Breastfeeding and Child Oral Health Promotion: Perspectives of Nursing Mothers and Dentists

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Abstract

Background: The aim of this study was to analyze the knowledge and practices of dentists regarding breastfeeding as a strategy for promoting children's oral health. It also aimed to investigate how nursing mothers perceive the participation of dentists in actions to promote and support breastfeeding.

Methods: this study employed a mixed methodological approach. During the quantitative phase, 91 dentists of the Family Health Strategy answered an electronic questionnaire, and the data were analyzed using descriptive statistics. For the qualitative investigation, were interviewed 21 nursing mothers. These interviews were examined through content analysis, and the results were interpreted from the perspective of the Theory of Planned Behavior.

Results: Among dentists, 81.3% agreed that they are aware of the implications of breastfeeding for the child's oral health and reported 72.8% advising mothers and pregnant women about its benefits. Ambivalent social norms and weaknesses related to actions promoting and supporting breastfeeding emerged in the speeches of nursing mothers, and unfamiliarity about the benefits of this practice for children's oral health.

Conclusions: Dentists recognize the benefits of breastfeeding for children's oral health. On the other hand, the nursing mothers pointed out barriers, exposed weaknesses, and signaled necessary conjunction of efforts to improve maternal and child care quality.

Background

Breastfeeding (BF) supports maternal and child health and promotes health benefits for the child\(^1,2\). This practice is essential and decisive for adequate craniofacial maturation and growth at the muscular, bone, and functional levels. BF adapts these structures for developing orofacial muscles, which will stimulate and guide the maturing of physiological functions\(^1\). The coordination of biological mechanisms favors the adequate growth and development of the stomatognathic system, contributing to the prevention of dental malocclusion (DM)\(^2-7\).

Early weaning induces oral-motor dysfunctions that contribute to the installation and worsening of DM, in addition to impairing swallowing, chewing, articulation of speech, and breathing sounds, and may additionally predispose children to oral breathing and oral-motor disorders\(^6\).

The practice of BF can become challenging for those mothers who intend to continue exclusive breastfeeding (EBF) during the first six months\(^6\). In this sense, the encouragement and support of professionals in the Primary Health Care (PHC) services are essential\(^7,8\). In Brazil, the oral health teams of the Family Health Strategy (FHS) can develop practices to promote, protect, and support BF in prenatal care and during the postpartum period, enabling the monitoring of children from birth. Actions to promote and support EBF does not require sophisticated technological approaches and promote benefits related to maternal and child health\(^8-10\).
When prioritizing actions for increasing the rates of EBF, it is essential to understand the determinants that modify the maternal intention to breastfeed and consider that the maternal knowledge about the benefits of BF alone is not enough to ensure its initiation and duration\(^8-^{11}\). In this sense, maternal behavior for BF can be examined from the Theory of Planned Behavior (TPB) perspective, which allows a better understanding of which factors influence the mother's decision to breastfeed\(^{11}\).

From the perspective of the TPB, the intention to behave is its primary determinant, and is also influenced by attitudes (knowledge), subjective norms (especially the social pressure perceived by the subjects to perform particular behavior), and perceived control (degree of control observed for acting in the absence or presence of barriers or facilitators)\(^{12}\).

The dentists' knowledge and practice in PHC on the promotion and support of BF as a strategy to encourage children's oral health and dialogical integration with the perception of nursing users have not yet been investigated. The aim of this study was to assess the knowledge and practice of dentists inserted in the FHS for the promotion and support of BF and also analyzed how nursing mothers perceive dentists' participation in the actions of BF promotion and support for fostering children's oral health.

**Method**

**Study design**

A descriptive study in which production and data analysis was used implementing a mixed approach. It was decided to broaden the survey's view by analyzing different subjects and incorporating quantitative and qualitative data in the dialogical perspective of encounters and divergences of our the results\(^{13}\).

**Sample characteristics**

The study was carried out in the municipality of Campo Grande, the capital of the state of Mato Grosso do Sul, Brazil. The city has 895,982 inhabitants and has a human development index of 0.78414. The Family Health Strategy covers 48.54% of the entire population\(^{15}\).

