

Parental Attitudes Toward Exclusive Breastfeeding

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Abstract

Globally 45% of infants under six months of age are exclusively breastfed (EBF), while malnutrition accounts for approximately 45% of all child deaths (United Nations Children's Fund)¹. In low and middle-income countries 4% of infants are never breastfed, whereas in high-income countries this figure rises to 21%². The study explores attitudes of mothers toward exclusive breastfeeding in Georgia's two big cities: Tbilisi and Batumi. Using a mixed-methods approach that included focus groups with pediatricians and a self-administered survey of 200 mothers in Tbilisi 92.9% of mothers reported practicing EBF, while in Batumi the rate was 95%. 86.5% believed they were exclusively breastfeeding even when providing other foods. Analysis demonstrated positive correlations between EBF and infant health ($r = .667$), maternal health ($r = .236$), and formula use ($r = .224$). Insights from focus groups underscored persistent challenges, such as the impact of aggressive formula marketing and systemic barriers.

Keywords

Exclusive breastfeeding, infants, dominant breastfeeding, formula feeding, breast milk

Introduction

Exclusive breastfeeding (EBF) is defined as feeding an infant only breast milk for the first six months of life, without the addition of any other food, water, or liquids.^{3, 4} EBF is widely recognized as the optimal method for infant nutrition⁵, with the potential to prevent over 820,000 child deaths annually.⁶

EBF for the full six months significantly reduces the incidence of gastrointestinal and respiratory infections among newborns.⁷ Moreover, breastfeeding is associated with long-term health benefits for mothers, including a decreased risk of breast and ovarian cancers, type 2 diabetes, and hypertension.⁸ The World Health Organization and UNICEF recommend initiating

exclusive breastfeeding within the first hour after birth to help protect newborns from infections such as diarrhea, pneumonia, and meningitis.⁹

Despite this benefit, health condition of the infant or mother may justify discontinuation or absence of breastfeeding.¹⁰ Studies show that factors like postnatal depression,¹¹ maternal knowledge,¹² socio-economic status, delivery method and support services affect breastfeeding behavior. Philosophical perspectives have also been studied to understand and promote EBF.¹³ Social and demographic factors continue to influence decisions of mothers, which indicates the need for focused public health efforts.¹⁴ Lack of breastfeeding-friendly environments and strong marketing of formula still impact global breastfeeding rates.¹⁵ However, programs offering breastfeeding support and professional advice have been effective in addressing issues like nipple pain and low milk supply.^{16, 17, 18} WHO continues to stress the importance of enforcing policies and protecting breastfeeding from unethical marketing practices.^{19, 20} The global rate of exclusive breastfeeding in 2018 was at 33%.²¹

Georgia has a longstanding cultural and public health commitment to breastfeeding. The country initiated its exclusive breastfeeding (EBF) programs in 1994. In 1999, Georgia enacted legislation aimed at protection and promotion of natural infant feeding practices.²² However, institutional continuity was disrupted in 2006 with the dissolution of the National Breastfeeding Committee, presenting a significant challenge to coordinated policy implementation.²³ According to the 2018 Multiple Indicator Cluster Survey (MICS), only 20.4% of infants in Georgia were exclusively breastfed during the first six months of life. Regional disparities were also observed: the median duration of exclusive breastfeeding was reported as four months in Tbilisi and six months in Adjara.²⁴

Methods

To ensure a comprehensive understanding of the research topic, a mixed-methods approach was employed, incorporating both, qualitative and quantitative methodologies. The study was conducted in July 2024 in two major urban centers of Georgia: Tbilisi and Batumi.

As part of the qualitative component, two focus group discussions were organized with a total of 11 pediatricians from primary healthcare facilities—one group in each city. Pediatricians were purposively selected based on their high levels of patient interaction and were invited to respond to five pre-formulated questions related to exclusive breastfeeding (EBF).

In parallel, a quantitative survey was administered among mothers residing in Tbilisi and Batumi who had infants under the age of one year. The questionnaire was designed to assess trust in available information and its role in influencing decisions of mothers regarding EBF. The survey comprised several thematic sections: (a) socio-demographic characteristics; (b) awareness and understanding of exclusive breastfeeding; (c) factors influencing breastfeeding decisions; (d) sources of information on EBF; (e) support received in developing breastfeeding skills; (f) beliefs and perceptions about breastfeeding, and (g) available support during the breastfeeding period.

