

Breastfeeding and breast-milk substitute use and feeding motivations among mothers in Bandung City

Key Findings

- Half of children 0-36 months received breast-milk substitutes in the previous day.
- Breast-milk substitute feeding was linked with mothers working outside the home and their perceived insufficient breastmilk production.
- The most important motivational factors for feeding breast-milk substitutes were perceived benefits on child growth, intelligence, and immunity.
- Mothers' exposure to breast-milk substitutes promotions was widespread, and promotional health and nutrition claims may be misleading mothers.



Background

Breastfeeding is the single most effective preventative intervention to improve child survival [1]. It confers life-long benefits to child and mother, notably reducing risks of child mortality and morbidity, and furthering child growth, development, and cognitive achievement [2]. The World Health Organization (WHO) recommends early initiation of breastfeeding within the first hour of life, exclusive breastfeeding for the first six months, and continued breastfeeding to two years and beyond [3]. Suboptimal breastfeeding practices lead to an estimated 823,000 preventable under-five deaths annually and USD 341 billion in global economic losses [2,4].

Suboptimal breastfeeding practices can be attributed to multiple determinants and contexts including deficient health service policies and practices; insufficient support from family and friends; inadequate maternity protection policies; and cultural traditions and beliefs [5]. Additionally, exposure to marketing of breast-milk substitutes (BMS) affects social norms on breastfeeding, undermines mothers' confidence and perceived self-efficacy to breastfeed, and influences attitudes on the safety and benefit of BMS [6]. BMS is defined as formula, milk, or milk-like products marketed for feeding children under 3 years of age [7].

Suboptimal breastfeeding is common in Indonesia, with only half of infants exclusively breastfed and feeding of BMS highly prevalent among infants and young children [8]. Few studies in Indonesia have documented mothers' exposure to BMS marketing and assessed the factors associated with BMS use among breastfeeding and non-breastfeeding mothers of both infants and young children. To address this evidence gap, this analysis explored breastfeeding and BMS feeding practices of mothers of young children living in Bandung City, West Java.

Research objectives and methodology

The primary objective of the study was to identify the prevalence of breastfeeding and BMS feeding in mothers of children less than three years of age. Secondary objectives were to (1) explore the influence of maternal and child characteristics on breastfeeding and BMS feeding, (2) to explore the motivating factors that influence mothers to breastfeed and/or provide BMS, and (3) to identify the prevalence of mothers' exposure to BMS marketing practices and recommendations to use BMS.

The study was a cross-sectional survey of Indonesian mothers of children less than 3 years of age (n=595) who were interviewed in 24 Bandung City health facilities from January to March 2018. Structured questionnaires were used to collect data on maternal and child characteristics (maternal age, parity, educational attainment, work outside of the home in the previous 1 month, child age and child sex), breastfeeding, and use of BMS. Mothers were asked to rate a series of reasons for breastfeeding and/or feeding BMS and to identify a statement that was closest to their opinion on the best way to feed a baby. Data were also collected on mothers' exposure to commercial promotions for BMS since the birth of their child and whether they received recommendations to use BMS, free samples of BMS, free samples of bottles or teats, or a branded gift.

- Indonesia has one of the largest and most rapidly expanding breast-milk substitute (BMS) markets [9].
- In 2016, BMS sales topped IDR 34.3 billion (USD 2.5 billion), nearly doubling in value over the previous five years [10].
- BMS manufacturers engage in competition for market share, resulting in aggressive advertising and promotional activity.