Two distinct groups participated in this study: the first group included all 118 dentists working in all 50 Basic Family Health Units distributed in the seven Sanitary Districts of the municipality of Campo Grande. Dentists who did not complete the form were excluded from our analyses. The second group consisted of nursing mothers, aged 18 years or older, registered in the Monitoring System of the Humanization Program for Prenatal and Birth (SISPRENATAL), accompanied by oral health teams during the prenatal, and that had performed at least one dental consultation. Nursing mothers should meet up to six months after delivery, which the recommended period for EBF\(^{16}\). It was excluded nursing mothers who had cognitive difficulties that would interfere in understanding and response during the interview. Data were collected between November 2018 and November 2019.
To identify the participants, we carried out a random sampling of one of the health units in each of the seven health districts. Three participants were randomly chosen from each group from the list of registered nursing mothers in the selected units. Lastly, the participants were 21 nursing mothers.

Data collection

Different data collection instruments and techniques were used for each of the two groups. Data collection was performed for the dentists using a self-applicable electronic tool developed for this study (see Additional file 1). The tool was previously verified using a pre-test with eleven dentists experienced in PHC. After the pre-test, there was no need for adjustments to the tool, and the professionals who answered it were not included in the final sample. For this study we used 15 questions about the sociodemographic, academic and professional profile, and knowledge and practices of dentists about BF as a strategy to promote children's oral health.

For the group of nursing mothers, face to face individual, semi-structured interviews were conducted by using a semi-structured interview guide developed for this study (see Additional file 2). The interviews guide was previously pilot-tested from two nursing mothers not included in this study. The interviews were audio-recorded and conducted by a single interviewer, male, first author of this study, dentist, ESF professional, and specialist in Primary Care in Family Health previously trained in qualitative research. As a professional working in PHC oral health teams, the interviewer sought to distance himself from biases that could influence or direct the participants' responses. The interviews were previously scheduled by phone and conducted in an isolated place of the residence to avoid external interferences. The participants were fully informed about the objectives and motivations for conducting the study. There was no previous contact between interviewer and interviewees. There was no repetition of interviews, and the average duration of each session was 30 minutes.

Data analysis

For data analysis of the dentists’ group, descriptive statistics were performed using the statistical program SPSS version 24.0.

The interviews were transcribed in full from the recordings and analyzed using the content analysis proposed by Bardin\(^\text{17}\). This method consists of organizing the collected material, successive readings and re-readings, and seeking to apprehend the nuclei of relevance and organization to achieve the objectives proposed for the studied phenomenon.

From a theoretical-methodological perspective, the categories derived from the content analysis were discussed later between facilitators and barriers in the light of TPB\(^\text{12}\) (attitudes, subjective norms, and perceived control). To preserve the participants' anonymity, we coded their identity by the ordinal sequence they were interviewed, followed by age (ex. E1, 26).
The triangulation of research methods was used to carry out the analysis of information. As for the distribution of time for data collection, we used the sequential explanatory project: the quantitative data collection, followed by qualitative data collection. Triangulation was carried out by connecting data from the group of dentists to data from the group of nursing mothers\textsuperscript{13}.

**Results**

Of the 118 surveyed professionals, 91 (77.12\% of the total) answered the self-administered electronic questionnaire. The average age of dentists was 39.89 ± 0.86 years (mean ± SD), and 78\% were female, 97.8\% were civil servants, and 83.5\% had specialization.

Regarding the knowledge and practices about BF, 81.3\% (n=74) of dentists fully agreed or agreed that they know the implications of BF for the child’s oral health. Moreover, 72.8\% (n = 68) often/always provide mothers or pregnant women with guidance about the benefits of this practice (Table 1).