The survey was conducted remotely via social media platforms, allowing broad access across the target population. Eligibility criteria for participation required that respondents had given birth at any gestational age and did not have any medical contraindications - either maternal or neonatal - that could hinder exclusive breastfeeding. Such conditions included, but were not limited to, neonatal hypoglycemia, birth weight under 1500 grams, maternal mastitis, HIV, hepatitis B/C, or herpes simplex virus type 1.

Quantitative data were analyzed using SPSS statistical software. The questionnaire was developed in Georgian and received approval from the Ethics Committee for Biomedical Research. Prior to participation, all respondents were informed about the purpose, procedures, and significance of the study.

Results

A total of 200 mothers participated in the study. Among them, 93.5% reported practicing exclusive breastfeeding (EBF), while 6.5% indicated that they did not. Of the total sample, 140 mothers resided in Tbilisi, where 92.9% reported practicing EBF and 7.1% did not. In Batumi, 60 mothers took part in the survey; among them, 95% practiced EBF, 5% did not, and 2% reported being unable to exclusively breastfeed due to health-related reasons - 1% due to the infant's medical condition and 1% due to the mother's own health concerns.

Regarding the age distribution of respondents, 6.5% were under the age of 18, 51.5% were between 18 and 29 years old, 39% between 30 and 40, and 3% were older than 41.

In the Tbilisi cohort, the highest rate of exclusive breastfeeding was observed among mothers aged 18–29 years (48.6%), while the lowest rate was recorded in the 41+ age group (2.1%). In Batumi, the highest rate of exclusive breastfeeding was among mothers aged 30–40 years (38.3%), with the lowest also in the 41+ age group (3.3%).

Regarding maternal education, in Tbilisi, the highest proportion of mothers practicing exclusive breastfeeding held a bachelor's degree (49.3%), while the lowest proportion had only secondary education (4.3%). Similarly, in Batumi, the majority of breastfeeding mothers had a bachelor's degree (41.7%), followed by those with secondary education (26.7%), and the lowest percentage held a doctoral degree (1.7%).

Across both cities, 91% of mothers who practiced exclusive breastfeeding were married, indicating a consistent trend across study locations. In terms of employment status, 47.5% of all surveyed mothers were employed, while 52.5% were temporarily unemployed. Among those practicing exclusive breastfeeding, 45% were employed and 55% unemployed, with a similar distribution observed in both Tbilisi and Batumi.

The majority of respondents (64%) were first-time mothers, of whom 59.5% practiced exclusive breastfeeding, while 41.5% did not. Among multiparous mothers (36%), 34% practiced exclusive breastfeeding and only 2% did not.

Knowledge levels regarding exclusive breastfeeding varied by location. In Tbilisi, among mothers practicing exclusive breastfeeding, 40% rated their knowledge as good, 17.1% as average, 35.7% as very good, and 7.2% reported having no information. In Batumi, 50% rated their knowledge as good, 13.3% as average, and 31.7% as very good.

Among the mothers surveyed, 86.5% believed they were practicing exclusive breastfeeding (EBF) even while providing their infants with liquids or solid foods, indicating a significant gap between perceived and medically defined EBF. Only 13.5% responded that they were not practicing EBF.

In terms of reasons for discontinuing EBF, 5% of mothers in Tbilisi cited the infant's health condition, while an equal percentage in Batumi attributed it to their own health condition.

The most frequently cited factor influencing the decision to breastfeed in both cities was personal motivation—reported by 57.9% in Tbilisi and 48.3% in Batumi. The least influential factors were advice from friends and having no influence at all.

Among mothers in Tbilisi practicing EBF, 92.9% believed it was beneficial for the health of the infant. However, 5.7% disagreed with its benefit to maternal health. In Batumi, 28.3% of mothers lacked knowledge about the maternal health benefits of breastfeeding—the highest proportion among the surveyed.

Regarding information sources, social media was the most commonly used in both cities (Tbilisi: 38.6%; Batumi: 45%), while scientific articles were the least accessed (10% overall). More mothers in Batumi relied on pediatricians (23.3%) compared to Tbilisi (15%), while fewer consulted scientific literature.

When asked about support for developing breastfeeding skills, most mothers reported receiving no professional help. In Batumi, 65% of mothers indicated a lack of support the highest figure compared to 44.3% in Tbilisi. The lowest reported sources of support were friends in Tbilisi (5%) and family members in Batumi (6.7%). Assistance from doctors was nearly identical across both cities (Tbilisi: 8.6%, Batumi: 8.3%), although other medical staff provided more support in Tbilisi (25%) than in Batumi (11.7%).

