Original Article

Vajira Med J
Journal of Urban Medicine

Prevalence of 2-Year Breastfeeding among Thai Mothers and Associated Factors of Achievement

Sutheera Uerpairojkit MD[1], Siriwan Tangjitgamol MD[2,3], Kanokorn Leepetcharut MD[1], Chutiman Puengtomwattanakul RN[1], Natapon Ativanichayapong BSc[3]

[1] *Pediatrics Center, MedPark Hospital, Bangkok 10110, Thailand*
[2] *Obstetrics and Gynecology Center, MedPark Hospital, Bangkok 10110, Thailand*
[3] *Research Center, MedPark Hospital, Bangkok 10110, Thailand*

ABSTRACT

OBJECTIVE: To assess 2-year breastfeeding (BF) rate and factors for the achievement of 2-year BF.

METHODS: This cross-sectional study was conducted between June 27 and December 11, 2023 by an electronic online questionnaire. Thai mothers with babies aged more than 2 years who registered on Facebook page of one author and could recall their infant's 2-year feeding pattern were included in the study. Participating mothers completed a questionnaire covering personal data, history of BF pattern of previous and current child, and knowledge and attitude toward BF. The rate of 2-year BF and factors for the achievement were analyzed by univariate and multivariate analyses.

RESULTS: The included mothers had a mean age of 36.2 ± 4.7 years, and 94.1% reported BF for at least 2 years. Among favorable features, only four exhibited a significant association with 2-year BF according to the univariate analysis: age > 36 years (odds ratio (OR) 3.07, 95% confidence interval (CI) 1.90-4.95, p-value < 0.001), being self-employed or working from home (OR: 2.60, 95% CI 1.64-4.10, p-value < 0.001), used contraception within 2 years postpartum (OR: 2.07, 95% CI 1.08-3.97, p-value = 0.025), and good history of 2-year BF in their previous child (OR: 4.71, 95% CI 1.96-11.28, p-value < 0.001). Multivariate analysis revealed that only the mothers with a history of 2-year BF in their previous child was the only independent feature associated with their current 2-year BF (adjusted OR: 5.25, 95% CI 1.61-17.07, p-value = 0.006).

CONCLUSION: The results of this study revealed a high rate of 2-year BF among the studied mothers. The only independent factor for a 2-year BF was a mother's history of 2-year BF with their previous child.

KEYWORDS: attitude, breastfeeding, history of breastfeeding, knowledge

INTRODUCTION

In 2019, the World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF), recommended nourishing infants with breast milk alone, that is, without any other food or liquid, during the first 6 months, or "exclusive breastfeeding"[1]. In 2021, the WHO also recommended that breastfeeding (BF) be continued along with complementary food for up to 2 years of age or beyond[2].

BF offers several benefits to children and mothers[3]. An exclusive BF (EBF) and proper nutrition during the first 2 years of life of children can improve their growth and development, boost intelligence, increase the likelihood of attained higher education and income during adulthood, and lower the risk of obesity and diabetes mellitus.

Corresponding author: Siriwan Tangjitgamol, siriwanonco@yahoo.com
Received: 19 June 2024
Revised: 22 July 2024
Accepted: 7 August 2024
Vajira Med J 2024;68(4):e269544
http://dx.doi.org/10.62691/vmj.2024.269544

In addition, breast milk contains immune components that reduce the risk of infection, which makes it an excellent nutrient source. The benefits of long-term BF to mothers have led to a decreased incidence of numerous diseases, e.g., ovarian and breast cancers, type II diabetes, etc.

According to the Global Breastfeeding Collective group, at least 60% of children should be continually breastfed until 2 years of age by 2030[4]. However, a systematic review and meta-analysis of data from 11 studies in 2013 indicated that the prevalence of 2-year BF of age or beyond reached only 33%[5]. A longitudinal study from China revealed the declined rate of 2-year BF in low-middle-income countries from 56.2% in 2010–2018 to 45% in 2023[6].

