Check for updates

Maternal & Child Nutrition

WILEY

Maternal & Child Nutrition

ORIGINAL ARTICLE OPEN ACCESS

Maternal Experiences and Perspectives of Marketing and Regulation of Commercial Milk Formula in Thailand: A Qualitative Study

Chompoonut Topothai[1,2,3] | Thitikorn Topothai[1,2,3] | Natasha Howard[1,4] | Viroj Tangcharoensathien[2] | Mary Foong-Fong Chong[1] | Yvette van der Eijk[1]

[1]Saw Swee Hock School of Public Health, National University of Singapore and National University Health System, Singapore, Singapore | [2]International Health Policy Program, Ministry of Public Health, Nonthaburi, Thailand | [3]Department of Health, Ministry of Public Health, Nonthaburi, Thailand | [4]Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, UK

Correspondence: Chompoonut Topothai (chompoonut@u.nus.edu)

Received: 5 March 2025 | **Revised:** 11 June 2025 | **Accepted:** 4 August 2025

Funding: This project was funded by the Food and Nutrition Policy for Health Promotion Program under the International Health Policy Program Foundation and the Capacity Building on Health Policy and Systems Research program (HPSR Fellowship), through cooperation between the Bank for Agriculture and Agricultural Co-operatives (BAAC), the National Health Security Office (NHSO), and the International Health Policy Program Foundation.

Keywords: breastfeeding | marketing | maternal perception | milk substitutes | qualitative research | Thailand | the international code of marketing of breast-milk substitutes

ABSTRACT

Commercial milk formula (CMF) marketing adversely influences breastfeeding practices globally. Thailand enacted the Control of Marketing Promotion of Infant and Young Child Food Act ('Thai Code') in 2017 to restrict the marketing of CMF for infants aged 0–12 months. This qualitative study aimed to explore mothers' experiences and perspectives of CMF marketing and its regulation by the Thai Code through semistructured interviews with 15 mothers across Thailand between July 2023 and March 2024. Our findings revealed that while traditional advertising and healthcare-setting promotions decreased, CMF marketing strategies evolved toward social media platforms, particularly TikTok and Facebook, and through building relationships with mothers for CMF products for young children. Participants reported varying perceptions toward CMF marketing, with those of lower socioeconomic status appearing to be more susceptible to marketing claims, for example, CMF boosts cognitive development and is equivalent to breast milk. While participants reported receiving strong breastfeeding support from healthcare facilities, subtle CMF promotional practices persisted in private settings through free sample distribution and invitations to join company-sponsored digital platforms. Despite general awareness that some form of CMF marketing regulation exists, participants had limited knowledge of the Thai Code's specific provisions. Therefore, enhanced monitoring of digital marketing and private healthcare settings, alongside improved public communication about the Thai Code, could strengthen its implementation, particularly in lower income settings in which mothers may be more vulnerable to marketing claims.

1 | Background

Breastfeeding provides optimal nutrition and immunological protection for infants and offers significant maternal health benefits (Horta et al. 2023; Pérez-Escamilla et al. 2023; Victora et al. 2016). Despite the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommendations for exclusive breastfeeding for 6 months (EBF) and continued

Mary Foong-Fong Chong and Yvette van der Eijk are co-last authors.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2025 The Author(s). *Maternal & Child Nutrition* published by John Wiley & Sons Ltd.

Summary

- Social media platforms, particularly TikTok and Facebook, have become primary channels for commercial milk formula (CMF) marketing, with companies building relationships with mothers through health apps, phone calls, and subtle branded materials.
- Lower income mothers appear to be more susceptible to marketing claims that CMF improves cognitive development and is equivalent to breast milk.
- While healthcare facilities were reported to have strong breastfeeding support with reduced overt CMF marketing, subtle promotional practices were observed in private settings, suggesting the need for enhanced measures in these settings.
- Despite general support for marketing restrictions, mothers' limited awareness of the Thai Code and concerns about access to CMF information highlight the need for improved public communication and guidelines.

breastfeeding for 2 years or beyond with appropriate complementary foods (World Health Organization 2003), less than half of infants globally receive optimal breastfeeding (World Health Organization, and United Nations Children's Fund [UNICEF] 2023). While multiple factors influence breastfeeding rates (Rollins et al. 2016; Victora et al. 2016), commercial milk formula (CMF) marketing has been shown to adversely affect breastfeeding practices (Baker et al. 2023; Piwoz and Huffman 2015; Rollins et al. 2023). CMF sales and consumption have increased almost 40-fold globally over the past 40 years (Baker et al. 2023); a concerning trend as overfeeding CMF poses a risk for overweight and obesity (Bloomfield and Agostoni 2020).

Globally, WHO and its member states adopted the International Code of Marketing of Breast-milk Substitutes in 1981 and subsequent relevant World Health Assembly resolutions (the WHO Code) to restrict CMF marketing for children aged 0–36 months to prevent its undue influence on maternal decisions on infant feeding as well as health professionals (World Health Organization 2017b). The WHO Code prohibits advertising, promotions, and CMF industry engagement with healthcare policies and systems and regulates product labelling (World Health Organization 2017a). Countries are encouraged to incorporate the Code into national legislation alongside other interventions, notably the Baby-Friendly Hospital Initiative (BFHI) and maternity protection, including paid maternity leave and workplace lactation support (Robinson et al. 2019; World Health Organization 2022).

Thailand, an upper-middle-income country in Southeast Asia, adopted the WHO Code through three national voluntary measures in 1984, 1995 and 2008, among others, to address aggressive CMF marketing (Cetthakrikul et al. 2014; Taylor 1998; Vinje et al. 2017). However, these measures lacked enforcement mechanisms and penalties for violations, proving ineffective in protecting mothers from CMF promo tions (Topothai and Tangcharoensathien 2021). In 2017, Thailand enacted 'The Control of Marketing Promotion of Infant and Young Child Food Act B.E.2560' ('Thai Code') (Cetthakrikul, Kelly, Baker, et al. 2022) to strengthen marketing restrictions and address Thailand's low EBF rates, which stood at 5.4% in 2006, 12.3% in 2012, and 23.1% in 2015 (Topothai and Tangcharoensathien 2021). The Thai Code is moderately aligned with the WHO Code (World Health Organization, and United Nations Children's Fund [UNICEF] 2024). It bans the marketing of CMF for infants aged 0–12 months (instead of 0–36 months) by limiting advertisements, promotions, free samples, direct marketing to families of children 0–3 years, cross-promotion through labelling, and marketing in healthcare facilities; see Supporting Information S1: Table S1 for key provisions related to mothers (Cetthakrikul et al. 2023).