\textbf{Table 1}

Knowledge and practices about breastfeeding among dentists. Campo Grande-MS, Brazil, 2019.
| Variables                                                                 | n  | %    | CI 95%       |
|--------------------------------------------------------------------------|----|------|--------------|
| Knows the implications of breastfeeding for the child’s oral health      |    |      |              |
| I totally agree                                                         | 17 | 18.7 | 11.8 – 28.2  |
| Agree                                                                   | 57 | 62.6 | 52.1 – 72.1  |
| I do not agree, nor disagree                                             | 11 | 12.1 | 6.7 – 20.7   |
| Disagree                                                                | 5  | 5.5  | 2.2 – 12.7   |
| I totally disagree                                                      | 1  | 1.1  | 0.1 – 7.6    |
| The absence of breastfeeding can generate changes in the growth of the   |    |      |              |
| face and in the oral motor system                                       |    |      |              |
| I totally agree                                                         | 42 | 46.2 | 36.0 – 56.6  |
| Agree                                                                   | 45 | 49.5 | 39.1 – 59.7  |
| I do not agree, nor disagree                                             | 3  | 3.3  | 1.0 – 9.9    |
| Disagree                                                                | 1  | 1.1  | 0.1 – 7.6    |
| I totally disagree                                                      | -  | -    | -            |
| Works in a multidisciplinary team                                       |    |      |              |
| Always                                                                  | 29 | 31.9 | 22.9 – 42.3  |
| Oftentimes                                                               | 43 | 47.3 | 37.0 – 57.6  |
| Sometimes                                                                | 17 | 18.7 | 11.8 – 28.2  |
| Rarely                                                                  | 2  | 2.2  | 0.5 – 8.5    |
| Never                                                                   | -  | -    | -            |
| I have the habit of advising mothers/pregnant women on the recommended  |    |      |              |
| duration of exclusive breastfeeding                                       |    |      |              |
| Always                                                                  | 40 | 44.0 | 33.9 – 54.4  |
| Oftentimes                                                               | 19 | 20.9 | 13.6 – 30.6  |
| Sometimes                                                                | 19 | 20.9 | 13.6 – 30.6  |
| Rarely                                                                  | 10 | 11.0 | 5.9 – 19.4   |
| Never                                                                   | 3  | 3.3  | 1.0 – 9.9    |
| I advise mothers/pregnant women on the importance of maintaining        |    |      |              |
| breastfeeding for up to 02 years or more                                 |    |      |              |
| Always                                                                  | 21 | 23.1 | 15.4 – 33.0  |
| Oftentimes                                                               | 19 | 20.9 | 13.6 – 30.6  |
| Frequency | Percentage | 95% CI       |
|-----------|------------|--------------|
| Sometimes | 27         | 29.7         | 21.0 – 40.0 |
| Rarely    | 12         | 13.2         | 7.5 – 22.0  |
| Never     | 12         | 13.2         | 7.5 – 22.0  |

**I advise mothers/pregnant women on the benefits of breastfeeding**

| Frequency | Percentage | 95% CI       |
|-----------|------------|--------------|
| Always    | 45         | 49.5         | 39.1 – 59.7 |
| Oftentimes| 23         | 25.3         | 17.2 – 35.3 |
| Sometimes | 17         | 18.7         | 11.8 – 28.2 |
| Rarely    | 5          | 5.5          | 3.3 – 12.7  |
| Never     | 1          | 1.1          | 0.1 – 7.6   |

**I advise mothers/pregnant women that breastfeeding contributes to facial growth and the development of the oral motor system**

| Frequency | Percentage | 95% CI       |
|-----------|------------|--------------|
| Always    | 39         | 42.9         | 32.9 – 53.3 |
| Oftentimes| 25         | 27.5         | 19.1 – 37.7 |
| Sometimes | 15         | 16.5         | 10.0 – 25.7 |
| Rarely    | 5          | 5.5          | 2.2 – 12.7  |
| Never     | 7          | 7.7          | 3.6 – 15.4  |

