

Effectiveness of Husbands' Support Exclusive Breastfeeding Facebook Programme During the COVID-19 Pandemic

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Introduction: The exclusive breastfeeding rate for six months in the Northeast region of Thailand has recently significantly decreased, in contrast to all other regions in Thailand. Facebook is widely used worldwide to enhance knowledge, attitudes, and behaviours that support breastfeeding. This study aims to assess the effectiveness of a Facebook programme for husbands' support of exclusive breastfeeding during the COVID-19 pandemic.

Methods: We employed a quasi-experimental study design conducted from September 2020 to November 2021. Data were collected from two tertiary hospitals in Thailand, involving a total of 72 participants—36 in the experimental group and 36 in the control group. These participants were husbands of postpartum women admitted to the postpartum wards. Four research instrument were the demographic questionnaire, the Husband's EBF Knowledge, Husband's EBF Attitude, and Husband's EBF Behavior Questionnaires. Demographic data were analysed using frequency distribution, percentages, and the Chi-square test. The mean difference in husbands' exclusive breastfeeding (EBF) knowledge scores was analysed using an independent samples *t*-test.

Results: At baseline, there was no significant difference in husbands' exclusive breastfeeding (EBF) knowledge scores between the experimental and control groups ($p = 0.82$). By the 1st month, there was a significant difference in the mean scores of husbands' EBF knowledge between the two groups ($p < 0.01$). However, the mean score of attitude at 6-month (mean=108.03, SD=19.89) was higher than the mean score of behaviour at baseline (mean=101.81, SD=17.99), but it was not significant ($p=0.40$). In addition, the different score of behaviour among baseline (mean=65.86, SD=7.02) and 6-month (mean=68.58, SD=10.42) was not significant ($p=0.24$).

Conclusion: The findings suggest that the Facebook programme is an effective platform for conveying exclusive breastfeeding (EBF) knowledge to husbands in Northeast Thailand during the COVID-19 pandemic.

Keywords: breastfeeding, covid-19, exclusive, social media

Introduction

The COVID-19 lockdowns have impacted various aspects of human life, including health, communication, commerce, transportation, education, and leisure.^{1,2} These impacts can directly or indirectly lead to a decrease in healthcare standards and access to healthcare services.³ In terms of breastfeeding practices, during the COVID-19 period, the protective such as wearing a facemask, isolation, and skin-to-skin care, could lead to the decreasing of EBF rate.⁴ To maintain high healthcare standards and improve access to healthcare services, many healthcare providers have recently transitioned to digital forms, including telehealth, telemedicine, healthcare applications, and social media platforms such as Facebook.⁵⁻⁷

The global target for 2025 is to achieve a 50% rate of six-month exclusive breastfeeding (6-month EBF) among children.⁸ In Thailand, the 12th National Economic and Social Development Plan for the period 2017–2021 has established a 6-month EBF goal that aligns with the WHO recommendation.⁹ The prevalence of 6-month EBF in

Thailand had been increased from 12.3% in 2013 to 23% in 2016.⁹ However, it has not yet reached the national and global targets. Achieving these targets remains a challenge for the Thai healthcare system.

In Thailand and internationally, there are various factors that influence 6-month EBF. These factors encompass maternal characteristics, infant-related factors, healthcare-related elements, and social factors. Among the maternal factors suggested to be associated with 6-month EBF are age, educational level, occupation, economic status, health status, knowledge of EBF, breastfeeding confidence, breastfeeding beliefs, and the duration of maternity leave.^{10–13} Infant-related factors that have been suggested to be associated with 6-month EBF include infant health, infant temperament, and the absence of effective suckling.^{10,13} Healthcare factors, including healthcare services, access to healthcare, healthcare professionals' knowledge, attitudes, skills, and EBF policy.^{14–16} Social factors, including the workplace and family dynamics, are deemed important and warrant further consideration.¹³ The family is an essential component of social factors, and the role of husbands has been suggested to influence the duration of breastfeeding. Husbands, being the ones closest to mothers after childbirth, provide crucial support and encouragement to postpartum women.¹⁷ Current evidence in the literature on breastfeeding promotion indicates a strong correlation between breastfeeding duration and husbands' support.^{12,18} In Thailand, during the postpartum period, husbands play an important role. They provide financial support, psychological support, and assist postpartum mothers in taking care of the baby, such as helping with bathing.¹³ Hence, interventions promoting exclusive breastfeeding should prioritise husband involvement.

