



Save the Children

DIGITAL MARKETING OF BREASTMILK SUBSTITUTES

How social media and influencer marketing
undermine informed choice

Digital marketing of breastmilk substitutes (BMS) is a significant barrier to breastfeeding. A scoping review conducted for this report identified inappropriate marketing practices on social media platforms across 18 countries. The aggressive and unethical advertising strategies employed by the BMS industry require urgent action from public health authorities to protect and promote breastfeeding.



Acknowledgments

The scoping review and report were conducted and written by Agnieszka Miciul, with Henrik Hvaal providing supervision and oversight of the project. Valuable insights were also provided by other Save the Children colleagues. Additional input was received from Katherine Shats (UNICEF) and Constance Ching (Alive and Thrive). Special thanks to Professor Karen Marie Ingeborg Moland from the University of Bergen.

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EXECUTIVE SUMMARY

Breastfeeding is widely recognized as the best source of nutrition for infants, providing significant benefits to both the infant and mother. However, the use of infant formula has become increasingly common on a global scale, largely due to powerful marketing strategies employed by the formula industry.

The aim of this report is to explain the newest marketing strategies used by the breastmilk substitute (BMS) industry on social media platforms. The report is based on a scoping review of 12 peer-reviewed scientific research articles published between 2020 and 2023 that documented various types of social media and influencer marketing.

The studies reviewed reported 5183 instances of digital marketing that violated the International Code of Marketing of Breastmilk Substitutes (the Code). Violations were then categorized by the type of marketing strategy used and linked to the corresponding Code articles that prohibit such marketing.

The results of the scoping review illustrate how social media and influencer marketing of BMS influences parents' informed choice. The review found that the BMS industry uses social media marketing strategies prohibited by the Code, such as initiating direct contact with mothers, providing educational materials through sponsored healthcare professionals, and making unsubstantiated health and nutrition claims.

This report makes several recommendations on how to strengthen the protection of breastfeeding and parents' informed choice from social media marketing. The Code must be strengthened through the adoption of a new resolution on digital marketing. Governments should also update their national legislation to include regulations on social media marketing and invest resources in developing technology for monitoring Code violations.

The review found that the BMS industry uses social media marketing strategies prohibited by the Code.



1. BREASTFEEDING

Breastfeeding is widely recognized as the best source of nutrition for infants, providing significant benefits to both the infant and mother, especially in low-income settings.¹ The World Health Organization (WHO) recommends that infants should be exclusively breastfed for the first six months of life. Breastfeeding should continue for at least two years, with complementary feeding introduced at 6 months after birth.²

Breastmilk has a complex dynamic structure and contains unique bioactive components that cannot be replicated by infant formula.^{3,4} Although the use of infant formula can be necessary and lifesaving in certain situations, breastfeeding should ideally serve as the primary source of infant nutrition whenever possible. Breastfeeding is the biological norm, and has superior nutritional, psychological and environmental benefits.^{5,6,7}

Ultimately, it is the parents' choice to decide which feeding methods work best for their individual situation and they should find the solution that caters to both their own and the infant's well-being. Parents have the right to make an informed choice free from commercial influence, based on an understanding of the risks, benefits, and implications on both breastfeeding and the use of infant formula.

1.1 Current global breastfeeding rates

According to a Lancet series published in 2016, if all infants were breastfed as the WHO recommends, more than 800,000 infant deaths could be prevented each year.⁶ Global breastfeeding rates have increased over the past decade and in 2023 48% of all infants under the age of 6 months were exclusively breastfed. Current predictions show that the World Health Assembly target of 50% will be reached by 2025.⁸ However, the rates vary significantly between countries, with many social and economic factors influencing breastfeeding trends. Only a small number of countries are predicted to meet the WHO target of 70% of infants being exclusively breastfed by 2030.

The low global breastfeeding trends can be explained by various economic and social barriers faced by caregivers. Mothers often do not have access to paid maternity leave and lack the community support to accommodate breastfeeding.^{9,10} Breastfeeding is a complex social issue that needs to be protected, facilitated and encouraged by policies on national and international levels to support mothers along the demanding breastfeeding journey.¹¹

2. BMS INDUSTRY AND UNETHICAL MARKETING

The global breastmilk substitute (BMS) market is worth around \$55 billion annually, a huge increase from \$1.5 billion in 1978. Advertising has always been a major driving force of sales, and today BMS companies allocate roughly \$3 billion yearly towards marketing.¹²

Recognizing the importance of breastfeeding and the negative impact of marketing on breastfeeding rates The World Health Organization (WHO) adopted The International Code of Marketing of Breast-milk Substitutes (the Code) in 1981, aiming to prohibit advertising of breastmilk substitutes, such as infant formula.¹³ Since then, many resolutions have been passed to update the Code, ensuring its relevance and strength in protecting breastfeeding. The BMS industry comprises a small number of very powerful international corporations that utilize their vast financial resources to lobby against any attempts to regulate marketing legislation at both national and international levels.¹⁴

Despite the efforts of many international organizations working to protect and promote breastfeeding, advertising of infant formula remains widespread and effective, due to sophisticated marketing techniques that indirectly promote the formula.¹⁵ Driven solely by commercial interests and financial gains, BMS companies consistently disregard the regulations of the Code in their relentless pursuit of increased sales.