Thailand has been established a national BF promotion scheme in for several decades through the Baby-Friendly Hospital Initiative program (WHO Baby-Friendly Hospital Initiative 2020). According to UNICEF, 29% of mothers in Thailand exclusively breastfeed their babies in the first 6 months of life; this value is exceedingly below the Global Nutrition Target of 50% exclusive BF by 2025[7]. The low rate of exclusive BF in the country led to a low rate of 2-year BF. This outcome was evidenced in a study in Thailand showcasing that 9.9% of mothers can extend BF between 18–24 months[8].

Several factors certainly influence BF practice. Such factors include national policies, economic status, cultural norms, lifestyles, and support from family members and healthcare providers. In Thailand, specific characteristics of mothers and their families, e.g., work, financial status, educational background, cultural beliefs, knowledge, attitude, attention, etc., may also influence the accomplishment of such goal[9].

The medical staff's practice in each hospital or area also determines the success of BF program. Our hospital adheres rigorously to the "WHO Ten Steps to Successful Breastfeeding." Notably, mothers having service in the Pediatrics Department have exhibited a high rate of exclusive BF. Although most mothers who brought their babies for a follow-up visit in our hospital were still BF until 2 years, we wanted to expand the assessment of the 2-year BF rate to a broader population. This study aimed to assess the rate of 2-year BF, personal characteristics and features of mothers, and factors determining the success or failure of 2-year BF.

METHODS

This cross-sectional survey project received approval from the Institutional Review Board (COA 002/2022) of the hospital on March 30, 2022. The inclusion criteria were Thai mothers with babies aged more than 2 years and can recall their infant's 2-year feeding pattern. A solicit document regarding the study objectives and inclusion criteria was posted on the Facebook page of the first author (S.U.; https://www.facebook.com/SuthiRaXeuxPhirocnKic). Those who were interested in participating in this work registered and provided their electronic mail addresses and/or phone numbers. The research assistants verified the age of the mothers' current child and sent questionnaires to those who qualified in the inclusion criteria via electronic mail from June 27th to December 11th, 2023. Data retrieval was performed in January 2024. Mothers who did not confirm, had incomplete information regarding the duration of BF, or did not respond to the e-mail were excluded from the study.

The questionnaire comprised four parts: Part 1, personal and obstetrical data; Part 2, BF pattern; Part 3, knowledge comprising 15 statements on BF, breast milk, and formula milk requiring an answer of "correct," "incorrect," or "not sure"; Part 4, attitude toward BF consisting of 10 statements on BF that require the following responses: strongly disagree (score 1), disagree (score 2), neutral (score 3), agree (score 4), and strongly agree (score 5). Prior to the conduct of the study, the Thai version of the questionnaire on knowledge and attitude was deliberated over, discussed, and revised until consensus among the researchers was reached. The final set of

questionnaires was validated by three experts in the fields not involved in the study (one obstetrician and two pediatricians) and tested for reliability using 30 mothers having the same characteristics as the participants. The reliability of Cronbach's alpha coefficient was analyzed. The knowledge and attitude questionnaires had reliability of 0.819 and 0.907, respectively.

The following personal and obstetrical data were collected: age, marital status, parity, education, occupation, workplace, duration of daily work (hours), monthly family income, route of delivery of the current child, gestational age, maternity leave, and BF pattern within 6 months and 2 years after delivery of the previous (if any) and current children, and the time after delivery when they stopped BF their current child. Problems related to BF of the current child were also collated. EBF was defined if the mother had provided only BF, without any other food or liquid, up to 6 months[1]. 2-year BF was defined when the mother had provided breast milk to their children up to 2 years regardless of the frequency[2].

Statistical analyses were performed using IBM SPSS Statistics for Windows, Version 28.0 (IBM Corporation, Armonk, NY, USA). Continuous variables are presented as mean ± standard deviation for normally distributed data, or else with median and interquartile range (IQR), and categorical variables as frequency and percentage. The knowledge and attitude questionnaires had total scores of 15 and 50, respectively.