During the COVID-19 pandemic, social media plays a crucial role in communicating, sharing information, exchanging knowledge, and distributing news among people.⁶ Social media is now widely used in healthcare through various applications, including Facebook, web pages, LINE, and others.⁶ Social media platforms with a positive impact on behavior modification include websites, Facebook, and virtual worlds.⁷ Social media is suggested as an effective tool to facilitate healthcare services for postpartum mothers, especially for those unable to access services due to COVID-19 restrictions.¹⁹ It also serves as a communication tool among healthcare teams.⁶ However, concerning points about social media include inaccurate information, non-professional advice, and commercial interests, which could mislead and misinform healthcare information.⁶

FB is one of the world's social media platforms.¹⁹ In 2019, it was estimated that Thailand had 45 million FB users, which accounted for 68% of the Thai population. Of these, 23 million were males (34% of the Thai population), and 22 million were females (33% of the Thai population).²⁰ Along with being easy to access and cost-effective, FB offers tailored content (such as text posts, photos, videos, live videos, and stories) and community engagement (through groups, events, and pages) that cater specifically to the audience's preferences. These features are key attraction points of FB.²¹ In countries like the United States and Australia, FB has been used as a digital platform to promote breastfeeding.^{19,22} FB can serve as a source of health knowledge and provide support to mothers for longer breastfeeding duration.²² It has been recommended as a new pathway to transfer EBF knowledge and change the behavior of family members, nannies, and healthcare teams to support EBF.¹⁵ FB and other social media platforms can support exclusive breastfeeding practices and serve as valuable platforms for women to gain knowledge about EBF, express their perspectives, and discuss any breastfeeding-related issues.^{19,22} However, in Northeast Thailand, there is limited evidence regarding the use of FB as an online support tool for husbands in promoting EBF. Therefore, this study aimed to determine the effectiveness of FB in promoting EBF among husbands of postpartum women in Northeast Thailand.

Achieving the WHO and Thailand's target of 6-month EBF is viewed as an ambitious challenge in Thailand. The role of husbands has been recognised as a significant factor influencing the duration of EBF in Thailand.¹³ The transformation of healthcare education during the COVID-19 pandemic has been found to be effective using online platforms, such as Facebook (FB) and other social media, for promoting exclusive breastfeeding (EBF). An online support programme for husbands using FB should be developed to further promote EBF. Thus, this study aims to assess the effectiveness of the husbands' support EBF Facebook programme in enhancing husbands' knowledge, attitude, and behaviour of EBF during the COVID-19 pandemic.

Materials and Methods

Design

A pretest-posttest comparison group Design was used to assess the effectiveness of the husbands' support EBF Facebook programme in improving husbands' knowledge of exclusive breastfeeding (EBF) to promote EBF in Northeast Thailand. The study was conducted from September 2020 to November 2021.

Setting

The data collection was conducted in two tertiary hospitals in Khon Kaen province, Northeast Thailand. These two hospitals are located in the Northeast of Thailand and serve as representatives of the region.

Sample

The participants in this study were husbands of postpartum women who were admitted to the post-partum wards. The inclusion criteria comprised husbands of postpartum women (who had either undergone normal delivery or a caesarean section within 1–4 days), or fathers of infants born 1–4 days prior, with normal health conditions and no breastfeeding restrictions. Additionally, participants had to be aged between 20–60 years, work for 6–8 hours a day either from home or outside, possess the ability to communicate, read and write in the Thai language, express willingness to participate in the study, provide consent for research participation, and be able to bring their child for health check-ups and vaccinations at the well child clinic when the child reaches 1 month of age.

The Sample size was determined using the formula for two independent samples,²³ with a consideration for a 20% dropout rate. We employed purposive sampling, resulting in a final sample size of 72 participants—36 in the control group and 36 in the experimental group.