**I carry out health education activities for pregnant women/mothers and babies**

| Frequency | Percentage | 95% CI       |
|-----------|------------|--------------|
| Always    | 24         | 26.4         | 18.2 – 36.5 |
| Oftentimes| 28         | 30.8         | 22.0 – 41.1 |
| Sometimes | 30         | 33.0         | 23.9 – 43.4 |
| Rarely    | 7          | 7.7          | 3.6 – 15.4  |
| Never     | 2          | 2.2          | 0.5 – 8.5   |

**The predominant method of health education activities performed**

| Method                                    | Percentage | 95% CI       |
|-------------------------------------------|------------|--------------|
| Lectures                                  | 50         | 54.9         | 44.4 – 65.0 |
| Workshops, groups and conversation circles| 29         | 31.9         | 22.9 – 42.3 |
| Others                                    | 8          | 8.8          | 4.3 – 16.8  |
| Does not perform                          | 4          | 4.4          | 1.6 – 11.3  |

**I develop health education activities on breastfeeding in other social facilities (schools, daycare centers, community centers, among others)**
| Frequency     | Count | Mean | Confidence Interval |
|---------------|-------|------|---------------------|
| Always        | 2     | 2.2  | 0.5 – 8.5            |
| Oftentimes    | 12    | 13.2 | 7.5 – 22.0           |
| Sometimes     | 20    | 22.0 | 14.5 – 31.8          |
| Rarely        | 26    | 28.6 | 20.1 – 38.8          |
| Never         | 31    | 34.1 | 24.9 – 44.5          |

**I make home visits in the First Week of Integral Health**

| Frequency     | Count | Mean | Confidence Interval |
|---------------|-------|------|---------------------|
| Always        | 1     | 1.1  | 0.1 – 7.6            |
| Oftentimes    | 11    | 12.1 | 6.7 – 20.7           |
| Sometimes     | 30    | 33.0 | 23.9 – 43.4          |
| Rarely        | 28    | 30.8 | 22.0 – 41.1          |
| Never         | 21    | 23.1 | 15.4 – 33.0          |

**Nursing mothers’ participants**

For the other group, 76.2% of nursing mothers were 25 years of age or older, 57.15% had secondary education, and 52.38% had a partner. For 52.38% of nursing mothers, the type of BF is exclusive (Table 2).

**Table 2**

Sociodemographic characterization of the participants in the semi-structured interviews (nursing mothers).
| Variables                          | n   | %  |
|-----------------------------------|-----|----|
| **Characteristics of nursing mothers** |     |    |
| **Age**                           |     |    |
| 18-20                             | 2   | 9.5 |
| 21-24                             | 3   | 14.3|
| 25-29                             | 8   | 38.1|
| ≥30                               | 8   | 38.1|
| **Self-reported skin color**      |     |    |
| White                             | 11  | 52.4|
| Black                             | 2   | 9.5 |
| Brown                             | 8   | 38.1|
| **Marital status**                |     |    |
| With partner                      | 11  | 52.4|
| Without partner                   | 10  | 47.4|
| **Schooling**                     |     |    |
| University education              | 3   | 14.3|
| High school                       | 12  | 57.1|
| Elementary school                 | 6   | 28.6|
| **Parity**                        |     |    |
| 01                                | 7   | 33.3|
| 02                                | 8   | 38.1|
| 03                                | 4   | 19.1|
| Above 03                          | 2   | 9.5 |
| **Delivery**                      |     |    |
| Vaginal                           | 13  | 61.9|
| Cesarean                          | 8   | 38.1|
| **Characteristics of babies**     |     |    |
| Baby’s age in months (average ± SD [interval]) | 3.18 ± 0.95 [1-6] |
| Baby’s gender                     |     |    |
From the analysis of the interviews, through content analysis by Bardin, three analytical categories emerged: “Knowledge and practice in everyday life”, “Influence of community networks”, and “Performance of family health teams/oral health teams in actions to promote, protect, and support BF”.

**Knowledge and practice in everyday life**

BF benefits the child’s health, especially concerning growth, nutrition, and protection against disease.