While the Thai Code represents a significant step in protecting breastfeeding, research assessing its effectiveness post-implementation remains limited. Studies evaluating maternal exposure to CMF marketing in Bangkok have identified non-compliant promotional activities (Cetthakrikul, Kelly, Baker, et al. 2022; Cetthakrikul, Kelly, Banwell, et al. 2022). These primarily focus on quantitative compliance assessment and overlook the evolving and increasingly subtle nature of marketing strategies and maternal perspectives thereof, despite mothers being primary targets of CMF marketing and key stakeholders of the Thai Code. This study thus aimed to explore Thai mothers' experiences with and perspectives on CMF marketing and the Thai Code.

2 | Methods

2.1 | Study Design

Our research questions were: 'How do mothers experience and perceive current CMF marketing practices, and how do these experiences shape their infant feeding perceptions and practices? What do mothers know about CMF marketing regulation under the Thai Code?'

We used a qualitative design with semistructured interviews. Our study is grounded in an interpretive epistemological stance, which acknowledges the subjective nature of individual experiences and the importance of context in shaping perspectives. These could be influenced by socioeconomic status, breastfeeding practices, and backgrounds within participants' specific contexts (Crotty 1998).

2.2 | Sampling and Recruitment

We used purposive heterogeneous sampling to capture the wide range of perspectives and experiences of 15 mothers across Thailand regarding geographical regions, breastfeeding practices, and the type of hospital used, as we anticipated that these characteristics could potentially shape participants' exposures and perceptions of CMF marketing. We applied a stratified recruitment process, selecting seven locations: Bangkok and six provinces representing each geographical region, based on annual childbirth rates and documented Code violations (Chiadamrong 2017). Five large and metro-provinces had high birth rates and a history of Thai Code violations (Bangkok Metropolitan, Chiangmai, Chonburi, Songkhla and Khon Kaen), while two smaller provinces had lower birth rates and no

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

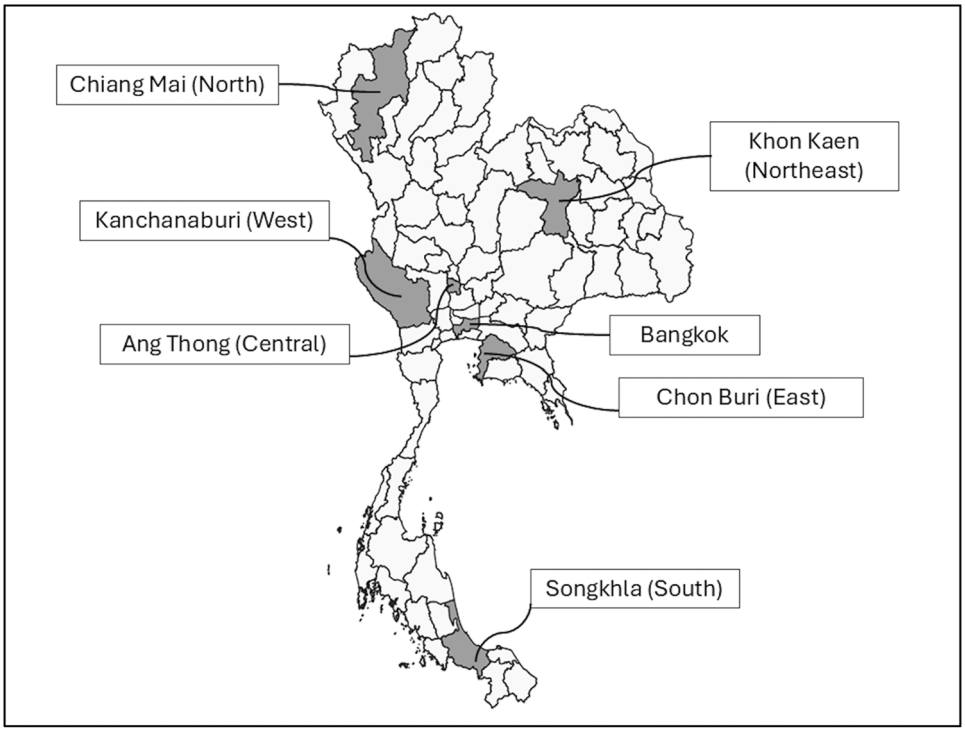

FIGURE 1 | Geographic distribution of seven provinces selected across Thailand.

documented Code violations (Kanchanaburi, Ang Thong; Figure 1). This selection aligned with WHO NetCode protocol recommendations for monitoring compliance with CMF marketing regulations (World Health Organization, and United Nations Children's Fund [UNICEF] 2017) by recruiting mothers from the largest cities where CMF marketing is typically concentrated while expanding the geographical scope to include smaller cities to broaden perspectives from less urbanised communities.

From these provinces, we recruited participants through well-child clinics, postpartum wards, and lactation clinics at the largest public hospitals, supplemented by recommendations from village health volunteers, local mothers' support groups, and snowball sampling to include private hospital users and ensure recruitment of mothers with various feeding practices. In the Bangkok Metropolitan area, we recruited through social media groups, personal networks, and snowball sampling. All invited mothers agreed to participate. All participants had accessed maternal and child health services in Thailand in the past 6 months.

Given our planned stratification across multiple characteristics, we prioritised capturing a snapshot of diverse perspectives across different contexts rather than pursuing data saturation within each subgroup. We believe that this methodological trade-off enabled us to explore the range of maternal experiences with CMF marketing and the Thai Code across Thailand's varied contexts.

2.3 | Data Collection

C.T., M.C., and Y.V. developed an interview guide based on the literature on formula feeding, CMF marketing, and Thai Code provisions (Supporting Information S1: Table S2). C.T. and T.T. conducted interviews between July 2023 and March 2024. Given the sensitive nature of infant feeding topics and the importance of building trust when discussing personal experience, we were committed to conducting face-to-face interviews, particularly with participants living outside Bangkok, as this approach aligns with local cultural expectations and facilitates deeper rapport while potentially yielding richer data than online interviews. As a result, we conducted 11 interviews face-to-face, and four online via Zoom for participants who specifically requested this format. All participants provided written informed consent before participating in the study. All interviews were conducted in Thai, lasted 45–90 min, and were audio-recorded, transcribed verbatim, and translated into English. Participants received 1000 THB (approximately US$30) as compensation for time and travel expenses.

2.4 | Data Analysis

We employed a deductive-inductive thematic analysis using codebook approaches (Braun and Clarke 2021). C.T. and T.T. independently conducted line-by-line coding of transcripts using NVivo (version 14) and developed initial codebooks. The initial coding included both deductive elements, informed by our research questions, and inductive elements to allow new insights to emerge from the data. They discussed their codes to create a unified codebook. Discrepancies were reviewed with M.C. and Y.V. until a consensus was reached in an iterative process. Codes were subsequently organised into categories, subthemes, and overarching themes (Supporting Information S1: Table S3).