The Husbands' Support Exclusive Breastfeeding Facebook Programme

The husbands' support exclusive breastfeeding Facebook programme was designed based on the knowledge transformation concept, which encompasses four stages: socialisation, externalisation, combination, and internalisation. This programme consists of three components: 1) The EBF Education Package Infographic: This package was created within the FB platform as an album. It contains information about the benefits of breastfeeding, factors affecting breast milk production, techniques for breastfeeding, methods for expressing breast milk, and common breastfeeding issues (internalisation), 2) The FB Page: Researchers provided additional EBF information every Wednesday on a dedicated FB page, facilitating the combination and externalisation of knowledge, 3) Group Counseling Channel (Messenger): Participants could use this channel to share their experiences and seek advice on any breastfeeding-related problems from other participants and researchers, fostering socialisation. All information was controlled by health professionals.

Measurement

We employed four questionnaires in this study: 1) Demographic Questionnaire: This questionnaire gathered information on husbands' age, income, education level, and the number of children at home. 2) the Husband's EBF Knowledge Questionnaire: This questionnaire included 11 questions related to EBF knowledge. The total EBF knowledge scores ranged from 0 to 40. 3) The Husband's EBF Attitude Questionnaire includes 19 questions, with a total possible score ranging from 19 to 95. 4) The Husband's EBF Behavior Questionnaire includes 30 questions, with a total possible score ranging from 30 to 69 points. The validity of the Husband's EBF Knowledge, Husband's EBF Attitude, and Husband's EBF Behaviour questionnaire was established in Thai husbands, with Cronbach's α coefficient of 0.81, 0.88, and 0.93, respectively.²⁴

Data Collection

After providing the participants with the information sheet and obtaining their consent, they initially joined the control group to prevent research contamination with the experimental group. During the COVID-19 pandemic, husbands had the opportunity to visit their postpartum wives twice: the 1st hospital visit occurred when the postpartum woman was admitted to the postpartum ward, and the 2nd hospital visit took place when the postpartum woman was discharged from the hospitals.

During the 1st hospital visit, participants in the control group self-administered the demographic and husbands' EBF knowledge questionnaires for the pretest. Afterward, they received standard care. The control group participants self-administered the husbands' EBF knowledge questionnaires for the posttest when their children reached one month of age during well-child clinic visits (see Figure 1). Once data from the control group were fully collected, the experimental group continued with the study.