An examination of reports from five major baby food companies showed that the BMS category generates a substantial profit, making it a hot product for investors.¹⁶ Some business analysts have compared BMS to high-margin categories like pet food and premium coffee.¹⁵ To increase their profits further, BMS companies use marketing to portray their formulas as premium, or ultra-premium, explaining the high price by an elaborate list of added health claims that supposedly benefit infant's health. Attaching a monetary value to a child's healthy development is a manipulative tactic because parents are naturally inclined to prioritize their children's access to the highest quality nutrition at any cost.¹⁵



The global breastmilk substitute market is worth around \$55 billion annually, a huge increase from \$1.5 billion in 1978.¹²

This type of unethical marketing is especially dangerous in low and middle-income countries, where high costs of infant formula can intensify existing socio-economic vulnerabilities^{17,18,19} While mothers have the freedom to choose and purchase products they believe are best in their individual circumstances, it is crucial to acknowledge that their decisions are often influenced by infant formula marketing. Research indicates that parents often encounter persuasive marketing campaigns that portray formula as a convenient alternative to breastfeeding.¹² However, scientific evidence consistently demonstrates the superior nutritional value of breastmilk, along with its cost-effectiveness and sustainability compared to formula.¹¹

2.1 Protecting Breastfeeding and Parents' Informed Choice

Technologies have advanced immensely since the Code was first created, with the widespread use of the internet, and more recently, social media platforms. These developments present new challenges for public health and the protection of breastfeeding. Two WHO reports published in 2022 demonstrated how the rise of digital marketing enabled highly effective advertising strategies that BMS companies utilize to sell more products.^{20,21}

The BMS industry strategically influences health policies through targeted challenges to WHO guidance and resolutions aimed at strengthening the Code, and industry lobbyist groups were found to exert substantial pressure on public health authorities to shape decision-making processes on introducing stricter regulation on digital marketing of BMS.²²

With a genuine dedication to advancing breastfeeding and public health goals globally, political leaders must confront the urgent necessity of updating and strengthening regulations to shield parents and children from unethical and aggressive digital marketing strategies across various platforms. The following discussion will explore these challenges and propose relevant recommendations.



Scientific evidence consistently demonstrates the superior nutritional value of breastmilk, along with its costeffectiveness and sustainability compared to formula.¹¹

3. DIGITAL MARKETING OF BREASTMILK SUBSTITUTES

In today's marketing world, digital channels have completely transformed how products and services are advertised. Digital marketing, including platforms like websites, social media, email, search engines, and mobile apps, provides BMS companies with unique ways to connect with their target audience in a more personalized manner. Through digital marketing strategies, these companies can effectively engage with consumers and influence their purchasing decisions. A recent WHO report revealed that digital marketing has emerged as the primary method by which BMS companies promote their products, constituting up to 70% of their advertising expenditure.¹

Modern marketing, especially in industries like infant formula, is a sophisticated and delicate practice. Research has shown that digital marketing of infant formula undermines efforts to improve breastfeeding practices on a global scale.² Governments are not able to effectively scrutinize new forms of digital marketing. Current marketing strategies bypass national laws, highlighting the need for new forms of regulation, monitoring, and enforcement to effectively implement and reinforce the Code.

3.1 Social Media Marketing

Social media refers to online communication and social networking platforms such as Instagram, Facebook, YouTube, TikTok, Snapchat, and X (formerly known as Twitter), among others. Through social media, individuals share their everyday life, knowledge and experiences to a vast audience.³ Organizations leverage social media for marketing objectives, including boosting brand recognition, attracting consumers or clients, shaping brand perceptions, and enhancing purchase intent.

The world of social media is constantly changing and evolving, with each platform coming up with new technologies to increase engagement with their users. Worldwide, over 3.6 billion individuals engage with social media platforms, with projections indicating a rise to 4.41 billion users by 2025.⁴ Social media engagement refers to the extent of interest and interaction audiences demonstrate towards online content. This multifaceted concept is determined by various metrics, including but not limited to the number of likes, followers, and comments.

“I scrolled through Facebook and saw an advisement about free samples of powdered milk for pregnant mothers. I registered and got free samples from Enfa and Friso during my first pregnancy.”