2.5 | Reflexivity

The research team includes members from Thailand's Ministry of Public Health and the Saw Swee Hock School of

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Public Health, National University of Singapore, comprising two PhD candidates (C.T. and T.T.) and four professors (N.H., V.T., M.C. and Y.V.). All female team members have personal breastfeeding experience, which enhanced our understanding of mothers' experiences while requiring careful reflection to avoid personal experience's projection onto participants' narratives. Each researcher has experience in conducting or analysing qualitative research. While C.T. and T.T. have insider knowledge of the Thai Code legislation and implementation, we carefully considered our positionality as researchers throughout the study. We also acknowledged that our positions that connect to implementing agencies could shape what we sought in the data and how we interpreted participants' accounts. This researcher's gaze was addressed through reflection during fieldwork, and we had regular team discussions during the data collection and analysis to help examine potential biases in our analysis.

2.6 | Ethics Statement

This study obtained ethical approval from the National University of Singapore Institutional Review Board (NUS-IRB-2023-307) and Thailand's Ministry of Public Health Institutional Review Board of the Department of Health (636/2566). To protect participants' confidentiality and enhance anonymity, we reported their geographical areas as 'Bangkok' or 'outside Bangkok'. We also assigned them English pseudonyms despite their Thai nationality to further distance the pseudonyms from participants' identities.

3 | Results

Among the 15 participants, 14 had a child aged 18 months or less and one participant was 16 weeks pregnant. Their median age was 31 years (range 26–40 years). Half had postsecondary education (bachelor's and master's degrees), and most had a monthly household income above Thailand's minimum wage of 15,000 THB (approximately 430 USD). Employment status varied among participants: one-third were formal employees entitled to 90 days of paid maternity leave, while the remaining participants included four unemployed, four self-employed or business owners, and one informal employee without maternity leave benefits. Two-thirds of mothers accessed services at public hospitals, primarily for child vaccination, with some using delivery services and prenatal care. Most had two children, two-thirds practiced EBF in the first 6 months, and eight had experience using CMF (five used CMF for infants before 6 months, and three used CMF for infants and young children after 6 months).

We identified four themes: (1) maternal exposure to CMF marketing in public, nonhealthcare settings; (2) maternal perception of CMF marketing and use; (3) mothers' experiences with breastfeeding support and CMF marketing in healthcare facilities, and (4) maternal awareness and perspectives of the Thai Code.

3.1 | Maternal Exposure to CMF Marketing in Public

3.1.1 | Social Media Advertisements

Participants, especially those who used CMF, reported frequent exposure to CMF advertisements on social media platforms, particularly TikTok and Facebook. These advertisements appeared automatically after they searched for child or parent-related content. Also, participants generally observed that CMF advertisements were for young children rather than infants or newborns.

> *I've seen advertisements on TikTok. They talk about how formula milk is just as good as breast milk and can contribute to the child's intelligence.*
>
> —Maya.

CMF companies had mobile applications and Line groups offering maternal and child health information and gave out freebies such as toys and handbooks upon registering. Participants primarily accessed these platforms through private healthcare settings, such as parental classes at private hospitals and prenatal visits at private clinics:

> *They added me on the Line since I was at the doctor's clinic [...] Nurses provide information through this channel. It's part of the [brand X] mom clubs. They set up a QR code at the clinic for us to scan.*
>
> —Carol.

3.1.2 | Promotional Strategies

Participants who used CMF products observed CMF sales promotions in both offline and online channels for CMF for young children and UHT milk, excluding infant formula. These promotions included discounts, bundle sales, and gifts. A private online mothers' group emerged as an informal marketing channel where members occasionally sell and buy CMF products with promotions:

> *I don't think they do a lot of [mass] marketing, but they use methods to release products and then promote them within mother groups. It's off-marketing because nowadays mothers have [private] groups for selling and buying goods at discounted prices.*
>
> —Pearl.

One participant reported receiving free infant formula samples from a municipal COVID-19 support program in 2020 for her first child. Other participants received CMF promotional materials, including gifts and toys, designed with minimal brand visibility yet recognisable to the participants, through playgroups and other child-centric spaces. Olive, from Bangkok, shared:

> *I remember the first brand was [...] because they gave out a lot of items, not necessarily infant formula but various*

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

other items. I remember getting items when I took my child to a playgroup.

—Olive.

Direct contact from CMF representatives occurred primarily through phone calls during pregnancy and after delivery to mothers who had used private clinics or registered with companies' websites for gifts. Sales representatives praised participants for practicing breastfeeding without offering sales promotions:

Yes, they [CMF representatives] contacted me via phone [...] they got my number from the doctor's clinic where I went to do prenatal checkups [...] Then, the representative asked if I was still breastfeeding, and I said yes. They praised that a lot. They didn't advertise any formula milk.

—Carol.

Nara, who works as a YouTuber, received an offer from a CMF company to create social media content for them:

[...] I receive offers from the agency telling me to make content and offer a certain payment [...] They send boxed milk [of CMF brand] for me to review.

—Nara.

While participants noted an absence of CMF salespersons at the point-of-sale locations, especially near infant formula shelves, some shopping centres provided on-call sales assistance.

3.1.3 | Changes in CMF Advertisements Over Time

Five participants with older children, born before the Thai Code enactment, noted a shift in marketing strategy, with traditional advertising making way for social media promotions. The practice of distributing free infant formula samples in hospitals has also changed. Bell, an expecting mother with a 12-year-old child, described her contrasting experiences at public hospitals:

[12 years ago] When I went there for prenatal check-ups, they had them [free samples]. They didn't recommend it, but they would give it out. The hospital staff would distribute rectangular bags right in front of the room where we saw the doctor. There were just samples of milk formula.

—Bell.

3.2 | Maternal Perception of CMF Marketing and Use

3.2.1 | Content of CMF Ads

CMF advertisements predominantly featured cognitive development claims, with secondary emphasis on nutrient content and the comparability of CMF to breastmilk:

Usually, they emphasize how the formula contributes to a child's cognitive development, intelligence, and overall well-being [...] every brand already selects nutrients to make it as close to breast milk as possible.

—Kate.

3.2.2 | Influences of CMF Advertisements and Marketing on Mothers' Perception

Maternal responses to CMF advertisements appeared to vary according to their breastfeeding practices and information needs. Formula-feeding mothers, particularly those with lower income, described advertisements as essential to guiding decisions:

I think if there were no advertisements, how would we choose? How would we know what's good? I believe the purpose of advertising for each brand of formula milk is to showcase their quality to encourage us to choose them.