Comparison involved grouping the data as follows: marital status (married or single/ divorced); parity (primiparous or multiparous); education (lower than bachelor's or bachelor's degree/ higher); occupation (no occupation/ housewife or employee/business); monthly family income as ≥ or < 2,700 USD (average familial monthly income in Thailand)[10]; workplace (work from home or office work); duration (daily work as ≤ 8 hours or longer); BF of current child (EBF for ≥ 6 months or sooner or BF until/ after 2 years or sooner); history of 2-year BF (good if all prior children had continued BF until 2 years; poor if all prior children had not achieved 2-year BF; and mixed if the achievement was not consistent for each child); knowledge and attitude on BF (≥ 80% or lower score) for each aspect based on Bloom's cutoff point[11]. A score ≥ 80% indicates good knowledge or good attitude.

Chi-square or Fisher Exact Test was performed for data comparison as appropriate. Univariate analysis was conducted to determine factors that showed association with the successful achievement or failure of 2-year BF. Factors that presented statistical significance in the univariable analysis were subjected to multivariable analysis. A p-value < 0.05 was considered statistically significant.

RESULTS

Among 3,572 mothers who registered on the Facebook page, 61 mothers with babies younger than 2 years and 1,929 who were unreachable for information verification were excluded. Analyses included data from 1,582 respondents who met the inclusion criteria.

Table 1 provides the basic characteristics of the respondents, whose mean age was 36.2 ± 4.7 years. The majority were married (95.9%), and nearly two-thirds had only 1 child (64%). The median age of a current child was 31 months (IQR 24, 42 months). Almost all participants reported having a bachelor's degree or higher (93.7%), and approximately half were employees or receive a monthly family income < 2,700 USD (56.2%). Approximately half of the participants self-employed or working from home (50.1%), and slightly over two-thirds work for ≤ 8 hours per day (68.9%). A total of 59.7% of the mothers used barrier contraception methods within 2 years postpartum, followed by those who used hormones (22.1%) and those who did not use contraception (18.2%).

Table 1 Characteristic features and details of pregnancy (n = 1,582)

Features	n	%
Age group		
≤ 36 years	642	40.6
> 36 years	636	40.2
NA	304	19.2
Marital status		
Married	1,517	95.9
Divorced/Separated	65	4.1
Parity		
Primipara	1,013	64.0
Multipara	569	36.0
Education		
Bachelor's degree or higher	1,483	93.7
Lower than bachelor's degree	99	6.3
Monthly family income, USD*		
≥ 2,700 USD	693	43.8
< 2,700 USD	889	56.2
Workplace		
Self-employed/ housework	793	50.1
Employee	789	49.9
Daily work hours		
> 8 hours	328	20.7
≤ 8 hours	1,089	68.9
NA	165	10.4
Contraception within 2 years postpartum**		
No contraception	303	18.2
Barrier	991	59.7
Hormonal	366	22.1

Abbreviations: n, number; NA, not available; USD, United States dollar
* Average Thai monthly family income 2023 was 2,700 USD (https://www.timechamp.io/blogs/what-is-the-average-salary-in-thailand-and-trend-analysis/).
** One mother may use one or more contraception.

Table 2 reveals the history and BF patterns of the mothers in relation to their previous and current children and the issues associated with the BF of the current child. Excluding primiparous respondents, among 516 mothers, 59.1% showed a good history of BF of their previous child for at least 2 years, 6.2% reported mixed findings, and 34.7% indicated poor results. For the current child, 94.8% had achieved EBF, whereas 5.2% had no BF at all or had mixed breast milk with other food within 6 months after birth. A total of 94.1% reported BF for at least 2 years, with a median duration equal to 31 months (IQR: 25 and 40 months). On the other hand, 5.9% of those who stopped BF prior to 2 years achieved a median stopping time of 14 months (IQR: 12 and 17 months). In our study, slightly more than half of the respondents reported one or more challenges related to BF of the current child, including maternal factors (61.9%), child's health (27.1%), and other reasons (11%).