Nguyen et al.(8), Vietnam: Interview with a mother of 4-month-old child



What makes social media more effective than other forms of digital marketing is the use of algorithms that matches the paid-for advertising with the very personalized likes and interests of each user. This means that if a parent follows a page on Facebook or Instagram that has pregnancy-related content, they will be shown more pages and advertising of products related to pregnancy and babies. Several studies have concluded that pregnant women and new mothers use social media to share their motherhood experiences, and they place a high value on the information and reassurance received online.^{5,6,7}

3.2 Social Media Influencers

A strategy for successful social media marketing involves partnering with social media influencers, known as influencer marketing.⁹ According to the 2022 Influencer Marketing Report, this approach is undergoing a swift expansion, with over 75% of companies currently exploring this emerging marketing avenue.¹⁰ It is anticipated by some that social media influencers will emerge as the dominant form of marketing in the foreseeable future.¹¹ BMS companies regard contracting social media influencers a very effective strategy for achieving their marketing goals, as the influencers engage with their followers in a more interactive and personalized manner compared to interactions involving a company.¹²

Audiences are increasingly drawn to social media influencers, viewing them as more trustworthy and familiar when compared to conventional marketing and celebrity endorsement.¹³ Through frequent interactions with their audience, social media influencers create the perception of transparency and honesty. This interaction can lead some audience members to feel as though they are engaging in conversations with distant friends.^{14,15} A 2024 systematic review concluded that social media influencers significantly impact health-related outcomes, confirming their powerful role in shaping audience behavior.¹⁶

This powerful marketing strategy poses a significant challenge for promoting breastfeeding, as BMS companies leverage the special, intimate, trusting relationship between influencers and their audience to portray BMS as a convenient and simple solution for addressing challenges related to infant feeding.¹⁷ The Code states that BMS marketing personnel should not seek direct or indirect contact with mothers and pregnant women. Influencers posting sponsored content paid for by a BMS brand effectively serve as marketing personnel, thus clearly violating the Code's regulations.

“ ... we do work with a group of influencers, but they cannot promote any product for children under twelve months, [...] in fact, as we work with them, they do not mention the product or claims; they simply participate with our experts with a doctor to speak about a topic of general interest for the mother, for example, ”stages of development of children over twelve months” and it is nothing more than a topic that goes with branding of the product, but we never send them a sample of the product ”

Mota-Castillo et al., (7) Mexico: A quote by a BMS Company Representative

3.3 Mommy Influencers

BMS companies choose to collaborate with Mommy Influencers - influencers who are mothers and use their social media platforms to share personal stories and experiences related to motherhood. The traditional role of real-life communities is evolving towards online connections, as mothers often turn to social media platforms to seek advice and support. Mommy influencers often strive to ensure their authenticity by portraying themselves as ordinary people and friends to their followers.^{18,19,20} Mothers like sponsored social media posts better when they are posted by a mommy influencer, compared to a BMS brand.²¹ A recent study found that 44% of new mothers were visiting mommy influencer profiles every day.²²

Pregnant women often experience anxiety about the challenges associated with breastfeeding. Factors that correlate positively with the duration of breastfeeding include the woman's intention to breastfeed, her confidence in breastfeeding (breastfeeding self-efficacy), and the level of social support she receives.²³ Research found that new mothers who lack sufficient real-life support may be more inclined to follow mommy influencers and be more susceptible to persuasion.^{24,25,26}

The BMS industry has developed an intimate understanding of mothers' insecurities and uses subtle tactics to exploit these fears, convincing parents that formula can be a convenient, reliable, and optimal source of nutrition for their child.¹⁷ BMS companies strategically leverage the influence of Mommy Influencers to efficiently promote infant formula, employing targeted marketing tactics rooted in scientific research and consumer behaviour analysis.

"[...] @philipsaventsa Natural bottle makes it all easy, for these bottles mimic the breast for easier combination feeding. That way you know your little heart is not fussy all day while you are at work. Oh and the very same containers you use to store your expressed milk can easily be turned into a Natural bottle. Easy feeding without pouring and re-pouring, ensuring hygiene for your little heart.

#breastfeeding #naturalbottles #youngmom #breastmilk #expressmilk
#babyboy #babysedi #lesedi #avent #philipsavent #babies #bottles
#naturallatch #anticolic #ultrasoft"



Pilime et al. (10), South Africa: Description of a mommy influencer post on Instagram, sponsored by a BMS brand. The post describes combination feeding as a solution to the challenges that come with breastfeeding.

4. SCOPING REVIEW ON THE EVIDENCE OF SOCIAL MEDIA MARKETING OF BMS

The primary objective of this scoping review was to gain insight into the digital marketing strategies employed by the BMS industry and assess their adherence to the WHO Code. Specifically, the review aimed to map the latest evidence regarding social media and influencer marketing of BMS products.