—Elsa.

However, even EBF mothers described advertisements as informative for contingency plans:

It [information from CMF ads] is beneficial because it helps us understand the benefits of formula milk for our babies, what nutrients it contains [...] If my breast milk doesn't flow well, I'll choose which one [CMF brands] has more nutrients.

—Gina.

Participants across socioeconomic backgrounds appeared generally accepting of promotional materials without obvious branding. Carol, an EBF mother, distinguished between advertising and gifts:

I think we need to separate the issue of advertising from the issue of giveaways [...] I don't believe that receiving free items necessarily implies that [I believe] formula milk must be beneficial... when it comes to giveaways, we often don't even notice the logos, so I don't see any issue with receiving them.

—Carol.

The more educated mothers expressed scepticism about marketing claims, particularly celebrity endorsement and breast milk comparison. Some participants expressed concerns about advertisements normalising formula feeding, especially among younger mothers:

I think it [CMF ads] does have an impact. Nowadays, teenagers, once they're pregnant for 9 months, they feel like they want to be free. They have options (after seeing ads), and it seems more convenient for them.

—Anna.

Olive, a mother with high literacy about marketing, recognised gift distribution as a brand recognition strategy:

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

They might not directly advertise infant formula but instead give out toys or other items with the company's logo. This way, parents remember the brand.

—Olive.

3.2.3 | Influence of CMF Ads on Maternal Feeding Practices and Brand Selection

The magnitude of marketing influence varied notably by maternal educational and breastfeeding experiences. The lower-educated mothers appeared more susceptible to marketing messages despite awareness of breastfeeding benefits:

We already know that breast milk is good and convenient, and on the other hand, formula milk has its benefits too [...] Advertisements just say that formula milk is good. So, I'd like to have the best of both milk and mix them together.

—Elsa.

Regarding brand choice, healthcare professional recommendations emerged as the primary and most trusted influence on mothers' CMF brand selection. Mothers across backgrounds viewed such recommendations as an indicator of quality and safety. Olive, a highly educated mother, shared:

The real influencers are hospitals [...] I trust their judgment. It turns out that [the private] hospital [I used] chose the most expensive CMF brands [...] I think the hospital chose it, so it should be good.

—Olive.

In the absence of healthcare providers' guidance, first-time mothers' selection criteria centred on nutritional claims, particularly those with specific nutrients advertising similarity to breast milk and their cognitive developmental benefits:

[I chose this brand because] I saw in the advertisements that it has complete nutrients, similar to breast milk.

—Gina.

We looked at the brands, specifically what nutrients they offered. We checked if they contained DHA, what vitamins were included, and what other ingredients they had. As a parent, you always want to choose the one that will make your child smart.

—Kate.

Higher-income mothers tended to equate higher prices with higher quality, while lower-income mothers prioritised affordability. Marketing influence appeared to diminish with experience, as mothers with older children typically maintained loyalty to a previous brand choice unless their infant showed intolerance.

3.3 | Maternal Exposure to Breastfeeding Support and CMF Marketing in Healthcare Facilities

3.3.1 | Breastfeeding Support Practices

Participants observed that healthcare facilities actively promoted breastfeeding through immediate breastfeeding initiation, rooming in, and health professional support. While public hospitals emphasised breastfeeding in policy but sometimes lacked individualised support, private hospitals varied in their approach based on institutional policies and staff practices. Although participants noted that health professionals provided comprehensive breastfeeding education, lactation management, and emotional support, access to lactation clinics was limited. Public hospital clinics operated during office hours and were located in inconvenient locations, and private hospitals had no designated lactation clinics. Participants reported seeing breastfeeding information across hospital settings, with CMF information restricted, even when they requested it. Several participants suggested hospitals should serve as reliable sources for CMF information to prevent reliance on CMF companies:

In hospitals, nobody talks about formula milk, not even nurses or doctors. It's like formula milk has become a forbidden word.

—Olive, a private hospital in Bangkok.

3.3.2 | Hospital Policy About CMF Supplementation

Participants whose infants received CMF supplementation during hospital stay reported varied indications, ranging from hypoglycemia and jaundice to perceived insufficient breastmilk supply, with inconsistent practices in maternal consent and explanation:

On the first day after delivery, my baby had low blood sugar, so the doctor ordered formula milk. They provided it right away.

—Maya, a private hospital in Bangkok.

Most facilities prepared prepackaged CMF for hospital use without brand disclosure, though practices varied between institutions. Alternative feeding methods, such as cup or syringe feeding, were generally promoted over bottle feeding to prevent nipple confusion. While most participants reported being unable to obtain brand information, three mothers using private hospitals in Bangkok learned the CMF brand upon request.

3.3.3 | Subtle CMF Marketing in Health Facilities

While overt CMF marketing was rare in healthcare facilities, subtle promotional practices emerged in specific settings. A few participants reported receiving free infant formula samples from the private clinics of obstetricians and paediatricians or CMF representatives at the outpatient wards of one public hospital. Private hospitals occasionally included CMF in

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

discharge packages, though these were a continuation of products used during hospitalisation rather than promotional samples.

> *As for the OBGYN's clinic, they distributed developmental stimulating toys and CMF products. We received one box of infant formula milk [...] it was just left there until my grandmother decided to use it.*
>
> —Carol, private clinic, outside Bangkok.

CMF company engagement was noted through digital platforms, particularly in private hospital settings where representatives promoted company-developed mobile applications during prenatal seminars.

3.4 | Maternal Awareness and Perspective of the Thai Code

3.4.1 | Awareness of the Thai Code

Most participants were aware that Thailand has CMF marketing regulations in place to ban or restrict CMF advertising and promotion, though only a few knew that such regulation is the law or could specifically identify the 'Thai Code' and its key provisions. Participants reported learning about CMF regulations through informal channels, including online searches for CMF products and word-of-mouth communication with their family, friends, and colleagues when discussing infant feeding. Some assumed there must be regulations based on healthcare providers' reluctance to discuss infant formula.

> *When we mentioned formula milk to the nurses at the hospital, they would immediately change the subject [...] It's like formula milk is a taboo word.*
>
> —Olive.

3.4.2 | Perceived Benefits of the Thai Code

After being informed about the Thai Code's aim and key provisions, participants largely viewed the Thai Code as supporting breastfeeding and protecting them from marketing influence. They believed restricting CMF marketing could prevent CMF from becoming a default choice and help maintain breastfeeding as a norm:

> *I think it would be beneficial because sometimes if we see a lot of advertisements, it might affect our mindset or undermine our confidence. Our main goal [to breastfeed)] might drop after seeing advertisements that catch our attention or become a norm.*
>
> —Carol.