> “Besides being good for the child, it helps the baby to grow fast; thus, the child will have a healthier life, having immunity [...]. And, for six months, it helps the child, like, gain weight, develop, makes him healthier.” (E2, 19)

In some speeches, however, it was noticeable that the interviewees were unable to associate BF with the baby’s oral health benefits. For some, ignorance is linked to a lack of guidance:

> “In this part, I’m a bit of a layman, even ... I don’t even have a clue [...]. I know that breastfeeding is good for everything for him, but, I don’t know how to tell you right in that part, I didn’t have any guidance, either. I really don’t know...” (E3, 30)

> “But, like this, I don’t know what it can do for the baby’s mouth, there’s no way to talk, if it has any advantage ... Because it strengthens the teeth, like this, but I never heard of it ...” (E10, 25)

One factor reported by mothers was the sensation of insufficient milk production, in contrast to the desire to breastfeed.

> “[...] I really wanted to breastfeed her, but I didn't have any milk, so it was what made it more difficult.” (E5, 20)

> “I wish I had breastfed more, but I didn't have a lot of milk, no. It ended up drying up.” (E3, 30)

Part of the identified speeches associates the experience of BF with a practice accompanied by suffering and anguish:

> “I remember that I suffered the issue of his grip the most, he got it wrong, it hurt my chest a lot, and then I couldn't breastfeed right.” (E3, 30)
"I don't think it's cool [...], I know it's important, but I don't find it pleasant." (E20, 29)

Despite facing difficulties related to the practice of BF, the speeches of the nursing mothers shows the desire to overcome them, and the determination to continue in the recommended BF duration are noticeable:

“I imagined one thing and it was another. Like, my milk got stuck, and even then, I gave breast, right, I kept giving him breast, who doesn’t even talk ... oh, no pregnancy is the same as another." (E1, 26).

Influence of community networks

Family and community support emerged in some interviews, and, in particular, the company in moments of fragility was valued at the expense of the transmission of technical and scientific knowledge:

“For my family, yes (support). Everyone. Plus my husband and my mother, who stay with me at home. Difficulty in the morning, waking up to breastfeed, my husband gets up, he talks to me and helps me put the baby to breastfeed.” (E1, 26)

Some barriers were related to the abandonment of BF, such as in moments of fragility and discrimination, either by the family, condemning BF or encouraging weaning, or by external individuals. An example is when they feel constrained to breastfeed in public places:

“The family and friends themselves, they want us to introduce food ahead of time, right? So I’m going to breastfeed until the age of six months, then the mother says: “No, it is already three to four months to give food, already asking for food, it will be weak, your milk is weak, the child is crying, the child needs of food!” I realize that the main barrier is the opinions of others.” (E12, 27)

“[…]. the biggest difficulty is that there is no place to breastfeed. I think that sometimes people feel uncomfortable […], they look very ugly at you. They do not understand that the child is hungry and wants to breastfeed at that time […], you cannot leave the child without breastfeeding for a long time.”(E11, 32)

Performance of family health teams and oral health teams in actions to promote, protect, and support BF

The performance of family health teams and the oral health team's professionals was valued in some interviewees:

“The nurse. I have a lot of difficulty because I don't have a beak, right, then she asked me to go to the health center, she talked to me and helped me to stimulate the right catch.” (E1, 26)

“And the dentist… she didn’t say that about suction, right: “Boot to suck is better!””(E11, 32)
The absence of home visits during the First Week of Comprehensive Health (PSSI) – accompanied by all sorts of doubts, misinformation, and suffering during this period – was pointed out by some interviewees:

“No, not here at home (no home visits during PSSI). If I had been here at home (team), you could have explained to me not to worry as we did. I would have explained what I could do …” (E1, 26)

The quality of the approach to the theme during the prenatal and puerperium periods, associated with the claiming tension, is present in most of the speeches:

“[…] there is a little lack of encouragement from public health professionals for this, right, and guidance as well. You feel lost because there are things I didn't know, so you ask the doctor and sometimes he doesn’t pay much attention to what you say, he just passes the exam, look if the baby is okay, and just ... I don’t know if due to lack of time or interest, right? ...”(E14, 31)