4.1 Methods

The literature review was conducted by using the procedures listed in the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Extension for Scoping Reviews (PRISMA-ScR) Checklist and follows the Arskey & O'Malley Framework.^{13,14} The literature search was conducted using two academic databases: MEDLINE and Web of Science. All relevant peer-reviewed literature on the social media marketing of BMS published in the English language was considered eligible for this scoping review. The data extracted from the selected studies were organized into a coherent and appropriate format. After identifying common themes, these themes were categorized more broadly using the articles of the WHO Code to facilitate analysis.

4.2 Results

Following a comprehensive literature search, screening, and eligibility assessment, the review included 12 peer-reviewed research articles. Analysis of these articles revealed 5,183 instances of digital marketing of BMS that violate the Code. All twelve research articles were gathered from a diverse array of scientific journals, each published between 2020 and 2023, ensuring that this review represents the most recent evidence obtainable. The data collection periods of the reviewed studies ranged from 2015 to 2020. The review has a global reach, as studies reported evidence of digital marketing of BMS in 18 different countries: Australia, Burkina Faso, Canada, China, India, Indonesia, Kenya, Laos, Malaysia, Mexico, Myanmar, Pakistan, the Philippines, South Africa, Thailand, Uruguay, the USA, and Vietnam.

Each of the 12 studies included in this review employed different methods to collect and categorize evidence of social media marketing. Only one study utilized the NetCode toolkit,¹⁵ and another used the CLICK Monitoring Framework.¹⁶ These tools, developed by the WHO to effectively monitor and review digital marketing strategies, ideally should be adopted by all research focusing on social media marketing. The use of diverse research methods in studies on digital marketing highlights the absence of an effective, unified methodology within the research community. The study by Hidayana et al. (4) used a coherent and efficient method for analyzing the violations reported by using each article of the Code as a separate category. This scoping review follows similar methodology, directly linking digital marketing strategies of the BMS industry to the legislation outlined in the Code.

TABLE 1 Summary of the peer-reviewed studies included in this scoping review, including where social media marketing posts were found and the number of violations of the Code found.

Study Number	Author (year of publication)	Study Setting	Social Media Platforms	Number of violations of the Code found
1	Cetthakrikul et al. (2022)	Thailand	Facebook, Instagram, Youtube, Line Official	931
2	Ching et al. (2021)	World	Facebook, Instagram	25
3	Dearlove et al. (2021)	Australia	Facebook	216
4	Hidayana et al. (2023)	Indonesia	Instagram and Facebook, WhatsApp	665
5	Karageuzián et al. (2021)	Uruguay	Facebook	302
6	Lozada-Tequeanes et al. (2020)	Mexico	Facebook, Twitter, Youtube	178
7	Mota-Castillo et al. (2023)	Mexico	Facebook, Instagram, Youtube	NA (Interviews)
8	Nguyen et al. (2021)	Vietnam	Facebook, Instagram, Zalo	NA (Interviews)
9	Pereira-Kotze et al. (2020)	South Africa	Facebook, Instagram, WhatsApp	4
10	Pilime et al. (2023)	South Africa	Instagram	27
11	Unar-Munguía et al. (2022)	Mexico	Facebook, Instagram, Twitter, Youtube	168
12	Zhao et al. (2023)	China	Weibo	2667
	TOTAL			5183

4.3 Social media platforms where the violations occurred

Violations of the Code covered in this review occurred in digital marketing posts on social media platforms and websites, such as BMS companies' websites, parenting websites, online retailers, public health-related websites, and news portals. Six studies combined evidence found on social media and websites (1,2,4,7,8,11), while others reported evidence found only on social media platforms. (3,5,6,9,10,12). Violations were found across social media platforms with global reach, including Facebook, Instagram, YouTube, WhatsApp, and Twitter (X). Additionally, violations were observed on more localized platforms limited to specific regions or countries, such as Zalo in Vietnam, Line in Thailand, and Weibo in China.

Marketing on Facebook was reported by ten studies (1,2,3,4,5,6,7,8,9,11). Two studies (3,5) focused their research exclusively on Facebook. BMS marketing strategies found on Facebook include advertising the product range, offering samples and gifts, organizing live events with healthcare professionals who provide educational material, encouraging parents to join private community groups, and having BMS personnel join and comment in parenting community groups.

FIGURE 1 This scoping review found examples of social media marketing of BMS in the countries marked in red.



Evidence of marketing on Instagram was reported by eight studies (1,2,4,7,8,9,10,11). One study focused exclusively on evaluating the impact of social media influencers on Instagram (10). Instagram was the platform where BMS brands were found to leverage mommy influencers to post sponsored content.

WhatsApp was mentioned in two studies (4,9), which provided examples of how BMS brands use encrypted online messaging services to initiate direct contact with mothers and offer gifts.

The BMS brands and sub-brands specific to certain countries, whose social media marketing strategies were reported by the reviewed studies, include: Abbott, AlphaPro, Baby Mum Mum, Bayer Healthcare, Belamy's Organic, Biostime, Bubs Organic, Calcar, Canaprole, Danone, Danonino, Enfagrow, Enfamil, Frisco, Gerber, Heinz, Kiddylicious, Mead Johnson, Novamil, NAN, Nestlé, Nido, Nutricia, PiSA Farmaceutica, Wyeth, and Yili-Pro and other.