3.4.3 | Perceived Limitations of the Thai Code

Despite supporting the Thai Code's aims, participants expressed concerns that it might hinder access to CMF product information, lead to uncertainties about what information sharing is permissible, or lead to adaptive marketing strategies from the CMF industry. Participants expressed minimal concern about promotional giveaway restrictions. However, some noted regulatory gaps, particularly regarding the marketing of CMF for young children over 1 year old, could affect continued breastfeeding practices:

> *We should control CMF sold for children aged 1 year and older [...] Otherwise, there will be no control, and mothers will continue to use these products extensively.*
>
> —Pearl.

4 | Discussion

This is, to our knowledge, the first qualitative study to explore Thai mothers' experiences with and perspectives on CMF marketing practices and their regulation under the Thai Code. Participants had encountered diverse CMF marketing strategies both outside and inside the healthcare setting and had varied perceptions toward CMF marketing. While they were generally aware of CMF marketing regulations, few were familiar with the Thai Code and its provisions.

In public settings, CMF marketing strategies appear to have evolved in response to the Thai Code. While participants reported no exposure to direct promotion and advertisement of regulated products, they were targeted with unregulated growing-up milk for young children on social media and through relationship-based marketing strategies such as phone calls and apps offering breastfeeding support. These adaptive marketing strategies toward digital platforms and unregulated products align with global trends (Baker et al. 2021; Becker et al. 2022; Jones et al. 2022; Topothai et al. 2024) and are consistent with marketing patterns reported by recent Bangkok research (Cetthakrikul, Kelly, Baker, et al. 2022). However, our study expands existing knowledge by revealing the emergence of TikTok as a key marketing channel alongside Facebook. We anticipated that this shift also resulted from the high coverage of smartphone and social media users in Thailand (Statista 2024). Our findings suggest the need for strengthening monitoring systems that incorporate AI-based surveillance of digital media (Backholer et al. 2025) as the impact of CMF digital marketing could potentially be more powerful in reaching mothers and providing information that is less recognisable as advertising (Rollins et al. 2023). Furthermore, strengthening the Thai Code provisions to address the marketing of CMF for young children aged 1–3 years is necessary (World Health Organization 2017a).

In healthcare facilities, participants reported little exposure to traditional CMF marketing practices, such as free sample distribution and discharge packages including CMF products, and their perceptions of strict CMF brand disclosure practices. These findings suggest potential improvements in healthcare facilities' marketing regulations compared to the pre-enactment of the Thai Code (Cetthakrikul et al. 2014; Taylor 1998). However, CMF marketing strategies have evolved, rather than disappeared, towards more subtle tactics in private healthcare

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

settings, as a few participants reported receiving free samples through private clinics and engaging with company-sponsored digital platforms during prenatal clinics or seminars. These adaptive marketing practices, which have primarily shifted to operate through private healthcare facilities, support findings from prior studies in Vietnam (Nguyen et al. 2021), South Africa (Doherty et al. 2022), Mexico (Bueno-Gutierrez and Chantry 2015), and Côte d'Ivoire (Emerson et al. 2021), that documented poorer compliance in private healthcare facilities compared to the public ones. These findings highlighted the need for active surveillance and enhanced enforcement in private healthcare settings.

Our findings revealed varied maternal perspectives on CMF marketing. Participants viewed CMF advertising as one of the legitimate information sources, and those with lower socioeconomic status appeared particularly susceptible to marketing claims emphasising cognitive development and nutrients equivalent to breast milk. This is concerning as CMF advertisements often lack essential information regarding appropriate preparation and use, and are sometimes misleading through their emphasis on products' benefits (Ching et al. 2021; Han et al. 2022; Rollins et al. 2023). Furthermore, mothers across different socioeconomic backgrounds remained somewhat naïve to subtle marketing tactics, especially branded materials, and online engagement despite evidence showing that online engagement with CMF companies is associated with a lower likelihood of predominant breastfeeding (Zhu et al. 2023). These findings underscore the importance of health literacy support with targeted intervention designed for mothers with different socioeconomic backgrounds to ensure their knowledge about the incomparable benefits of breast milk that cannot be replicated by CMF products and their abilities to distinguish commercial marketing messaging from health information.

Interestingly, our study found that participants reported being encouraged to breastfeed through various hospital practices while receiving little advice to use CMF from healthcare workers. This finding differs from research in other countries with CMF regulations that documented healthcare workers recommending formula feeding (Caicedo-Borrás et al. 2021; Green et al. 2021; Hernández-Cordero et al. 2022; Sobel et al. 2011). It sheds light on positive improvement among Thai healthcare workers to be more attentive to breastfeeding promotion and support. Nevertheless, considering participants perceived limited availability of lactation clinics and insufficient responsive lactation management in this study and prior research (Cetthakrikul and Topothai 2019; Topothai and Cetthakrikul 2018), we recommended that healthcare facilities should continue to strengthen their breastfeeding services. Additionally, our findings revealed participants perceived healthcare professionals as a trusted source influencing maternal CMF brand choice highlighting the need for healthcare professionals to maintain professional integrity and ethical conduct, and healthcare settings to tighten CMF marketing controls (Cetthakrikul, Kelly, Baker, et al. 2022).

However, we acknowledge that mothers have the right to receive objective information about CMF while being safeguarded against promotional messaging. Health professionals represent the most trusted and appropriate source for providing objective feeding information (Baker et al. 2023; Rollins et al. 2023). Thus, we recommend that the healthcare system establish clear protocols for providing information to mothers and families. Additionally, healthcare professionals should receive training in breastfeeding and formula feeding counseling, the impacts of CMF marketing, and identifying conflicts of interest, to provide unbiased guidance when mothers specifically request information about CMF or have medical indications for CMF use. Such information should focus on factual content including age-appropriate use, preparation methods, safety considerations, and nutritional composition without brand recommendations or promotional language. This approach would address the information gaps our participants experienced while protecting them from commercial influence, thereby enabling informed decision-making on infant feeding.

Our study also revealed limited maternal awareness of the Thai Code and its provisions, indicating gaps in public communication. While support from consumer groups facilitates effective Code enforcement and vice versa (Hernández-Cordero et al. 2022; Payán et al. 2022; Thow et al. 2021), participants' understanding of the Thai Code's aim and its benefits should be advocated for. The concerns about restricted access to CMF information expressed by participants merit attention and could be addressed by the recommendation mentioned earlier.