Table 2 Pattern of breastfeeding of the mother

Breastfeeding and related problems	n	%
History of 2-year breastfeeding in previous child[a] (n = 516)		
Good	305	59.1
Mixed	32	6.2
Poor	179	34.7
Current breastfeeding pattern (n = 1,582)		
Exclusive breastfeeding to 6 months		
No	82	5.2
Yes	1,500	94.8
Breastfeeding ≥ 2 years		
No	93	5.9
Yes	1,489	94.1
Problem related to breastfeeding		
None	749	47.3
Yes[b]	833	52.7
Maternal factor[c]	741	61.9
Infant/child factor[d]	325	27.1
Others[e]	132	11.0

a. History of 2-year BF in previous child was defined as good if all prior children had continued BF until 2 years; poor if all prior children had not achieved 2-year BF; and mixed if the achievement was not consistent for each child.
b. The 833 mothers who had problems related to BF may have one or more problems.
c. Maternal factors included: breast tenderness/ lump/ mastitis (n = 914), cracked nipple (n = 354), fatigue (n = 263), inadequate breastmilk (n = 151), postpartum depression (n = 7), taking medication for medical problems (n = 10), and pregnancy (n = 106).
d. Infant/ child factor included: poor weight gain (n = 162), health problem (n = 238).
e. Others included: separated from baby (n = 24), no assistance/ support (n = 113).

The mothers were also assessed for their knowledge and attitudes regarding BF. All respondents had a mean knowledge score of 12.9 ± 1.4, with food knowledge observed in 87% of the participants. In regard to attitudes, the respondents had a mean score of 47.3 ± 3.4, with 57.3% exhibited good attitudes.

Investigations were also performed on the association among the characteristics of mothers, history of 2-year BF in previous child, history of EBF in current child, knowledge, and attitudes (table 3). Univariate analysis revealed the significant features associated with 2-year BF achievement compared with those of other groups: age > 36 years (51.6% vs 48.4%: odds ratio (OR) 3.07, p-value < 0.001), self-employed or working from home (51.4% vs 48.6%: OR 2.60, p-value < 0.001), used contraception within 2 years postpartum (75.4% vs 24.6%: OR 2.07, p-value = 0.025), and had good history of 2-year BF of their previous child (61.1% vs 32.4%: OR 4.71, p-value < 0.001). Although certain mothers who were married, primiparous, had bachelor's degree education or higher, earning < 2,930 USD monthly family income, had ≤ 8 hours daily work hours, and had knowledge or attitudes ≥ 80% of total scores had higher rates of 2-year BF than the other comparative groups, the differences showed no statistical significance. One contradictory finding in our study was that the mothers who experienced no problems related to BF attained a lower achievement in 2-year BF. We explored and discovered the favorable features of this group of mothers, including higher education or good knowledge and attitudes (data not shown). Multivariable analysis unveiled that only the mothers with history of 2-year BF of their previous child accounted for the only independent feature associated with 2-year BF (adjusted OR 5.25, p-value = 0.006).

Table 3 Features associated with 2-year breastfeeding patterns

Feature Column	n	Achieved 2-year breastfeeding, n (%)		[c]OR (95% CI)	P-value	[a]OR (95% CI)	P-value
Age, mean (year) (n = 1,278)							
> 36	636	612	(51.6)	3.07 (1.90-4.95)	< 0.001	1.66 (0.60-4.61)	0.328
≤ 36	642	573	(48.4)				
Marital status (n = 1,582)							
Married	1,517	1,428	(95.9)	1.05 (0.37-2.96)	0.790	-	
Divorced/separated	65	61	(4.1)				
Parity (n = 1,582)							
Primipara	1,013	952	(63.9)	1.08 (0.69-1.67)	0.747	-	
Multipara	569	537	(36.1)				
Education (n = 1,582)							
Higher or bachelor	1,483	1,397	(93.8)	1.24 (0.56-2.747)	0.603	-	
< Bachelor's degree	99	92	(6.2)				
Work (n = 1,582)							
Self-employed/ housework	793	766	(51.4)	2.60 (1.64-4.10)	< 0.001	1.99 (0.73-5.45)	0.178
Employee	789	723	(48.6)				
Monthly family income, USD (n = 1,582)							
< 2,700 USD	889	832	(55.9)	1.25 (0.81-1.92)	0.307	-	
≥ 2,700 USD	693	657	(44.1)				
Daily work hours (n = 1,417)							
≤ 8 hours	1,089	1,025	(77.2)	1.38 (0.86-2.21)	0.182	-	
> 8 hours	328	302	(22.8)				
Problem related to breastfeeding (n = 1,582)							
None	749	709	(47.6)	1.20 (0.79-1.84)	0.388	-	
Yes	833	780	(52.4)				
Contraception within 2 years postpartum (n = 1,269)							
Yes	966	896	(75.4)	2.07 (1.08-3.97)	0.025	1.35 (0.27-6.59)	0.715
No	303	292	(24.6)				
History of 2-year breastfeeding in previous child (n = 516)							
Good history	305	298	(61.1)	4.71 (1.96-11.28)	< 0.001	5.25 (1.61-17.07)	0.006
Mixed/ poor history	211	190	(32.4)				
Exclusive breastfeeding to 6 months (n = 1,582)							
Yes	1,500	1,416	(95.1)	2.08 (1.01-4.30)	0.053	-	
No	82	73	(4.9)				
Knowledge score (n = 1,582)							
≥ 80%	1,370	1,295	(87.0)	1.60 (0.93-2.73)	0.082	-	
< 80%	212	194	(13.0)				
Attitude score (n = 1,582)							
≥ 80%	905	853	(57.3)	1.06 (0.69-1.61)	0.795	-	
< 80%	677	636	(42.7)				