The BMS products falling within the scope of the Code, for which advertising was identified in this review, include infant formula, follow-up formula, growing-up milks, and other milks. Additionally, commercial complementary foods or drinks intended for infants or young children aged between 6 and 36 months, as well as bottles, teats, and gadgets facilitating the use of BMS, were also observed. One study (10) reported evidence of marketing pacifiers, which is currently not within the scope of the Code. However, pacifiers were found to be linked to the disruption of exclusive breastfeeding and can be used as a channel for the cross-promotion of teats, which are covered by the Code.^{17,18}

4.4 Types of Code violations reported in studies

This chapter presents an overview of the violations categorized by type of digital marketing strategy and the respective articles of the Code, offering perspectives on the challenges and implications associated with such practices.

TABLE 2 Reported violations found across all 12 studies categorized by violation type and the related article of the Code.

Code Article/ Resolution	Violation Type	Studies reporting the violations (Study Number)	Number of violations found in the review
Article 5. The General Public and Mothers WHA 69.9 (2016b)	Promotion to the general public: Advertisement, product range	1,2,3,4,12	606
	Promotions, mechanisms for sale: Offering coupons, discounts, free samples and gifts	1,2,3,4,8,12	958
	Initiating direct contact. Engagement building	1,2,3,4,9,12	1092
Article 6. Health Care system Article 7. Health Workers Article 8. Persons employed by manufacturers and distributors	Providing educational material	1,2,3,4,7,12	850
	Influencer Marketing. Celebrity Endorsement	3,4,7,10,12	628
Article 9. Labelling	Images and text idealizing formula use. Absence of required statements	1,3,4,5,6,9,11,12	772
Article 10. Quality	Food products meet applicable standards recommended by the Codex Alimentarius Commission and the Codex Code of Hygienic Practice for Foods for Infants and Children	4	1
WHA 58.32 (2005) WHO 63.23 (2010)	Use of unsubstantiated health and nutrition claims	1,4,7,8,9,12	267
WHA 63.23 (2010)	Supplies or donations by manufacturers during emergency situations	1,4	9
Total			5183

4.4.1. Article 5. General public and mothers and Marketing of BMS products for children aged 3-36 months WHA 69.9 (2016b)¹⁹

Violations reported under Article 5 were classified into three categories: Promotion to the general public (including advertisement and product range), Promotions and mechanisms for sale (such as offering coupons, discounts, free samples, and gifts), and Initiating direct contact (engagement building). The violations of the WHA 69.9 (2016b) Resolution, which relates to the marketing of commercial foods for children aged 6 to 36 months, were also included in the above categories. Upon review, 606 instances of promotion directed towards the general public (constituting 12% of the total number of violations) and 958 instances of promotional activities involving mechanisms for sale (18%) were found.

Initiating direct contact

Initiating direct contact and engagement building were the most frequent Code violations found, constituting 21% of all violations (1092 instances). Examples include posts promoting secret 'mom clubs' on Facebook and WhatsApp group chats (9), direct chats with BMS brand representatives available 24/7 (1), and direct messages to mothers' phone numbers encouraging engagement with BMS brand marketing offers.

FIGURE 2 Examples of direct contact with mothers

1) **Nestlé Baby & Me South Africa**
20 June 2019
Hey, mom! For all that you do, we'd like to thank you. Join us for a conversation on WhatsApp, and stand a chance to win rewards for you and your child.
066 365 5940
Click the button below to join.

2) **Nestlé Sponsored**
We understand how hard it can be to get your kids to eat their spinach, peas or carrots. That's why we're hosting a Nestlé Secret Moms' Club, where we share ideas on how you can give your kids all they need to be healthy, active and happy.
#NestleSecretMomsClub

3) **Nutriclub**
11-11 15:08
Register Kulwap & Dapatkan Free 500Mb untuk Mama yg ingin mengetahui seputar si Kecil yang lahir caesar bersama Expert Kulwap Nutriclub. Yuk klik myads.id/x9gvp
12:08
Yuk, 1 langkah lagi Register Kulwap & Dapatkan Free 500Mb untuk Mama ! Info klik myads.id/hssya

1, 2) Pereira-Kotze et al.(9), South Africa: Example of a WhatsApp group chat and a secret moms' club on Facebook created by a BMS brand, mothers are offered rewards for joining.

3) Hidayana et al.(4), Indonesia: Examples of BMS companies contacting mothers directly on their phone numbers to offer: A book to record the baby's development and free 500MB of mobile data in exchange for registering for a lecture on C-section delivery.