While our study offers deeper insights into how mothers perceive and respond to CMF marketing practices, and provides complementary qualitative evidence to the prior quantitative compliance assessment following the NetCode protocol (Cetthakrikul, Kelly, Banwell, et al. 2022), it had several limitations. Our sample was small for a heterogeneous data set due to many reasons. Our study timeline and resource constraints did not allow sufficient flexibility to address the logistic challenges of participant access and gain the trust needed for comprehensive heterogeneous sampling across all planned strata. During data collection, we observed that certain themes—particularly those related to breastfeeding support in healthcare settings and general awareness of marketing restrictions—reached saturation among our initial participants, comprising EBF mothers as the majority. We then tried to recruit more CMF-feeding mothers and private hospital users, but this was challenging due to restricted access to private hospitals. This required shifting our recruitment strategy from direct recruitment at the hospitals to village health volunteers' recommendations, local mothers' support groups, social media platforms, and personal networks. Additional challenges included the logistic difficulties and time constraints of travelling to several provinces, resulting from the preference for face-to-face interviews, and complications with online recruitment methods due to prevalent scams that made potential participants hesitant. Consequently, data saturation was reached for certain themes but not all themes, particularly for themes related to direct CMF marketing exposure among CMF-feeding mothers and private hospital users. Additionally, social desirability bias may have influenced participants' responses about breastfeeding practices as they were aware of the researchers' positions as medical officers working for maternal and child health policy from the Ministry of Public Health. To mitigate this, researchers tried to build rapport and begin the interview with broad, open-ended questions without leading toward breastfeeding outcomes (Table 1).

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 | Participant characteristics.

Name	Age	Highest education	Income	Entitled to paid maternity leave	Number of children (their age)	Current feeding practice	CMF use in the current child	Type of hospital
Anna	36	High school	Middle	NA, self-employed	3 (11 and 4 years, and 3 months)	EBF	Never	Public
Bell	42	Secondary school	Middle	No	1 (12 years) and 16 weeks pregnancy	NA (EBF in previous child)	NA	Public
Carol	31	Master's degree	Middle	Yes	1 (8 month)	EBF 6 months, continue BF	Never	Public
Dana	34	Bachelor's degree	Middle	Yes	1 (2 months)	EBF	Use in the hospital	Public
Elsa	26	Secondary school	Lower	NA, unemployed	2 (8 years and 14 months)	Formula and fresh milk (non-EBF)	since birth	Public
Fern	26	Secondary School	Lower	NA, unemployed	2 (4 years and 3 months)	Formula feeding (non-EBF)	since birth	Public
Gina	28	High school	Middle	NA, unemployed	2 (5 years and 1.5 months)	EBF	Never	Public
Ice	31	High school	Middle	Yes	2 (11 years and 14 months)	Formula and fresh milk (EBF 5 months)	Since 5 months until now	Public
Jane	38	Master's degree	Higher	NA, business owner	2 (4 years and 18 months)	Formula and fresh milk (EBF 6 months, continue BF to 10 months)	Since 10 months until now	Private
Kate	40	Bachelor's degree	Higher	Yes	2 (3 years and 11 months)	Formula feeding (EBF 6 months, continue BF to 7 months)	Since 7 months until now	Public
Luna	28	High school	Lower	NA, unemployed	2 (3 years and 3 days)	EBF	Never	Public
Maya	29	Bachelor's degree	Higher	NA, self-employed	1 (4 months)	Mixed feeding	Since birth until now	Private
Nara	31	Bachelor's degree	Higher	NA, self-employed	1 (16 months)	Fresh milk (EBF 6 months, continue BF 11 months)	At 11–12 months	Private
Olive	39	Master's degree	Higher	NA, business owner	2 (6 years and 3 months)	EBF	Never	Private
Pearl	31	Master's degree	Higher	Yes	1 (15 months)	BF and fresh milk (EBF 6 months, continue BF until now)	Never	Private

Note: Income refers to household monthly income: lower: ≤ 15,000 THB, middle: 15,000–50,000 THB, and higher: ≥ 50,000 THB.

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

5 | Conclusion

Despite the Thai Code's enactment in 2017, mothers in Thailand are still exposed to CMF marketing. CMF companies appeared to have adapted their strategies, focusing on growing-up milk and UHT milk, social media, and building relationships with mothers. Our findings highlight several priorities for strengthening the Thai Code's implementation: enhancing digital marketing surveillance, improving enforcement in private healthcare settings, expanding the regulatory scope to include products for children aged 1–3 years, banning misleading health claims, and strengthening communication about the Thai Code to the public.

Author Contributions

C.T., M.C. and Y.V. designed the research study. C.T. and T.T. conducted all interviews and analysed the data with advice from M.C. and Y.V. C.T. initially wrote the paper. All authors reviewed, revised, and approved the final draft before submission.

Acknowledgements

We want to thank all the participants and coordinators in this study. We thank Dr. Nisachol Cetthakrikul, the FHP team, and the staff at the Department of Health, Ministry of Public Health, Thailand, for their coordination and management support. This project was funded by the Food and Nutrition Policy for Health Promotion Program under the International Health Policy Program Foundation and the Capacity Building on Health Policy and Systems Research program (HPSR Fellowship), through cooperation between the Bank for Agriculture and Agricultural Co-operatives (BAAC), the National Health Security Office (NHSO), and the International Health Policy Program Foundation.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data that support this study's findings are available in the Supporting Information of this article.

References

Backholer, K., L. Nguyen, D. Vu, C. Ching, P. Baker, and R. Mathisen. 2025. "Violations of Vietnamese Laws Related to the Online Marketing of Breastmilk Substitutes: Detections Using a Virtual Violations Detector." *Maternal & Child Nutrition* 21, no. 1: e13680. https://doi.org/10.1111/mcn.13680.

Baker, P., T. Santos, P. A. Neves, et al. 2021. "First-Food Systems Transformations and the Ultra-Processing of Infant and Young Child Diets: The Determinants, Dynamics and Consequences of the Global Rise in Commercial Milk Formula Consumption." *Maternal & Child Nutrition* 17, no. 2: e13097. https://doi.org/10.1111/mcn.13097.

Baker, P., J. P. Smith, A. Garde, et al. 2023. "The Political Economy of Infant and Young Child Feeding: Confronting Corporate Power, Overcoming Structural Barriers, and Accelerating Progress." *Lancet* 401, no. 10375: 503–524. https://doi.org/10.1016/S0140-6736(22)01933-X.

Becker, G. E., P. Zambrano, C. Ching, et al. 2022. "Global Evidence of Persistent Violations of the International Code of Marketing of Breast-Milk Substitutes: A Systematic Scoping Review." *Maternal & Child Nutrition* 18, no. S3: e13335. https://doi.org/10.1111/mcn.13335.

Bloomfield, F. H., and C. Agostoni. 2020. "The Potential Impact of Feeding Formula-Fed Infants According to Published Recommendations." *Pediatric Research* 88, no. 4: 526–528. https://doi.org/10.1038/s41390-020-1056-6.

