Journal of Obstetric, Gynecologic, & Neonatal Nursing* 2003, **32**(6):734-744.
18. Shorey S, Chan SWC, Chong YS, He HG: **Maternal parental self-efficacy in newborn care and social support needs in S ingapore: a correlational study**. *Journal of clinical nursing* 2014, **23**(15-16):2272-2283.
19. Artieta-Pinedo I, Paz-Pascual C, Grandes G, Bacigalupe A, Payo J, Montoya I: **Antenatal education and breastfeeding in a cohort of primiparas**. *Journal of advanced nursing* 2013, **69**(7):1607-1617.
20. Su L-L, Chong Y-S, Chan Y-H, Chan Y-S, Fok D, Tun K-T, Ng FS, Rauff M: **Antenatal education and postnatal support strategies for improving rates of exclusive breast feeding: randomised controlled trial**. *Bmj* 2007, **335**(7620):596.
21. Rosen IM, Krueger MV, Carney LM, Graham JA: **Prenatal breastfeeding education and breastfeeding outcomes**. *MCN: The American Journal of Maternal/Child Nursing* 2008, **33**(5):315-319.
22. Persson EK, Fridlund B, Kvist LJ, Dykes AK: **Mothers' sense of security in the first postnatal week: interview study**. *Journal of advanced nursing* 2011, **67**(1):105-116.
23. Moudi A, Tafazoli M, Boskabadi H, Ebrahimzadeh S, Salehiniya H: **Comparing the effect of peer support and training by healthcare providers on women's breastfeeding self-efficacy**. *Journal of Midwifery and Reproductive Health* 2016, **4**(1):488-497.
24. Damstra KM: **Improving breastfeeding knowledge, self-efficacy and intent through a prenatal education program**. 2012.
25. Ansari S, Abedi P, Hasanpoor S, Bani S: **The Effect of Interventional Program on Breastfeeding Self-Efficacy and Duration of Exclusive Breastfeeding in Pregnant Women in Ahvaz, Iran**. *International Scholarly Research Notices* 2014, **2014**:510793-510793.
26. Otsuka K, Taguri M, Dennis C-L, Wakutani K, Awano M, Yamaguchi T, Jimba M: **Effectiveness of a breastfeeding self-efficacy intervention: do hospital practices make a difference?** *Maternal and child health journal* 2014, **18**(1):296-306.
27. Noel-Weiss J, Rupp A, Cragg B, Bassett V, Woodend AK: **Randomized controlled trial to determine effects of prenatal breastfeeding workshop on maternal breastfeeding self-efficacy and breastfeeding duration**. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2006, **35**(5):616-624.
28. Nichols J, Schutte NS, Brown RF, Dennis C-L, Price I: **The impact of a self-efficacy intervention on short-term breast-feeding outcomes**. *Health Education & Behavior* 2009, **36**(2):250-258.
29. Hmone MP, Li M, Agho K, Alam A, Dibley MJ: **Factors associated with intention to exclusive breastfeed in central women's hospital, Yangon, Myanmar**. *International breastfeeding journal* 2017, **12**(1):29.
30. Hawkins SS, Griffiths LJ, Dezateux C, Law C, Group MCSCH: **The impact of maternal employment on breast-feeding duration in the UK Millennium Cohort Study**. *Public health nutrition* 2007, **10**(9):891-896.

31. Thussanasupap B, Lapvongwatana P, Kalampakorn S, Spatz DL: **Effects of the Community-Based Breastfeeding Promotion Program for Working Mothers: A Quasi-experimental Study**. *Pacific Rim International Journal of Nursing Research* 2016, **20**(3):196-209.
32. Hinic K: **Predictors of breastfeeding confidence in the early postpartum period**. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2016, **45**(5):649-660.
33. Blyth RJ, Creedy DK, Dennis CL, Moyle W, Pratt J, De Vries SM, Healy GN: **Breastfeeding duration in an Australian population: the influence of modifiable antenatal factors**. *J Hum Lact* 2004, **20**(1):30-38.
34. Scott J, Landers M, Hughes R, Binns C: **Factors associated with breastfeeding at discharge and duration of breastfeeding**. *Journal of paediatrics and child health* 2001, **37**(3):254-261.
35. O'Brien M, Fallon A: **The effect of breastfeeding self-efficacy on breastfeeding duration**. *Birth Issues* 2005, **14**(4):135-142.
36. Bandura A: **Self-efficacy: toward a unifying theory of behavioral change**. *Psychol Review* 1977, **84**(2):191-215.
37. Dennis CL, Faux S: **Development and psychometric testing of the Breastfeeding Self-Efficacy Scale**. *Research in nursing & health* 1999, **22**(5):399-409.