4.4.2. Article 6. Health care systems, Article 7. Health workers, Article 8. Persons employed by manufacturers and distributors

Articles 6 and 7 of the Code were combined into one category to demonstrate how digital marketing strategies are used by the BMS industry to utilize healthcare professionals and social media influencers to promote their products or broader brand values, either directly or indirectly. This is achieved through creating mother-friendly content incorporating either BMS products or educational material, or a combination of both.

Providing educational material

The analysis found 762 instances of Providing educational material (15%), mostly involving healthcare professionals such as doctors, nurses, midwives, or nutritionists who participated in Facebook Live events, webinars, or videos and photos posted on social media platforms. The educational content was created and sponsored by BMS brands. Mothers were found to perceive the advice provided as useful (7). The reported incidents involved advertising events with healthcare professionals and encouraging mothers to participate, but the exact content of the live events organized by the BMS industry is unknown.

Examples of Providing Educational material as a digital marketing strategy to promote BMS brand values:

FIGURE 3 Examples of Providing educational material



Ching et. al. (1) Philippines: Facebook Live Event on pregnancy and COVID-19 sponsored by a BMS brand



Mota-Castillo et al., (7) Mexico: Facebook Live Event on child's health sponsored by a BMS company

Influencer marketing

There were 628 instances of influencer marketing documented (12%). BMS brands often engage mommy influencers in promotional activities, ranging from participating in brand-produced online events to sharing images of their children featuring the BMS product. These influencers, however, present sponsored content on their social media platforms as personal recommendations. Written in the first person point of view, these posts convey the impression that the influencer genuinely believes the promoted BMS product to be the optimal choice for their children.

FIGURE 4: Example of Influencer marketing



Hidayana et al. (4), Indonesia: Instagram post by an influencer with 5 million followers, this influencer is a signer, actress, a public figure, and a mother. This post was sponsored by a BMS company. In the description, this influencer recommends the use of the BMS product seen in the picture.

The Code violation by an influencer from Indonesia (4) serves as a clear example of cross-promotion, where the influencer showcased packaging of Growing Up Milk with a prominent "3" – a type of milk designed for children aged 1 to 3 years old. However, the same brand also produces Infant Formula, with packaging almost identical, featuring a "1". This violation highlights an issue where BMS products tailored for different age groups lack visual distinction, going against WHO guidelines.²⁰

FIGURE 5: Despite catering to distinct age ranges, these products feature packaging that is almost identical.



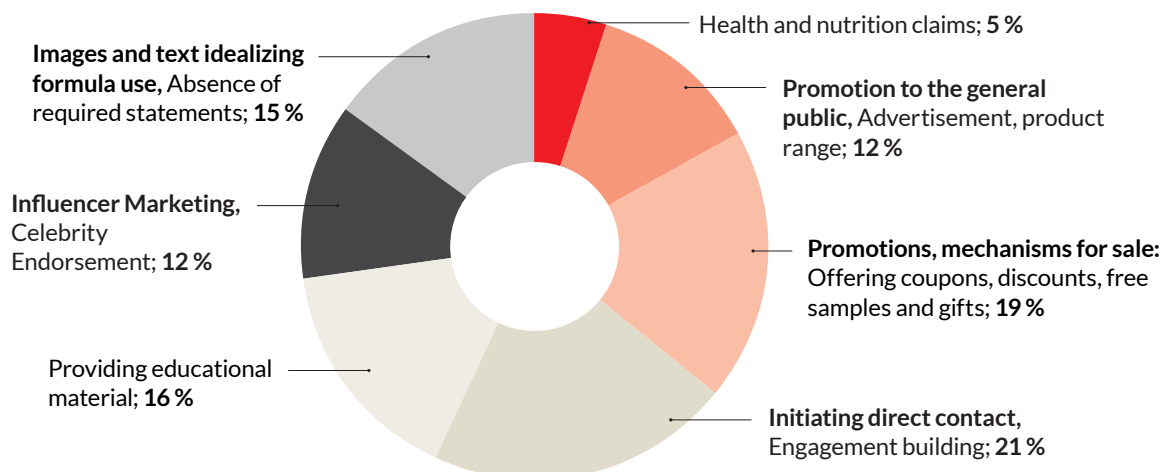
4.4.3. Article 9. Labelling

A total of 773 violations prohibited by Article 9 were found in the review, constituting 15% of the instances. These violations included digital marketing instances featuring images and texts idealizing formula use, as well as instances where required statements were absent (statements such as the superiority of breastfeeding and the importance of consulting health personnel). Among the studies reviewed, these violations were the most commonly reported, appearing in eight out of twelve studies.

4.4.4. Use of unsubstantiated health and nutrition claims **WHA 58.32 (2005), WHO 63.23 (2010)**^{21,22}

The above resolutions urged the cessation of inappropriate promotion of food for infants and young children, as well as ensuring that health and nutrition claims were not used in the marketing of breast milk substitute (BMS) products. This review identified 267 instances of digital marketing strategies using unsubstantiated health and nutrition claims.