Braun, V., and V. Clarke. 2021. "Can I Use TA? Should I Use TA? Should I Not Use TA? Comparing Reflexive Thematic Analysis and Other Pattern-Based Qualitative Analytic Approaches." *Counselling and Psychotherapy Research* 21, no. 1: 37–47. https://doi.org/10.1002/capr.12360.

Bueno-Gutierrez, D., and C. Chantry. 2015. "Using the Socio-Ecological Framework to Determine Breastfeeding Obstacles in a Low-Income Population in Tijuana, Mexico: Healthcare Services." *Breastfeeding Medicine* 10, no. 2: 124–131. https://doi.org/10.1089/bfm.2014.0109.

Caicedo-Borrás, R., A. Díaz, J. Bertha, K. M. Silva-Jaramillo, and G. Rivas Mariño. 2021. "Violations of the International Code of Marketing of Breastmilk Substitutes (WHO Code) in Two Ecuadorian Cities." *Nutrition* 87–88: 111206. https://doi.org/10.1016/j.nut.2021.111206.

Cetthakrikul, N., C. Banwell, M. Kelly, P. Baker, and J. Smith. 2023. "Regulating the Marketing of Foods for Infants and Young Children: Lessons From Assessment of Gaps in Monitoring and Enforcement in Thailand." *Maternal & Child Nutrition* 19, no. 3: e13507. https://doi.org/10.1111/mcn.13507.

Cetthakrikul, N., M. Kelly, P. Baker, C. Banwell, and J. Smith. 2022. "Effect of Baby Food Marketing Exposure on Infant and Young Child Feeding Regimes in Bangkok, Thailand." *International Breastfeeding Journal* 17, no. 1: 64. https://doi.org/10.1186/s13006-022-00503-7.

Cetthakrikul, N., M. Kelly, C. Banwell, P. Baker, and J. Smith. 2022. "Regulation of Baby Food Marketing in Thailand: A Netcode Analysis." *Public Health Nutrition* 25, no. 10: 2680–2692. https://doi.org/10.1017/S1368980022001446.

Cetthakrikul, N., W. Kunpurk, S. Phulkerd, et al. 2014. "Track 7: From Individual Choice to Population Prevention: Solutions and Interventions." *Obesity Reviews* 15: 206–248. https://doi.org/10.1111/obr.12153.

Cetthakrikul, N., and C. Topothai. 2019. "Study of Lactation Consultant's Services in Health Facilities in Thailand." *Journal of Health System Research* 13, no. 4: 368–382.

Chiadamrong, B. 2017. "The Surveillance and Monitor of Marketing Communication in Thailand for Powdered Milk Violates on the International Code of Marketing of Breast-Milk Substitutes." *Romphruek Journal* 34, no. 2: 105–124.

Ching, C., P. Zambrano, T. T. Nguyen, M. Tharaney, M. G. Zafimanjaka, and R. Mathisen. 2021. "Old Tricks, New Opportunities: How Companies Violate the International Code of Marketing of Breast-Milk Substitutes and Undermine Maternal and Child Health During the COVID-19 Pandemic." *International Journal of Environmental Research and Public Health* 18, no. 5: 2381. https://doi.org/10.3390/ijerph18052381.

Crotty, M. 1998. *Foundations of Social Research: Meaning and Perspective in the Research Process*, 1st ed. Routledge. https://doi.org/10.4324/9781003115700.

Doherty, T., C. J. Pereira-Kotze, S. Luthuli, et al. 2022. "They Push Their Products Through Me: Health Professionals' Perspectives on and Exposure to Marketing of Commercial Milk Formula in Cape Town and Johannesburg, South Africa—A Qualitative Study." *BMJ Open* 12, no. 4: 055872. https://doi.org/10.1136/bmjopen-2021-055872.

Emerson, J., F. Kouassi, R. Oka Kouamé, F. N. Damey, A. S. Cisse, and M. Tharaney. 2021. "Mothers' and Health Workers' Exposure to Breastmilk Substitutes Promotions in Abidjan, Côte D'ivoire." *Maternal & Child Nutrition* 17, no. 4: e13230. https://doi.org/10.1111/mcn.13230.

Green, M., A. M. Pries, D. N. Hadihardjono, D. Izwardy, E. Zehner, and V. H. Moran. 2021. "Breastfeeding and Breastmilk Substitute Use and Feeding Motivations Among Mothers in Bandung City, Indonesia." *Maternal & Child Nutrition* 17, no. 3: e13189. https://doi.org/10.1111/mcn.13189.

Han, S., H. Chen, Y. Wu, and R. Pérez-Escamilla. 2022. "Content Analysis of Breast Milk Substitutes Marketing on Chinese E-Commerce

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Platforms." *Maternal & Child Nutrition* 18, no. 2: 1–13. https://doi.org/10.1111/mcn.13332.

Hernández-Cordero, S., M. Vilar-Compte, A. C. Castañeda-Márquez, N. Rollins, G. Kingston, and R. Pérez-Escamilla. 2022. "Exposure to Marketing of Breastmilk Substitutes in Mexican Women: Sources and Scope." *International Breastfeeding Journal* 17: 16. https://doi.org/10.1186/s13006-022-00455-y.

Hernández-Cordero, S., R. Pérez-Escamilla, P. Zambrano, I. Michaud-Létourneau, V. Lara-Mejía, and B. Franco-Lares. 2022. "Countries" Experiences Scaling Up National Breastfeeding, Protection, Promotion and Support Programmes: Comparative Case Studies Analysis." *Maternal & Child Nutrition* 18, no. Suppl 3: e13358. https://doi.org/10.1111/mcn.13358.

Horta, B. L., N. Rollins, M. S. Dias, V. Garcez, and R. Pérez-Escamilla. 2023. "Systematic Review and Meta-Analysis of Breastfeeding and Later Overweight or Obesity Expands on Previous Study for World Health Organization." *Acta Paediatrica* 112, no. 1: 34–41. https://doi.org/10.1111/apa.16460.

Jones, A., S. Bhaumik, G. Morelli, et al. 2022. "Digital Marketing of Breast-Milk Substitutes: A Systematic Scoping Review." *Current Nutrition Reports* 11, no. 3: 416–430. https://doi.org/10.1007/s13668-022-00414-3.

Nguyen, T. T., H. T. T. Tran, J. Cashin, et al. 2021. "Implementation of the Code of Marketing of Breast-Milk Substitutes in Vietnam: Marketing Practices by the Industry and Perceptions of Caregivers and Health Workers." *Nutrients* 13, no. 8: 2884. https://doi.org/10.3390/nu13082884.