Abbreviations: CI, confidence interval; n, number; [a]OR, adjusted odds ratio; [c]OR, crude odds ratio; USD, United States dollar

DISCUSSION

Our study revealed that the prevalence of BF for at least 2 years was 94.1%. This value was considerably higher than 7.5% to 20.9% prevalence reported by four previous studies from Asia, South America, and Australia continents[12-15] and 33% from a recent systematic review[5].

The high rate of 2-year BF in our study can be attributed to a few possible reasons. Such finding can be attributed to the membership of all participants of this study in a fan page called "Breastfeeding Facebook" of the author (S.U.). Mothers should extend additional attention to the health of their children or have received knowledge from this platform, influencing their behavior of BF. In addition, Thai mothers who participated were also found in prior reports showing that mothers in Asian countries were more likely to breastfeed their child up to 24 months[5,15] than those with white skin[13]. Notably, this finding may be attributed to differences in cultural backgrounds.

We also explored and discovered favorable features associated with 2-year BF (table 3). The four features that presented significantly better achievement than the other groups comprised age > 36 years, being self-employed or working from home, contraception use, and a good history of 2-year BF of the previous child, which was the only independent favorable feature.

Old age as a favorable feature agreed with the finding of Santana et al., who observed from their systematic review that old age achieved the highest percentages of associations with BF for 12 months or longer[16]. Other authors proposed the great emotional stability of old-age mothers, which allows them to deal with any peri- and postpartum period, in contrast to younger-age mothers who frequently experienced postpartum depression that resulted in the immediate discontinuation of BF[17]. By contrast, other research indicate that older mothers had discontinued BF before 12 months[18] or after 2 years[14] due to high positions at work, additional work pressure, and great social responsibility[14].

For the positive influence of being self-employed or working from home, previous studies reported that being a full-time mother/freelancer/working from home/1-year leave from work positively influenced the 2-year BF[13-15]. These women should be more available for childcare and BF rather than those who work outside their homes as an employee, which can interrupt BF[14]. Others also discovered that mothers with daytime work can continue BF for at least 12 months[18]. We also observed that short daily working hours (≤ 8 hours) was a favorable factor although not statistically significant.

Contraception use within 2 years postpartum was also a significant favorable factor in our study. No prior research examined the effect of contraceptive use and 2-year BF. We proposed that these mothers who temporarily (any means of barrier or hormone) or permanently (by tubal sterilization) refused to have another child intended to provide full care to their child.

The last feature, which had a significant effect on 2-year BF and was the only independent favorable factor in our study, was reported a good history of 2-year BF of the previous child. We can identify one previous study which, although had a shorter period of assessment, also reported that previous experience of BF for at least 12 months was associated with prolonged BF to > 12 months for the current child[18]. This finding can be explained as a pleasurable experience in prolonged BF of previous child that can lead to the same pattern of BF.