“And in that, I looked for support at the post, I looked for support for health agents, but there was no second alternative. It was “you have to see the handle!”, “You have to see the position! ”, except that all of this I already knew, there was no support ... Then, when she was very hungry, then we couldn’t stand it and had to give her milk.” (E8, 29)

The role of dentists in actions to promote, protect, and support BF emerged in part of the speeches as either giving this role predominantly associated with the job of doctors and nurses or criticizing it as a vague action without further in-depth guidelines:

“No (guidance on BF). More was the nurse who spoke, and my doctor was saying some things. Dentist did not participate, neither of them participated.” (E1, 26)

“During the consultation, no (guidance on BF), at any time.” (E12, 27)

“She came here to see if I had already extracted it (dental element). They came here […], asked if I was breastfeeding. That was basically it. But it didn’t go any deeper. ” (E13, 21).

Discussion

The practice of BF is a relational experience since community support is crucial for developing or modifying social norms. The obtained speeches indicated the ambivalent influence of social support networks, which show the polarization between actions of encouragement versus discouragement, support versus oppression, and understanding versus judgment. Social networks and subjective norms influence the intention to breastfeed, either positively or negatively.

When BF is normative in the network, the pressures and external voices create expectations about BF as "being a good mother", leading to the internalization of messages that can negatively impact mothers. Feelings of shame can cause revolts, so individuals tend to stop BF. On the other hand, when BF is
not normative, as women have developed sufficient minimum self-efficacy, this negative effect can resist the opposite norms and support by their efforts, making it possible to seek protection in other networks that recover the sense of normalcy\textsuperscript{11,18}.

PHC services can identify and discuss with different constructs to maximize BF rates' effectiveness by recognizing the role of the network and social norms. PHC can also shape and change meanings and weave connections between different subjects\textsuperscript{18,23,24}. However, few dentists develop intersectoral activities involving the theme of BF. Considering the importance of dialogue with social norms to strengthen and reframe knowledge and exercises related to the practice of BF, the identified reality exposes weaknesses in promoting environments favorable to lactation\textsuperscript{18,19}.

Similarly to the study by McKellar, Fleet, and Dove (2018)\textsuperscript{19}, the nursing mothers interviewed in this study portray the act of BF as an experience that is sometimes difficult, tiring, and inconvenient. These emotions are associated with the desire to rescue the style of a previous life. Mothers may feel anxious, overwhelmed, and frustrated about the intensity and unpredictability of BF\textsuperscript{25}. Our interview analysis indicated that some participants, even though they were not properly assisted or faced difficulties, persisted in BF regardless of the outcome (success or weaning).

Self-efficacy expresses how much effort mothers dedicate to BF, how they respond to any challenges, and how long they persevere in BF in the face of obstacles\textsuperscript{26}. Self-efficacy is a dominant factor in satisfaction with BF. Mothers may value this experience and feed their babies because they are concerned with the physical and psychological benefits for their children and themselves\textsuperscript{27}. Therefore, learning how to solve lactation problems requires patience and support for mothers to build and strengthen their self-efficacy during this process by gaining experience\textsuperscript{20,22}.

Perceived control is an essential predictor of BF: mothers with adequate self-efficacy have a greater ability to deal with problems\textsuperscript{11}. Intent can be understood as the factor that most influences future behavior, and self-efficacy is constituted by beliefs and ability to deal with new situations\textsuperscript{25}. When there is no adequate support, self-efficacy tends to be reduced, the mother is less likely to breastfeed her baby for the recommended period, and the benefits are no longer maximized\textsuperscript{26,28,29}. Thus, professionals should not only encourage BF but have the practical skills to assist women in the initiation and continuation of BF as part of the routine of maternal and child care\textsuperscript{24}.