FIGURE 6 Chart describing the distribution of different BMS marketing strategies found in this review

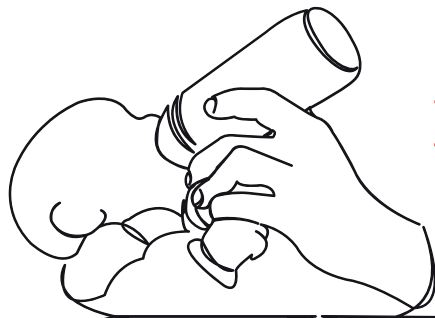


5. DISCUSSION: SOCIAL MEDIA, INFLUENCER MARKETING AND PARENTS INFORMED CHOICE

The diverse body of evidence analyzed in this scoping review illustrates how the BMS industry uses social media platforms for advertising purposes. The findings are consistent with recent WHO reports highlighting the transition to digital marketing by BMS brands.^{1,2,3} New parents are often under a lot of emotional stress resulting from the huge responsibility of caring for another human being, and they may crave reassurance and support. Through building a friendly image, formula brands pose as allies and use individually targeted communications to provide non-judgmental support to vulnerable caregivers who often might feel inadequately prepared for the demands of parenthood.^{4,5}

This review builds on the existing literature illustrating how social media has provided the BMS industry with a platform to engage directly with mothers and exploit their specific fears, needs, and aspirations under the guise of addressing parental concerns.^{6,7}

The review highlights how companies use social media to spread unsubstantiated health and nutrition claims capitalizing on the credibility and trust of health professionals and mommy influencers, persuading parents that their products are an optimal, if not the best, source of nutrition for their children. This supports previous research that found that mothers consider a formula healthy if it contains scientific nutrition and health claims that raise questions about the optimal way to feed their children.^{8,9} Health and nutrition claims have been observed to enhance the likelihood of mothers opting for a specific formula, as many parents place trust in the claims presented in advertisements.¹⁰ Recent research from the USA revealed that over half of parents believed that formula can be better than breastmilk.¹¹ Using unsubstantiated health and nutrition claims violates WHA Resolutions 58.32 (2005) and 63.23 (2010).



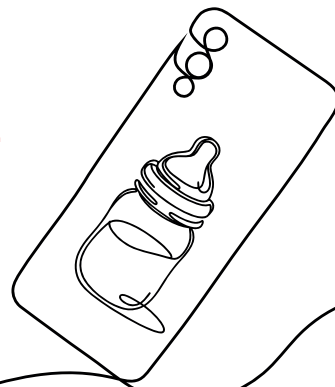
Recent research from the USA revealed that over half of parents believed that formula can be better than breastmilk.¹¹

Social media marketing integrates customer needs with commercial strategies, allowing marketing techniques to be disguised as objective help. Studies show that mothers use social media extensively for support and information.¹² This reliance makes them susceptible to influencer marketing, where BMS manufacturers pay influencers to endorse their products. This review illustrated the widespread use of subtle and sophisticated soft-sell marketing tactics employed by the BMS industry, including the provision of educational material and influencer marketing. The presence of health professionals on BMS's social media increases brand awareness and interactions with influencers are found to be more engaging and personalized than those involving the brand.¹³

Social media engagement with brands' advertising increases when the company is not seen as the sender, and the marketing content offers a combination of informativeness, entertainment, or credibility.¹⁴ Article 8 of the Code states that BMS marketing personnel should not have direct contact with mothers. However, evidence shows that brands employ health professionals and influencers to create engaging marketing content, gaining direct access to mothers through social media platforms. Consequently, influencers and health professionals participating in sponsored social media content should be recognized as BMS marketing personnel.

Parents seeking support online are particularly vulnerable to manipulative BMS marketing tactics, often mistaking marketing content for genuine advice rather than commercial persuasion. Many mothers lack confidence in their ability to breastfeed, and the BMS industry exploits this by using social media to convince them that they sell a simple solution to their insecurities.¹⁵ The manipulation of parental vulnerabilities through social media and influencer marketing raises significant ethical and public health concerns. Parents deserve the right to make informed decisions without commercial influence. However, social media exposes new parents to unethical marketing strategies by the BMS industry, potentially leading to choices that may not best benefit their child's health. When governments work to protect children's right to health and a healthy food environment, they must include strong legislation, monitoring and enforcement regulating the digital marketing of BMS.

The manipulation of parental vulnerabilities through social media and influencer marketing raises significant ethical and public health concerns. Parents deserve the right to make informed decisions without commercial influence.



6. RECOMMENDATIONS

6.1 Strengthening national legislation on social media marketing

There is currently no national regulation of BMS promotion on social media platforms.¹⁶ While marketing of BMS products is generally covered by the Code regardless of which platforms the marketing occurs on, there is currently no examples of national regulation targeting the challenge of BMS promotion on social media platforms specifically.