Payán, D. D., N. Zahid, J. Glenn, H. T. Tran, T. T. T. Huong, and C. Moucheraud. 2022. "Implementation of Two Policies to Extend Maternity Leave and Further Restrict Marketing of Breast Milk Substitutes in Vietnam: A Qualitative Study." *Health Policy and Planning* 37, no. 4: 472–482. https://doi.org/10.1093/heapol/czab116.

Pérez-Escamilla, R., C. Tomori, S. Hernández-Cordero, et al. 2023. "Breastfeeding: Crucially Important, but Increasingly Challenged in a Market-Driven World." *Lancet* 401, no. 10375: 472–485. https://doi.org/10.1016/S0140-6736(22)01932-8.

Piwoz, E. G., and S. L. Huffman. 2015. "The Impact of Marketing of Breast-Milk Substitutes on WHO-Recommended Breastfeeding Practices." *Food and Nutrition Nulletin* 36, no. 4: 373–386. https://doi.org/10.1177/0379572115602174.

Robinson, H., G. Buccini, L. Curry, and R. Perez-Escamilla. 2019. "The World Health Organization Code and Exclusive Breastfeeding in China, India, and Vietnam." *Maternal & Child Nutrition* 15, no. 1: e12685. https://doi.org/10.1111/mcn.12685.

Rollins, N., E. Piwoz, P. Baker, et al. 2023. "Marketing of Commercial Milk Formula: A System to Capture Parents, Communities, Science, and Policy." *Lancet* 401, no. 10375: 486–502. https://doi.org/10.1016/S0140-6736(22)01931-6.

Rollins, N. C., N. Bhandari, N. Hajeebhoy, et al. 2016. "Why Invest, and What It Will Take to Improve Breastfeeding Practices?" *Lancet* 387, no. 10017: 491–504. https://doi.org/10.1016/s0140-6736(15)01044-2.

Sobel, H. L., A. Iellamo, R. R. Raya, A. A. Padilla, J. M. Olivé, and S. Nyunt-U. 2011. "Is Unimpeded Marketing for Breast Milk Substitutes Responsible for the Decline in Breastfeeding in the Philippines? An Exploratory Survey and Focus Group Analysis." *Social Science & Medicine* 73, no. 10: 1445–1448. https://doi.org/10.1016/j.socscimed.2011.08.029.

Statista. 2024. "Internet Usage in Thailand—Statistics & Facts," 2025. https://www.statista.com/topics/6140/internet-usage-in-thailand/#topicOverview.

Taylor, A. 1998. "Violations of the International Code of Marketing of Breast Milk Substitutes: Prevalence in Four Countries." *BMJ* 316, no. 7138: 1117–1122. https://doi.org/10.1136/bmj.316.7138.1117.

Thow, A. M., G. Waqa, J. Browne, et al. 2021. "The Political Economy of Restricting Marketing to Address the Double Burden of Malnutrition: Two Case Studies From Fiji." *Public Health Nutrition* 24, no. 2: 354–363. https://doi.org/10.1017/S1368980020000440.

Topothai, C., and N. Cetthakrikul. 2018. "The Service Provision of Lactation Clinic in Health Facilities in Thailand." *Thailand Journal of Health Promotion and Environmental Health* 41, no. 4: 87–100.

Topothai, C., N. Cetthakrikul, N. Howard, V. Tangcharoensathien, M. F.-F. Chong, and Y. van der Eijk. 2024. "Outcomes of Implementing the International Code of Marketing of Breast-Milk Substitutes as National Laws: A Systematic Review." *International Breastfeeding Journal* 19, no. 1: 68. https://doi.org/10.1186/s13006-024-00676-3.

Topothai, C., and V. Tangcharoensathien. 2021. "Achieving Global Targets on Breastfeeding in Thailand: Gap Analysis and Solutions." *International Breastfeeding Journal* 16, no. 1: 38. https://doi.org/10.1186/s13006-021-00386-0.

Victora, C. G., R. Bahl, A. J. D. Barros, et al. 2016. "Breastfeeding in the 21st Century: Epidemiology, Mechanisms, and Lifelong Effect." *Lancet* 387, no. 10017: 475–490. https://doi.org/10.1016/S0140-6736(15)01024-7.

Vinje, K. H., L. T. H. Phan, T. T. Nguyen, S. Henjum, L. O. Ribe, and R. Mathisen. 2017. "Media Audit Reveals Inappropriate Promotion of Products Under the Scope of the International Code of Marketing of Breast-Milk Substitutes in South-East Asia." *Public Health Nutrition* 20, no. 8: 1333–1342. https://doi.org/10.1017/S1368980016003591.

World Health Organization. 2003. "Global Strategy for Infant and Young Child Feeding." https://www.who.int/publications/i/item/9241562218.

World Health Organization. 2017a. "Guidance on Ending the Inappropriate Promotion of Foods for Infants and Young Children: Implementation Manual." https://iris.who.int/bitstream/handle/10665/260137/9789241513470-eng.pdf?sequence=1.

World Health Organization. 2017b. "International Code of Marketing of Breast-Milk Substitutes: Frequently Asked Questions (2017 Update)." https://iris.who.int/bitstream/handle/10665/254911/WHO-NMH-NHD-17.1-eng.pdf.

World Health Organization. 2022. "Marketing of Breast-Milk Substitutes: National Implementation of the International Code, Status Report 2022." https://www.who.int/publications/i/item/9789240048799.

World Health Organization, & United Nations Children's Fund (UNICEF). 2017. "NetCode Toolkit. Monitoring the Marketing of Breast-Milk Substitutes: Protocol for Periodic Assessments." https://iris.who.int/bitstream/handle/10665/259695/9789241513494-eng.pdf?sequence=1.

World Health Organization, & United Nations Children's Fund (UNICEF). 2023. "Global Breastfeeding Scorecard 2023: Rates of Breastfeeding Increase Around the World Through Improved Protection and Support." https://www.unicef.org/documents/global-breastfeeding-scorecard-2023.

World Health Organization, & United Nations Children's Fund (UNICEF). 2024. "Marketing of Breast-Milk Substitutes: National Implementation of the International Code, Status Report 2024." https://www.who.int/publications/i/item/9789240094482.

Zhu, Z., A. Narayan, S. Zhang, et al. 2023. "How the Marketing Practices of Commercial Milk Formula Companies Impact Infant Breastfeeding Practices in China." *BMJ Global Health* 8, no. 11: e012803. https://doi.org/10.1136/bmjgh-2023-012803.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.
Table 1: Summary of the Thai Code provisions related to the public and mothers. **Table 2:** Interview guide for mothers and pregnant women. **Table 3:** Codebook.

17408709, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/mcn.70097, Wiley Online Library on [29/08/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License