Despite the lack of a significant association with 2-year BF and some features demonstrated in our study, they merited a description and were compared with previous reports. Some were consistently reported in other studies: being married[16] or with support from family members[14], exclusive BF of the baby until 4 months or 6 months old[13-14], higher education[14-16,19], and good knowledge and/ or attitude about BF[14,20-21].

The plausible reasons were married mothers receive support in childcare, good experience from exclusive BF leading to more confidence, or having good knowledge/attitudes about breast milk should drive them to achieving a positive performance.

Nevertheless, a few other favorable features in our study had been inconsistently reported in previous research. These features include lower income[13,16], which was in contrast with others who observed better results in mothers with higher income[14]. The actual reasons for the association of high or low income and achievement are unknown. However, possible reasons for these 2 contradictory findings may be due to less work requirements with more available time leading to more dedication to BF in high income mothers whereas mothers with lower family incomes are possibly concerned regarding the cost of formula milk. In contrast to previous studies which found multiparity as a favorable feature by some authors[15-16,19], we found primiparity to be more favorable. Again, the actual reason cannot be explained, and thus, we proposed that the mothers having their first child should show enthusiasm in childcare and raising.

One contradictory finding in our study was to the mothers with problems related to BF tended to present better achievement with the 2-year BF. This may be due to the mothers in this study having high education as was described by some authors that highly knowledgeable mothers may possess management skills vital to improving their BF, especially in the presence of obstacles or problems[22].

We recognized some limitations encountered in our study. First, the high rate of 2-year BF in our study may not represent data of general Thai mothers because the participants were the Fan page members of one of the authors who is a pioneer supporting BF in our country. Second, all data were obtained from the participating mothers themselves and could not be verified except the age of their child which were re-queried for confirmation. Third, the questionnaire did not include detailed features or actual reasons for continuation of BF until or beyond 2 years or stopping prior to that. Fourth, a recall bias especially in remote past (advanced age of the child) might be one factor which affected the actual duration the women had breastfed their children. Finally, some of the features assessed possibly interacted with or influenced each other. These composite factors might have resulted in the variations in the effect of features obtained across studies.

Nevertheless, this study presented some strengths. This work is the first in Thailand to address the rate of 2-year BF among Thai mothers. Several possible influencing factors were also determined. Most findings were consistent with those of previous studies should be data on the BF situation of this group of Thai mothers.

CONCLUSION

Good practice of BF was achieved, and either a good history in BF of the previous child or exclusive BF of the current child had a high chance of success of 2-year BF. Emphasis of the favorable and unfavorable features demonstrated in our study will encourage or support mothers to attain a good practice of 2-year BF. Further study for the exploration and focus on each of these factors in detail will enable its implementation in clinical practice.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

ACKNOWLEDGEMENT

This work was granted by MedPark Hospital Research Fund. The authority who provided funding had no involvement with the study conduct including data collection, analysis, data presentation, manuscript preparation, and the process of publication submission. Furthermore, the authors thank the colleagues in Pediatrics and Women's Health Centers for general administrative support.

DATA AVAILABILITY STATEMENT

Please contact the corresponding author for data availability.