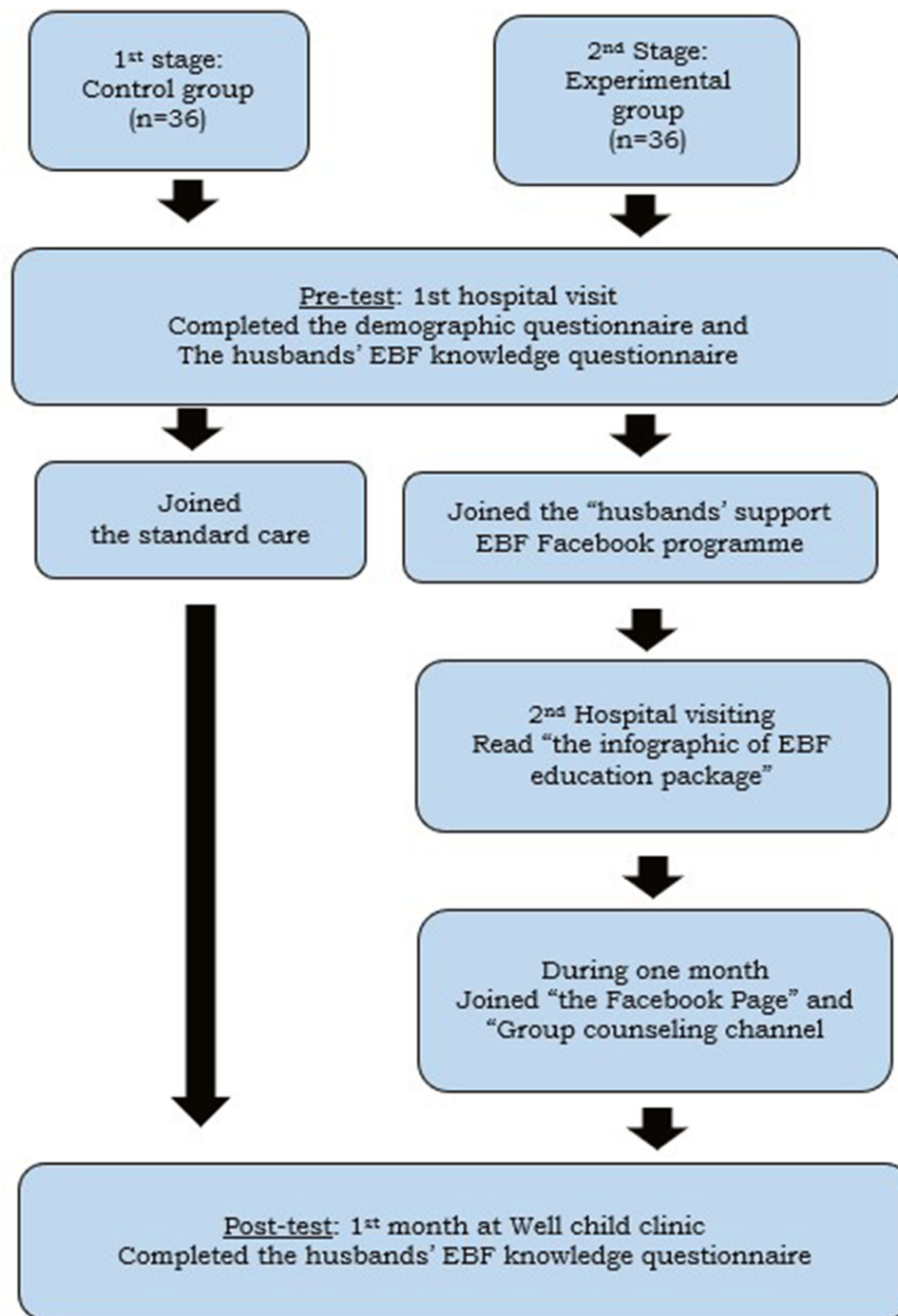


Figure 1 Data collection process.

For the experimental group, during the 1st hospital visit, husband participants self-administered questionnaires for the pretest and were then invited to join the “husbands” support EBF Facebook programme. During the 2nd hospital visit, husband participants were checked to ensure they had read “the infographic of EBF education package” at least once. After that, participants were allowed to self-learn this education package repeatedly within a month. Additionally, participants joined “the Facebook Page” and “Group counseling channel” as much as possible. During well-child clinic visits, the participants in the experimental group self-administered questionnaires for the posttest, similar to the control group (see [Figure 1](#)). In case there was no response, the participants from both the control group and the experimental group were contacted at their baby’s 1-month vaccine appointment.

Data Analysis

The demographic data were analysed by using the frequency distribution, percentage and Chi-square test. The independent sample *t*-test were used to analyse the mean score of husband's EBF knowledge, attitude, and behaviour by SPSS version 28, Armonk, NY: IBM Corp with $p < 0.05$ as statistic significant.

The Ethical approval was granted by the College Ethics Review Board (HE631345), Khon Kaen university as well as the Khon Kaen Hospital Ethics Committee (KEMOU63021).

Results

Seventy-two fathers were included in the study, and there were no withdrawals. The majority of participants in both the experimental and control groups were aged between 30–39 years (as shown in Table 1). The education levels of both groups were similar, with over 50% of participants having graduated from bachelor's degree programmes. Approximately one-fifth of the participants had a monthly income ranging from 10,001 to 20,000 baht. More than half of the participants had children, and their wives had prior breastfeeding experience (as detailed in Table 1). There were no significant differences in terms of age, education level, income, history of having children, breastfeeding experience, or taking leave with their wives between the experimental group and the control group (see Table 1).

At baseline, the mean scores of husbands' knowledge in the control and experimental groups were 19.52 and 19.77, respectively. There was no significant difference in husbands' EBF knowledge between the two groups ($p = 0.82$) (as shown in Table 2). However, at the 1st month postpartum, the mean scores of husbands' knowledge in the experimental group were significantly higher than those in the control group ($p < 0.01$) (as detailed in Table 2).

