

論文題目 Cross-border Formula Milk Promotion in Lao People's Democratic Republic  
and Its Effect on Maternal Attitudes Towards Breastfeeding

(ラオス人民民主共和国に対する国境を越えた乳児用調製粉乳の広告宣伝と広告が  
母乳育児に対する母親の態度に及ぼす影響)

ポンパイ プッタゲーオ  
Phonephay Phoutthakeo

## Introduction

Breastfeeding is a strong predictor and identified as one of the most important preventive interventions to reduce child morbidity and mortality, especially in developing countries. In 2003, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) jointly developed the Global Strategy for Infant and Young Child Feeding. This strategy strongly recommends exclusive breastfeeding (EBF) for six months and continued breastfeeding (CBF) for two years and beyond. However, in Lao PDR, the breastfeeding prevalences for both EBF and CBF are declining at 26% and 48% in 2006, which are in the low range in the Southeast Asia region. According to a previous study, exposure to the Thai TV commercials and its positive attitudes towards formula use could be significant influential factors on breastfeeding in Lao PDR. This is because Lao PDR is located next to Thailand in mainland Southeast Asia, and shares a close cultural and linguistic proximity.

However, evidence is still limited to identify the association between cross-border media formula promotion and breastfeeding in Lao PDR. As Laotians can understand Thai language, the Thai media's formula promotion, especially TV commercials, might be one of the key factors determining breastfeeding practices, especially EBF for six months in Lao PDR. The objectives of this research were to: (1) assess the key breastfeeding indicators among the mothers with children under two years of age in urban areas of Lao PDR; (2) measure the level of their exposure to Thai media's formula use promotion and development of positive attitudes towards formula use through TV commercials; (3) examine the impact of their media influenced attitude on EBF for six months; and (4) test the Iowa Infant Feeding Attitude Scale (IIFAS) in Lao PDR.

## Methods

This cross-sectional study was conducted through a face-to-face structured questionnaire survey and focus group discussion (FGD) targeting Lao mothers who had children under two years of age in urban areas of Vientiane Capital, Lao PDR. A cluster sampling was used and a total of 1,022 mothers in 42 villages took part in the survey.

The questionnaire used in this survey consisted of four standardized questionnaires: (1) WHO and UNICEF's Household Baseline Survey of Integrated Management of Childhood Illness (IMCI); (2) UNICEF's Multiple Indicator Cluster Surveys (MICS); (3) Global Youth Tobacco Survey (GYTS); and (4) the Iowa Infant Feeding Attitude Scale (IIFAS).

Basic descriptive findings were obtained using frequency and percentage. Chi-square tests were performed to examine the association of EBF for six months with various variables. Then, a multivariate logistic regression model was constructed for quantitative data analysis. With regards to the IIFAS, total scores were grouped into the following

three categories: (1) positive to breastfeeding (70-85); (2) neutral (49-69); and (3) positive to formula feeding (17-48). Cronbach's alpha level was also calculated to assess the internal consistency. In all statistical tests,  $p < 0.05$  was considered significant. Content analysis was for qualitative data analysis.

To ensure validity and reliability of the questionnaire, various approaches were used. These included: (1) using aforementioned four standardized questionnaires; (2) translating and back-translating the tool by professional translators; (3) conducting pre-test with 60 mothers; and (4) rounds of review with experienced breastfeeding specialists considering the local and cultural appropriateness and the applicability among Lao mothers.

In addition to the survey, six FGD sessions were conducted to triangulate the finding from quantitative data. The FGDs were necessary to better understand how and why exposures to the Thai media's promotion on formula milk develop into positive attitude towards formula use. To meet the research objectives, the following three guiding questions were used: (1) "How were mothers with children under two years of age in urban areas of Lao PDR exposed to Thai media's promotion on formula milk?"; (2) "How was such an exposure associated with attitudes towards breastfeeding, particularly EBF?"; and (3) "How was the exposure to Thai media's promotion on formula milk associated with EBF?"

This study was approved by the Research Ethics Committee of the Graduate School of Medicine in the University of Tokyo, Japan, and the National Ethics Committee for Health Research and the Ministry of Health, Lao PDR. The interviewed mothers were well informed that their identities would remain anonymous to protect their confidentiality and privacy. Written informed consents were obtained from all respondents in survey as well as all participants in FGD.

## Survey results

A total of 1,022 valid cases, namely mothers with children under two years of age were collected in the survey. For the FGD, a total of 29 mothers participated in six sessions.

The major findings are as follows. Among the 1,022 mothers surveyed, 52.5% of the children were boys. The mean (SD) age of the children was 9.3 (6.4) months. As it was conducted in the urban setting, a high percentage of them (90.7%) were born in a public hospital. Similarly, a relatively high percentage of the children (10.6%) were delivered by caesarean section. The mean (SD) birth weight was reported as 3,091.9 (418.9) grams, based on the mother's memory. The prevalence in EBF for six months was 16.1%, CBF at one year was 59.7% and CBF at two years 24.7%. The exposures to media were soaring in all media channels except for radio, and particularly so in TV commercials (92.9%). Regardless of media channels, Thailand was the most popular origin of the media source. More than a majority of the respondents (79.1%) developed a positive attitude towards formula use and felt like purchasing formula, after being exposed to media except for radio and printed materials. Regardless of media channel, many came to perceive that (1) the formula milk has a lot of nutrients and (2) it makes the infant grow fast. These messages were reported with high percentages particularly in those who were exposed to TV commercial (66.6%), followed by logo (54.5%) and posters (51.4%).