REFERENCES

1. World Health Organization, United Nations Children's Fund. Global breastfeeding scorecard, 2019: increasing commitment to breastfeeding through funding and improved policies and programs [internet]. 2019 [cited 2023 Mar 15]. Available from: https://apps.who.int/iris/handle/10665/326049
2. World Health Organization. Infant and young child feeding [internet]. 2023 [cited 2024 May 8]. Available from: https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding
3. Victora CG, Bahl R, Barros AJ, França GV, Horton S, Krasevec J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet 2016;387(10017):475-90.
4. Global Breastfeeding Collective. Global breastfeeding scorecard [internet]. 2023 [cited 2024 May 8]. Available from: https://www.unicef.org/media/150586/file/Global%20breastfeeding%20scorecard%202023.pdf
5. Delgado C, Matijasevich A. Breastfeeding up to two years of age or beyond and its influence on child growth and development: a systematic review. Cad Saude Publica 2013;29(2):243-56.
6. Zong X, Wu H, Zhao M, Magnussen CG, Xi B. Global prevalence of WHO infant feeding practices in 57 LMICs in 2010-2018 and time trends since 2000 for 44 LMICs. EClinical Medicine 2021;37:100971.
7. UNICEF Thailand. UNICEF finds 1 in 3 mothers in Thailand exclusively breastfeed their babies, far below target [internet]. 2023 [cited 2024 May 9]. Available from: https://www.unicef.org/thailand/press-releases/unicef-finds-1-3-mothers-thailand-exclusively-breastfeed-their-babies-far-below
8. Keskomon T, Pansang K, Poungjuntaradej N, Klinsukon C, Boonleart D, Thongkam P, et al. Factors affecting breastfeeding during 6 months to 2 years of adolescent at police general hospital. JRTAN 2022;23(3):494-503.
9. Yimyam S, Morrow M, Srisuphan W. Role conflict and rapid socio-economic change: breastfeeding among employed women in Thailand. Soc Sci Med 1999;49(7):957-65.
10. Time Champ. What is the average salary in Thailand? And trend analysis [internet]. 2023 [cited 2024 Jul 22]. Available from: https://www.timechamp.io/blogs/what-is-the-average-salary-in-thailand-and-trend-analysis/
11. Bloom BS. Learning for mastery. Instruction and curriculum. Regional Education Laboratory for the Carolinas and Virginia, topical papers and reprints, number 1. Eval Comment 1968;1(2):12.
12. Doma H, Tran TD, Tran T, Hanieh S, Tran H, Nguyen T, et al. Continuing breastfeeding for at least two years after birth in rural Vietnam: prevalence and psychosocial characteristics. Int Breastfeed J 2021;16(1):78.
13. Vieira GO, de Oliveira Vieira T, da Cruz Martins C, de Santana Xavier Ramos M, Giugliani ERJ. Risk factors for and protective factors against breastfeeding interruption before 2 years: a birth cohort study. BMC Pediatr 2021;21(1):310.
14. Yang Z, Ding Y, Song S, Zhang Y, Li A, Su M, et al. Factors affecting the breastfeeding duration of infants and young children in China: a cross-sectional study. Nutrients 2023;15(6):1353.
15. Scott J, Ahwong E, Devenish G, Ha D, Do L. Determinants of continued breastfeeding at 12 and 24 months: results of an Australian cohort study. Int J Environ Res Public Health 2019;16(20):3980.
16. Santana GS, Giugliani ERJ, Vieira TO, Vieira GO. Factors associated with breastfeeding maintenance for 12 months or more: a systematic review. J Pediatr (Rio J) 2018;94(2):104-22.

17. Agnafors S, Bladh M, Svedin CG, Sydsjö G. Mental health in young mothers, single mothers and their children. BMC Psychiatry 2019;19(1):112.
18. Mendes MS, Schorn M, Santo LCDE, Oliveira LD, Giugliani ERJ. Factors associated with breastfeeding continuation for 12 months or more among working mothers in a general hospital. Cien Saude Colet 2021;26(11): 5851-60.
19. Kozachenko J, Kivite-Urtane A, Berzina F, Stolcere IE, Lazdane G. The association of longer breastfeeding duration and socioeconomic, pregnancy, childbirth and postpartum characteristics. Medicina (Kaunas) 2024;60(5):792.
20. Rostamkhan S, Lakeh NM, Asiri S, Leili EK. Breastfeeding up to two years of age and its' associated factors based on behaviors, attitudes, subjective norms, and enabling factors (BASNEF) model. J Holist Nurs Midwifery 2020;30(1):9-16.
21. Paramashanti BA, Dibley MJ, Huda TM, Prabandari YS, Alam NA. Factors influencing breastfeeding continuation and formula feeding beyond six months in rural and urban households in Indonesia: a qualitative investigation. Int Breastfeed J 2023;18(1):48.
22. Jacobzon A, Engström Å, Lindberg B, Gustafsson SR. Mothers' strategies for creating positive breastfeeding experiences: a critical incident study from Northern Sweden. Int Breastfeed J 2022 8;17(1):35.