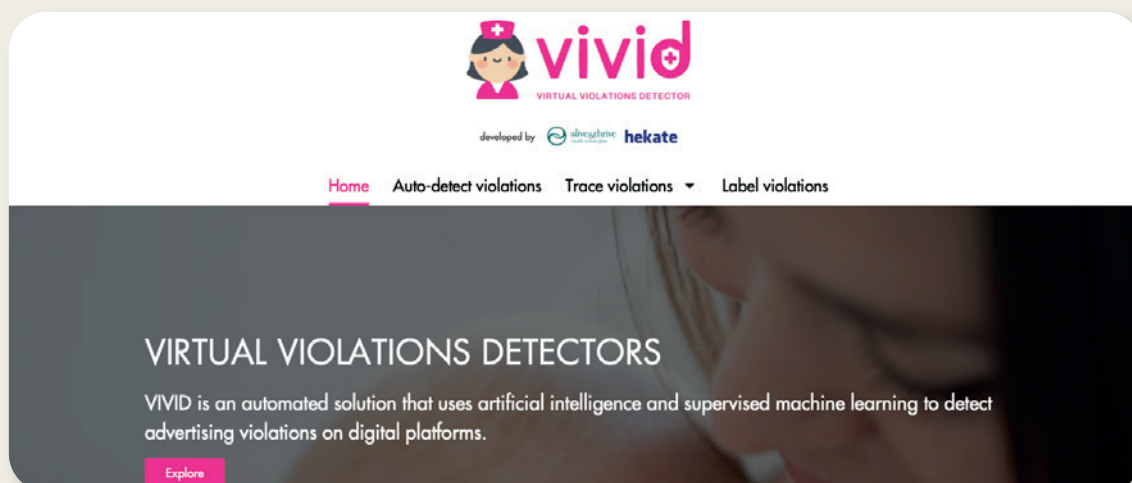
Many governments have implemented measures from the Code in their legislation to regulate the marketing of BMS in traditional media.¹⁷ These efforts deserve recognition and appreciation. Now, there is an urgent need for countries to adapt their existing regulations to address marketing strategies used in social media and influencer marketing. Countries must allocate adequate funds and build capacity to effectively monitor and enforce the Code within their national regulations. Governments should use the 2023 WHO Guidance on regulatory measures aimed at restricting the digital marketing of BMS to strengthen their national legislation.¹⁸

The upcoming 78th World Health Assembly in 2025 presents a significant opportunity to update and strengthen the Code by introducing new regulations aimed at controlling digital marketing of BMS. Member states must engage in collective efforts to protect parents from unethical marketing practices on social media platforms.

6.2 Development of technology for monitoring of violations

Governments should prioritize the integration of modern technologies into their national strategies to effectively monitor digital marketing of BMS. An example of an effective tool is the VIVID (Virtual Violations Detector) solution, a collaborative effort between the government of Vietnam and Alive and Thrive. This technology uses AI to detect digital marketing of BMS, which is then reviewed by a government agency to ensure compliance with the national Code legislation.¹⁹

FIGURE 6: VIVID: Virtual Violations Detector technology

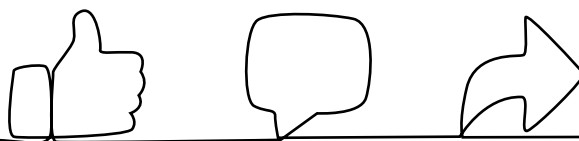


6.3 Development of research tools to collect and analyze evidence of new forms social media marketing

The research community would greatly benefit from updated tools to effectively collect and evaluate evidence regarding social media marketing of BMS. In this scoping review, various studies employed different research methods, with only one utilizing the NetCode toolkit. The data collected for this review extends only up to 2020. However, as of 2024, marketing strategies utilize short video formats for promotional purposes.²⁰

There is a pressing need to develop methodologies capable of capturing and analyzing these video formats to facilitate a more thorough evaluation of BMS marketing strategies. The Cisco Annual Internet Report highlighted a significant increase in video content consumption, with estimates that internet video traffic will comprise 82% of all consumer internet traffic by 2022.²¹ This growth underscores the rising importance of video as a dominant form of digital marketing. Evidence shows that online video content is more engaging and plays an important role in driving consumers' purchase intention.^{22,23} Since 2020, the social media platform TikTok, designed for sharing short videos and popular among younger audiences, has experienced exponential growth, boasting over one billion monthly users and becoming a marketing tool for brands.²⁴ None of the studies in this review mentioned TikTok. Additionally, Instagram has introduced a "story" function, allowing influencers to post sponsored content that disappears within 24 hours.²⁵

To address these emerging challenges, new tools must be developed to efficiently gather data on evolving trends in social media and influencer marketing.



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Graphic design: Anna Maria Pirolt, brodogtekst.no



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