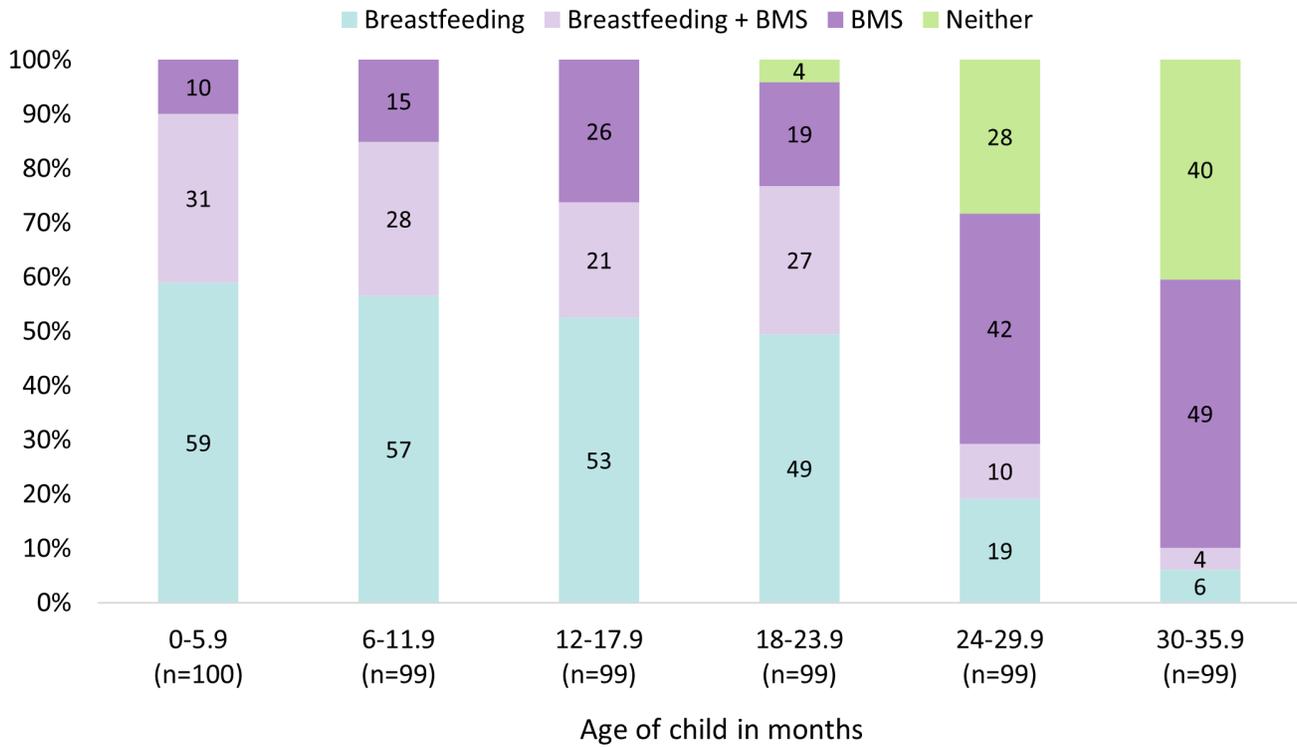


Prevalence of breastfeeding and BMS feeding

Almost all mothers breastfed their children at some point during infancy (99%) and almost half (46%) of children 0-5 months were exclusively breastfed. Children were categorized based on their consumption of (1) breastmilk only, (2) mixed feeding of breastmilk and BMS, (3) BMS only, or (4) neither, in the previous day. These categories did not account for children's consumption of other liquids or foods in the prior day. Figure 1 summarizes these categories by 6-month age groups.

BMS use was common across all ages in our study, given either alongside breastfeeding or fed on its own. Use of BMS was notably prevalent among older children. Nearly half (50%) of 1-3 year-olds consumed growing-up milk—BMS products intended for children 12-35 months of age—with the majority consuming them daily.

Figure 1. Percentage of children breastfeeding or receiving BMS in the previous day, across age groups (n=595)



Maternal and child characteristics

Overall, almost a quarter (22%) of mothers worked outside the home. Mothers of children 6-23 months of age who worked outside the home more commonly reported feeding BMS to their child compared to mothers who reported breastfeeding only.

Higher educational attainment (mothers who had completed diploma or university-level education) was associated with mothers feeding BMS, but only in mothers of children 12-35 months. BMS feeding was equal across household wealth.

- Non-exclusive breastfeeding during the first 6 months is a risk factor for stunting and infant mortality due to a number of preventable diseases, including diarrhea.
- Use of growing-up milks (toddler milks) has been increasing globally and is a burgeoning market for manufacturers [10,11].



Motivating factors

Mothers who provided breastmilk and/or BMS to their child were asked to rate how important a series of reasons were in her personal decision to breastfeed and/or feed BMS (Figure 2). Breastfeeding mothers stated that the most important factors motivating their decision to breastfeed were perceived benefits for child growth, health and immunity, and child intelligence. Similarly, mothers who fed BMS also reported these three factors as the strongest motivators for their BMS-feeding decision. Among working mothers, the need to work was a significantly important motivating factor.