During the first few days after birth, the most BF difficulties originate, and many mothers are unable to seek help. Thus, the performance of multidisciplinary home visits during the postpartum period can be considered an effective and timely promotion strategy, mainly to support lactation\textsuperscript{20,30}. The nursing mothers' narratives reveal that there is no practice of home visits during this period; some mothers feel unhappy for not being adequately assisted. This information is in line with the low percentage of dentists who frequently carry out home visits during this period.
Although most dentists considered developing a multidisciplinary team for the care of pregnant women and mothers, underutilization of this strategy compromises the intention to practice BF. This construct may be negatively influenced by beliefs, suffering, distress, and reduced self-efficacy, implying a higher risk of weaning\textsuperscript{25}.

The attitude of BF is defined as the perspective and understanding of infant feeding methods. Maternal knowledge about BF includes knowledge of its importance, physiology, and mechanism as a human, biological, and natural process\textsuperscript{31} and influencing the acquisition of skills and confidence in BF\textsuperscript{11}. Mothers who have adequate knowledge can have a broader view of outcomes, which strengthens self-efficacy and helps to eliminate any barriers\textsuperscript{11}. However, we identified beliefs related to insufficient milk production, doubts related to its quality, and self-perception of ignorance about how to breastfeed in the interviews of the nursing mothers.

Mothers may show concern about BF's adequacy for the baby's needs, milk quality, and have doubts about position and technique\textsuperscript{11,24,32}. However, the feeling of insufficient milk production may be related to a lack of confidence and inadequate practice than to a real inability to produce milk. Therefore, the timely support of health teams could solve this barrier\textsuperscript{11,20} by investing in maternal and family knowledge and by improving BF advice\textsuperscript{33}.

Women's assistance during pregnancy can minimize anxiety and increase the number of pregnant women to breastfeeding their babies\textsuperscript{7,34}. Multidisciplinary actions developed during the prenatal and postpartum periods strengthen bonds between teams and users, facilitate the care line's implementation, and promote integrality\textsuperscript{33}. In keeping with previous studies\textsuperscript{26,35}, most of the interviewees reported not having received information about BF during the prenatal period. It is common to have not received any teaching or demonstration of BF by any health team professional, although most dentists have stated that they frequently carry out health education activities with the theme of BF during the prenatal period. According to the nursing mothers, BF orientations took place abstractly and superficially, were devoid of details, and were disconnected from the practice.

The critical weaknesses identified in the interviews reveal the inadequacy between this theme's approach in prenatal services and the real needs of users, demonstrating a portrait of the actions developed by multidisciplinary teams during prenatal and puerperium. On the other hand, the scenario found is no different from other prenatal and postpartum care services in the FHS in the Brazilian context, which faces substantial challenges since the actions developed do not follow the standards adopted in national protocols. This disconnect both in the managerial dimension, and the assistance dimension, compromises the quality of services\textsuperscript{36}.

The orientation for BF in the daily life of PHC should be interprofessional and include guidelines from dentists to promote the importance of BF for the correct development of the child's stomatognathic system. This approach prevents the acquisition of non-sucking habits, nutrition, DM, and oral breathing. The literature supports the knowledge presented by professionals about the implications of BF for the
child's oral health. The oral and perioral muscles (tongue, lips, and cheeks) need to be stimulated in the newborn, and suction during BF guides the future occlusal development favors the correct intermaxillary relationship, promotes adequate orofacial development, and facilitates growth and harmonious development of the maxilla and mandible bones\(^3\)–\(^7\).

As in previous studies\(^{18,32}\), we found that nursing mothers show a minimally adequate understanding about the benefits of BF to the child's general health. This understanding center the idea that BF represents the best for their babies. Although most of the participating dentists responded that they often or always have the habit of guiding mothers and pregnant women about the benefits of BF for children's oral health, limited knowledge about the benefits to children's oral health was identified in the narratives of nursing mothers.

It was observed that most professionals use lectures as a method of health education. Many mothers create expectations, however, that the professional guidelines on BF are not only verbal but that there is physical, hands-on support during the practice of BF\(^{37}\). This idea is confirmed in some nursing mothers’ interviews when they vocalize difficulties in using guidelines for practical reality.