Among all mothers practicing EBF, 62% believed that breast milk cannot be fully replaced by formula, while 29.4% believed full replacement was possible, and 8.6% were unsure. In Tbilisi, 60.7% supported the irreplaceability of breast milk, 24.3% believed otherwise, and 15% were uncertain. In contrast, 35% of mothers in Batumi agreed that formula could fully substitute breast milk.

In total, 65.5% of breastfeeding mothers found information from pediatricians to be clear and understandable, while 35.5% did not—reflecting a similar trend in both cities.

Regarding pediatric visits, 65% of breastfeeding mothers in Tbilisi followed routine check-ups, 20.7% visited due to health concerns, and 14.3% did not respond. In Batumi, 46.7% adhered to routine schedules, while 41.3% visited out of concern; 12% did not answer.

Overall, 80.5% of mothers agreed that awareness of breastfeeding benefits increases motivation to breastfeed; 18.5% partially agreed, and only 1% disagreed. When asked whether formula poses a risk to child development, 34% believed it did not. In Tbilisi, 32.9% agreed, 48.5% partially agreed, and 18.6% disagreed. In Batumi, 28.3% agreed, 35% partially agreed, and 36.7% disagreed.

A small percentage (3%) of breastfeeding mothers reported using formula due to discomfort, while 58% continued breastfeeding despite discomfort, 13% sought medical consultation, and 29% selected “other”.

Statistical analysis revealed:

- A strong positive correlation between belief in health benefits of breastfeeding for the infant and actual practice ($r = .667$).
- A moderate correlation between maternal health benefit awareness and breastfeeding practice ($r = .236$).
- A positive correlation between belief that breast milk cannot be replaced and EBF practice ($r = .224$).

As for qualitative data analysis, two online focus group discussions were held via Microsoft Teams with 11 pediatricians (7 in Tbilisi, 4 in Batumi), selected for their high patient engagement. Conversations addressed EBF-related knowledge, training, barriers, and patient communication.

Batumi pediatricians reported a complete lack of clinic-level guidelines and printed materials on EBF. They relied on self-directed learning through literature and seminars—often attended at their own expense. They expressed frustration over the absence of structured state support and highlighted difficulties in communicating with first-time mothers who often held misconceptions or distrust.

In contrast, Tbilisi pediatricians focused on systemic challenges within maternity hospitals, particularly the early introduction of formula. They noted that postpartum mothers are often discouraged from breastfeeding due to assumptions about insufficient milk supply, making it difficult to re-establish EBF later. The absence of lactation consultants and the delayed first pediatric visit—typically occurring a month after birth—were cited as critical missed opportunities for early intervention. Participants recommended integrating EBF education into antenatal care to mitigate early misinformation.

Qualitative data from the focus group conducted in Batumi identified several influential factors shaping exclusive breastfeeding (EBF) practices. These included the marketing and sponsorship

activities of artificial infant food manufacturers, the attitudes of hospital personnel, and maternal willingness to adopt EBF as a means of improving child health. Participants noted that infant formula companies are actively engaged in training and distributing informational materials related to EBF and infant nutrition. However, the content provided by these companies was often described as inconsistent or misleading, potentially creating confusion among healthcare providers and mothers. Notably, there were no government-sponsored seminars or training sessions reported, while commercial entities in the infant nutrition sector were found to be organizing awareness-raising events under the guise of supporting breastfeeding.

Pediatricians reported that mixed feeding was commonly introduced when infants failed to demonstrate sufficient weight gain during the first six months. In such cases, pediatricians typically informed mothers of the growth concern and recommended supplementary formula feeding. Additional accounts revealed that hospital staff occasionally introduced artificial feeding in response to non-medical concerns, such as infant crying or sleep difficulties, further complicating adherence to EBF recommendations. These practices point to structural weaknesses within the healthcare system that require attention.

Both focus groups—Tbilisi and Batumi—expressed concern over the influence of infant formula manufacturers on clinical practice and professional development. Pediatricians in Batumi spoke candidly about company-sponsored events and incentive structures that encouraged the indirect promotion of formula feeding, often at the expense of accurate breastfeeding guidance. Their counterparts in Tbilisi echoed these concerns, noting that although such companies claim to support breastfeeding, their events often subtly promote formula products. There was a shared perception that professional development opportunities disproportionately favor providers aligned with commercial interests in the infant nutrition industry.

Despite these challenges, pediatricians from both cities emphasized the need to provide mothers with accessible, reliable, and evidence-based information on EBF. They unanimously agreed that a mother's awareness and understanding of benefits of breastfeeding significantly influence both the initiation and continuation of EBF. To address existing gaps, participants proposed several strategies: the development of national breastfeeding guidelines, integration of lactation consultants into maternity hospital settings, early postnatal follow-up to support breastfeeding initiation, and the establishment of structured educational initiatives, such as parenting schools and SMS-based support systems for new mothers.