The majority of the respondent mothers had positive attitudes toward breastfeeding. For instance, 98.6% agreed that breast milk is the ideal food for babies. However, 69.5% of mothers agreed that a mother who occasionally drinks alcohol should not breastfeed her baby. In addition, a majority of the respondents (88.3%) mentioned that formula feeding is a better choice if a mother plans to work outside the home. The median IIFAS score was 61.0. The reliability of the IIFAS that indicates the internal consistency was  $\alpha = 0.53$  for the studied population. However, the

internal consistency was found higher among 563 respondents who were surveyed in the last two weeks of the two-month survey ( $\alpha = 0.72$ ).

For analysis on the predictors of EBF for six months, a multivariate logistic regression model was constructed with 17 independent variables, which were reported as significant influencing factors on EBF in Lao PDR in previous studies. The results show that three variables were found to be statistically significant: caesarean section as type of delivery (AOR: 0.25, 95% CI 0.10-0.58,  $p = 0.001$ ); early initiation of breastfeeding (AOR: 3.02, 95% CI 1.42-6.42,  $p = 0.004$ ); and positive attitude on formula use towards TV commercial (AOR: 0.25, 95% CI 0.74-0.83,  $p = 0.024$ ).

## FGD results

Among the total of 29 mothers, 23 were mothers, three were grandmothers, and three were mothers-in-law. The results were based on two themes: (1) media influence on formula use from Thailand and (2) attitude and practice on breastfeeding and EBF

Sixteen participants responded that they got to know about formula use from the Thai TV commercial.

*...I gave formula milk for three days after delivery while waiting for my breast milk but I stopped formula milk right after my milk came. In addition, formula milk is convenient for mothers when mothers have to go outside...* (29-year-old, married housewife, ID 5, Session 5, Theme 2)

Ten participants had a positive attitude towards breastfeeding, pointed out its convenience and benefits for child's health. However, they demonstrated a negative attitude towards EBF and reported various challenges in EBF.

*Exclusive breastfeeding for six months is ideally. However, I think it is impossible... Giving water is to clean the mouth because breast milk leaves some white mucus... At three months, I introduced processed-supplementary foods, thin porridge and fruits. I was advised by the doctor from a Thai hospital to do so...* (22-year-old, married business owner, ID 4, Session 2, Theme 2)

## Discussion

Despite the important roles of mass media on health promotion, this research was the first study in Lao PDR that investigated the association of media's formula use promotion with breastfeeding, especially EBF. This research was also one of the first studies examining the roles of cross-border media influence on breastfeeding.

The 16.1% EBF rate for six months in this study was alarmingly low and lower than that of the neighbouring countries of Lao PDR such as Phnom Penh, Cambodia 51.1% (2006). However, the rate was higher than Bangkok, Thailand at 11.0% (2007), the major origin of formula use promotion for mothers in Lao PDR and by far the least EBF-practicing country in the region.

Therefore, the images can be reinforced during a long period of time on a massive scale, passed on from generation to generation, and become "conventional wisdom" across the entire country, a tremendous challenge for the future.

However, further analysis on both survey and FGD data implies that the main reason to stop EBF was not only formula use, but also plain water use. Plain water was the most common intake within the last 24 hours among 0-5 infants as well as the first substitute for breastfeeding, followed by formula milk. Therefore, even without Thai media's formula use promotion and its influence on attitudes towards formula milk, the EBF rate in Lao PDR will not improve unless inappropriate beliefs around breastfeeding substitution are properly addressed with interventions.

It also implied the mothers in general had positive attitudes towards breastfeeding while they presented inappropriate breastfeeding knowledge. For instance, the mothers seem not knowing the fact that formula-fed babies are likely to be overfed while breastfed ones are not. Also, nearly 70% of the respondents agreed with a statement that mother who occasionally drinks alcohol should not breastfeed her baby. In addition, the respondents did not have appropriate knowledge on nutritional benefits of breast milk. Almost 90% of the respondents supported the idea of formula feeding if mothers are working outside home, which corresponds to the FGD result. These issues could be addressed in a very early stage during pregnancy with clear, simple and easy messages to understand.

## **Conclusions**

This study revealed that the Lao mothers had low breastfeeding prevalences. A high proportion of mothers interviewed was highly exposed to Thai media's formula use promotion, especially through Thai TV commercials and developed a positive attitude towards formula use through media exposure. As assumed, it was found that mothers who developed a positive attitude towards formula use through TV commercial were approximately 75% less likely to practice EBF for six months than those who were not. Therefore, the hypothesis was accepted. A low breastfeeding prevalence country can negatively affect its neighbouring country through its media promotion on formula use when both countries share a cultural and linguistic proximity.

FGD revealed that one of the key determinants of EBF was not only formula use, but also plain water use. Therefore, the current EBF rate in Lao PDR may not improve unless inappropriate beliefs and knowledge around breastfeeding substitution are also properly addressed with interventions.

Through the IIFAS, while the studied mothers in Lao PDR in general had positive attitudes toward breastfeeding, they did not have appropriate knowledge on breastfeeding including nutritional benefits of breast milk. Testing the IIFAS, due to the moderate level of internal consistency, the Lao language version of the IIFAS used in this study was found not highly reliable because of the type of respondents and understandability of the questions among the respondents.

The Thai formula milk promotion negatively affects breastfeeding in Lao PDR. Such cross-border impacts should be addressed globally, in particular where culture and language are similar.