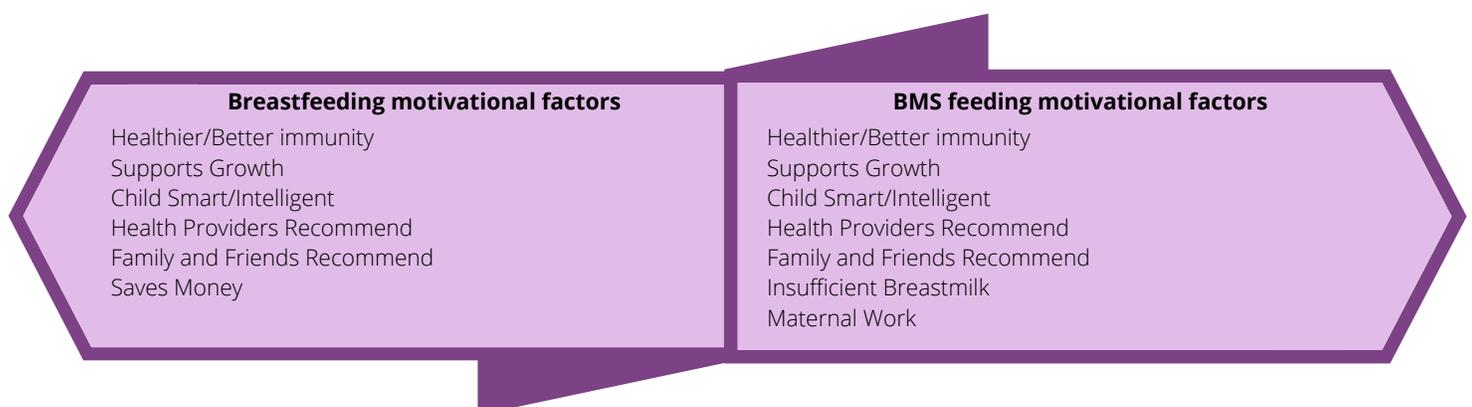
When asked to report their primary reason for feeding BMS in the previous week, the most common reason given by mothers was perceived breastmilk insufficiency, followed by perceived health benefits of BMS. The proportion of mothers reporting insufficient breastmilk decreased with child age, while those citing health benefits increased with child age.

Whilst most women in the study were aware that breastfeeding was optimal for their baby, a quarter of them believed that breastfeeding and formula feeding were equally good options.

The perceived benefits of child growth; health and immunity; and child intelligence are key marketing messages utilized by the breast-milk substitute industry to imply that BMS supports brain development and strengthens immunity [12,13].

These marketing messages have been documented as being prevalent in Indonesia [10,11]. Despite this, there is limited scientific evidence to substantiate these claims [14].

Figure 2. Mother's motivational factors for breastfeeding and BMS feeding



Mothers' exposure to BMS marketing practices

Exposure to commercial BMS promotions was nearly ubiquitous (93%) among all women. Most mothers observed BMS promotions outside of the health system (93%), but almost half (43%) reported exposure to these promotions inside the health system. Promotions outside the health system were predominantly observed in media, including television, social media, and magazines and newspapers. Mothers also observed BMS promotions in retail outlets, on billboards, and contact with company representatives. Mothers of children aged 12 months and older were more likely to report exposure to commercial promotions than mothers of infants 0-11 months.



Mothers' exposure to recommendations to use BMS

Almost half (45%) of all mothers had received a recommendation to use BMS since the birth of their child. Nearly a quarter (22%) of all mothers reported receiving a recommendation to use BMS from within the health system, including from a doctor, nurse, or midwife. Just under one-third (28%) of all mothers reported receiving a recommendation to use BMS from outside the health system, mainly from family. More mothers who fed BMS to their child reported receiving a recommendation to feed BMS from within the health system compared to those who only breastfed.

Conclusion

While the WHO recommends exclusive breastfeeding for the first six months and continued breastfeeding to two years and beyond, this study found that the use of BMS for feeding infants and young children 0-36 months was common in Bandung City, Indonesia [3]. With almost all women in the study reporting exposure to BMS promotion, it is highly likely that the marketing of and health and nutrition claims made on breast-milk substitutes may be misleading some mothers into erroneously believing that these products are equally as good as breastmilk. Commercial BMS promotions are also likely to be influencing Indonesian mothers' perceptions by making use of nutrition and health claims giving the impression of apparent health and developmental benefits. These practices and perceptions are concerning as they undermine optimal infant and young child feeding. Full implementation of WHO recommendations on maternity protection and the International Code of Marketing of Breast-milk Substitutes, especially prohibiting the promotion of BMS for children less than 3 years of age in both within and outside of the health system, will facilitate improved breastfeeding practices in Indonesia [15,16].

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