Discussion

The study findings highlight a significant gap in the source and clarity of information on exclusive breastfeeding (EBF) received by mothers. The majority of participants reported obtaining information on EBF primarily through social media platforms, rather than from healthcare professionals. Notably, among those who received information from pediatricians, nearly one-third indicated that the information was unclear or insufficiently detailed.

This issue is particularly important, as quantitative analysis using the chi-square statistical test identified that the decision to practice exclusive breastfeeding was significantly associated with several key variables:

- Level of awareness of mothers;
- The influence of a reliable source;
- Awareness of health benefits for both the infant and the mother;
- Maternal motivation;
- Support in developing early breastfeeding skills.

Despite these associations, 86.5% of mothers believed they were practicing exclusive breastfeeding even when also giving their infants additional liquids or solid foods, suggesting widespread misconceptions about the definition of EBF.

Insights from the Tbilisi focus group further revealed that primary healthcare providers lack printed guidelines or structured educational materials on EBF. In addition, there are no state-supported training initiatives or clinical meetings aimed at promoting breastfeeding. Pediatricians reported that retraining is not provided, and that physicians largely depend on independent self-education. In contrast, infant formula manufacturers are actively organizing conferences and promotional events, often framing them as educational seminars, which may contribute to the spread of commercially biased information.

Quantitative results also identified statistically significant correlations between exclusive breastfeeding practices and perceived health benefits for the infant, maternal health benefits, belief that breast milk cannot be fully replaced by artificial formula.

Findings suggest that focusing on growing willingness of mothers to practice exclusive breastfeeding is critical, and they need to be provided with evidence-based and clear information. Pediatricians also emphasized the value of early, accurate, and coordinated communication, which play a critical role in the decision to breastfeed. This includes defining key terms such as exclusive breastfeeding, mixed feeding, and predominant breastfeeding, while also explaining the long-term health and economic benefits of EBF.

Equally critical to improving EBF practices is the motivation and preparedness of medical personnel, which requires that healthcare providers be equipped with accurate, up-to-date information. It is essential that the government establish a structured system to facilitate the dissemination and public promotion of EBF, ensuring that educational initiatives are grounded in public health priorities and free from commercial influence. More specifically, organization of training sessions and professional seminars under the auspices of the public healthcare sector—rather than industry-sponsored events—is necessary to uphold the integrity of breastfeeding guidance.

At present, physicians and healthcare staff receive no formal retraining or continuing professional education on EBF. Most rely on self-directed learning to update their knowledge. In contrast, infant formula companies are actively involved in organizing conferences to introduce and promote their product lines. Addressing this issue requires targeted research, particularly beginning with maternity hospitals, where early feeding practices are established and clinical habits are shaped.

In summary, although the two pediatrician focus groups—Tbilisi and Batumi—identified shared challenges, including limited access to training and widespread misinformation among mothers, their perspectives diverged in emphasis. The Tbilisi group underscored broader systemic and institutional constraints, particularly within hospital settings, while the Batumi group emphasized the lack of educational materials and communication barriers at the primary care level. Nevertheless, both groups concurred on the critical importance of enhancing maternal education and ensuring continuity of care between maternity hospitals and pediatricians as key strategies for improving exclusive breastfeeding practices.

Based on results and discussion of the study Recommendations for improving the practice of exclusive breastfeeding include the following:

1. Enhanced government involvement — training sessions for gynecologists, pediatricians and neonatologists;
2. Introducing lactation consultants to support mothers;
3. Control over the sponsorship and marketing of artificial food manufacturers — tightening the enforcement mechanisms of the law;
4. Institutional control over the offering of artificial food to newborns post-delivery/establishment of medical indications and monitoring;
5. Printing and distribution of evidence-based guidelines on EBF to pediatricians and other primary care providers.

Conclusion

To improve the practice of exclusive breastfeeding, it is important to effectively control the marketing and sponsorship activities of infant formula manufacturers, and also to ensure that printed guidelines on exclusive breastfeeding are available for pediatricians, something which, as noted, unfortunately does not currently exist. Equally significant is the awareness of neonatologists and the need for deeper research into the issue in order to address the problem. To enhance exclusive breastfeeding practices, it is crucial to increase government involvement and implement regulations that support and improve the process. To address the issue, it is important to conduct in-depth research, starting from maternity hospitals.

Acknowledgments

We would like to thank the Georgian Healthcare System and the University of Georgia for their ongoing partnership and contributions.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The research process was not funded.

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