Similarly, The mean of attitude at 1st month (mean=108.03, SD=19.89) was higher than the mean of behaviour at baseline (mean=101.81, SD=17.99). However, the different mean score of attitudes among baseline and 1st month was

Table 1 The Characteristic of Participants

Items	The Intervention Group N (%)	The Control Group N (%)
Age (year)		
19–29	10(27.8)	8(22.2)
30–39	13(36.1)	22(61.1)
40–49	12(33.3)	3(8.3)
50–59	1(2.8)	3(8.3)
Education level		
High school	15(41.7)	16(44.4)
Bachelor degree	20(55.5)	18(50.0)
Over Bachelor degree	1(2.8)	2(5.6)
Incomes (Baht/month)		
1–10,000	0(0)	2(5.6)
10,001–20,000	22(61.1)	20(55.6)
20,001–30,000	10(27.8)	9(25.0)
30,001–40,000	4(11.1)	5(13.9)
> 40,000	0(0)	1(2.9)
History of having children		
No	12(33.3)	15(41.7)
Yes	24(66.7)	21(58.3)
Breastfeeding experience		
No	12(33.3)	11(30.6)
Yes	24(66.7)	25(69.4)
Taking a leave with wife		
No	20(55.6)	26(72.2)
Yes	16(44.4)	10(27.8)

Table 2 The Knowledge, Attitude, Behaviour of Father to Supporting Breastfeeding Between Experimental Group and Control Group

Items	Time	Intervention Group		Control Group		p
		Mean	SD	Mean	SD	
Knowledge	Baseline	16.42	4.22	19.39	4.15	0.01*
	1st month	19.78	5.50	19.53	4.55	
Attitude	Baseline	101.81	17.99	105.11	14.57	0.40
	1st month	108.03	19.89	106.69	20.83	
Behaviour	Baseline	65.86	7.02	63.75	8.74	0.24
	1st month	68.58	10.42	69.17	7.19	

Note: *Significance at P-value <0.01.

not significant ($p=0.40$) (Table 2). In addition, the different score of behaviour among baseline (mean=65.86, SD=7.02) and 1st month (mean=68.58, SD=10.42) was not significant ($p=0.24$) (Table 2).

Discussion

To the best of the researcher's knowledge, this study aimed to assess the effectiveness of the husbands' support EBF Facebook programme in enhancing husbands' knowledge, husbands' attitude, and husbands' behaviour of exclusive breastfeeding (EBF). During the COVID-19 pandemic, a significant difference in the mean scores of husbands' EBF knowledge was observed. The findings from this study suggest that the EBF Facebook programme is effective in supporting husbands in gaining knowledge about breastfeeding.

There are many points to support the effectiveness of the husbands' support exclusive breastfeeding Facebook programme. Firstly, this FB program was accessible and provided an opportunity to easily gain knowledge about EBF, thus, the participants can learn about EBF as much as they want. A similar study in China has shown that, the husbands who attended the BF education programme had the high score of BE knowledge than those who did not.²⁵ In addition, a study conducted in Africa suggests that the breastfeeding FB programme was effective to help the husbands gain knowledge in EBF and thus, increase the intention and the duration of breastfeeding.¹⁹ Secondly, this programme is the usefulness of receiving peers and healthcare professional support on the online consulting platform. This was not only from receiving information from the EBF info-graphic (internalisation) but also from the support in sharing experience from peers as well as from healthcare professional's advice (combination and externalisation). A study in the USA shown that FB provides the support to promote breastfeeding by getting experience support and emotional support, which is led the self-efficacy in postpartum mother.¹⁹ Therefore, during the four weeks accessing the FB programme, the participants learn more about EBF knowledge via the experience of peers and healthcare professionals. In Thailand, according to the accessibility and, peer and healthcare professional online support platform of this FB program, it could fill up the gap of physical distancing during Covid-19 and inaccuracy information in social platform.

The strength and the limitation of this study were presented. For the strength, this study was that it included husbands in different age groups, educational levels, backgrounds, income levels. This could lead to the variety of sharing knowledge and experiences which is one of the taxic knowledge. However, this study has a limitation related to the inclusion of study participants. Some husbands who were not interested in breastfeeding were not included in the study, although this was not the primary focus. In future studies, it would be valuable to measure the impact of the Facebook programme on husbands' attitudes and behaviours in supporting EBF.

Conclusion

This study aimed to assess the effectiveness of the husbands' support EBF Facebook programme in providing knowledge and support for EBF during the COVID-19 pandemic. The findings indicated a significant increase in the mean scores of

husbands' EBF knowledge after participating in this programme, but attitude and behaviour. During the COVID-19 situation, this Facebook program could be one of the best choices for educating husbands, promoting supportive attitudes, and encouraging behaviors for EBF among husbands in Thailand and beyond. In future research, this programme could serve as an alternative option to enhance husbands' knowledge, attitude, and behaviour of EBF.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors report no conflicts of interest in this work.

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