Approach based only on the transmission of knowledge or the methods of verbalized education, though commonly used, have not met the maternal needs\(^{38}\). This data also highlights the importance of creating means so that the nature of the actions is not imposing or punitive, but rather woven into a bonding relationship between users and teams to enable reflection and socialization of knowledge and actions for self-care\(^{39}\). Educational efforts are considered valid because they are capable of generating reflections\(^{40}\) and can be more effective if they are dialogical and participatory, including several subjects in addition to mothers, partners, and other members of the social network\(^{18,39}\).

Peer counseling can represent a crucial form of education and support during the prenatal, peripartum, and postpartum periods. Participation in educational groups, which is a means of promoting instructional practices underused by the participating dentists in this study, supports social interaction and the sharing of experiences, contributing to the construction of trust and knowledge. During group participation, women can deal with BF normally, while they may feel ashamed in other circumstances\(^{18,19,41}\).

Corroborating previous studies, the portrait of the professional practices developed by dentists in this study, as well as the speeches of the interviewed nursing mothers, features a work process in oral health that is marked by weaknesses regarding some PHC attributes, especially concerning comprehensiveness\(^{42,43}\). Achieving comprehensiveness in its entirety requires the construction of a reliable assistance network; difficulties inherent to the work process, such as low professional profile, a deficit of professionals, and overload of care and working conditions, result in the traditional care model focused on the biomedical model\(^{42,43}\). The difficulty in realizing this attribute can be caused, among several factors, by the low proportion of oral health teams that execute the planning shared with other professionals of the FHS, and that monitor the indicators. The organization of work aimed at family guidance is a common difficulty\(^{44}\) and helps to understand the results identified in this study.
A limitation of the study is its local scope, since it was carried out in a Brazilian capital. In addition, there is a possibility that the answers may have been influenced by memory bias; therefore, the ability to generalize the results is limited. On the other hand, the data comprises a high percentage of responses from dentists, and considered nursing mothers from the seven health districts and used different methods, which enabled a more sensitive analysis of the subject studied. Studies in other locations are recommended considering the possible use of these and other methodologies, including the partners of these mothers and other PHC team members.

**Conclusions**

Professional dentists recognized BF’s benefits for children's oral health and considered the promotion and encouragement of BF to be present in their daily practices. However, in the speeches of nursing mothers, both little familiarity about the BF benefits for child's oral health and difficulty in recognizing the figure of these professionals as agents that promote BF emerged.

It was noted that the reality identified in the nursing mothers' speeches portrays a prenatal period where the guidelines on BF are little or even unexplored by the oral health teams. In this manner, a postpartum period surrounded by difficulties and lacking professional support is accompanied by a multitude of challenges and barriers, such as anxieties, uncertainties, and frustrations.

It was learned from the participants' statements that the influence of community social networks is marked by multiplicity, evidenced by subjective norms that verbalize the dichotomization of actions by family members and external actors. However, the underutilization of community spaces for the development of intersectoral measures demonstrates that the promotion of environments favorable to BF, including the possibility of strengthening or reframing social norms, has been scarce.

These results show the fragility of care for the prenatal and puerperium developed in the studied context. In this way, the necessary combination of efforts and strategic actions aimed at improving the quality of care in the maternal and child care line is reinforced through the use of educational methodologies and support for BF that meet the needs of health. Finally, developing actions that strengthen the autonomy and self-efficacy of nursing mothers and consider the potential influence of community social networks is imperative.

**Abbreviations**

BF: breastfeeding

DM: dental malocclusion

EBF: exclusive breastfeeding

FHS: Family Health Strategy
Declarations

Ethics approval and consent to participate

This research was approved by the Research Ethics Committee of the Federal University of Mato Grosso do Sul (UFMS), CAAE: 98526918.0.0000.0021, following Resolution No. 466, December 12, 2012. All participants filled an informed consent form.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

Funding

Not applicable.

Authors' contributions

All authors have read and approved the manuscript. PIC and APB conceived the study. PIC, APB and FDSF analyzed the data. PIC, APB and FDSF determined the intellectual content. PIC, APB and FDSF prepared, edited, and reviewed the manuscript.

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