Girona *et al.*
International Breastfeeding Journal (2025) 20:63
https://doi.org/10.1186/s13006-025-00750-4

International Breastfeeding Journal

RESEARCH

Open Access

Exploring the social representations of breastfeeding among mothers and grandmothers in Uruguay using word association

Alejandra Girona[1*], Lucia de Pena[2], Hugo Cristo Sant'Anna[3], Gastón Ares[4] and Rita Heck[5]

Abstract

Background A comprehensive understanding of women lived experiences is crucial for developing effective strategies to support breastfeeding at both individual and systemic levels. In this context, this study aimed to explore the social representations of breastfeeding among Uruguayan mothers and grandmothers through a structural approach.

Methods A total of 154 women, 77 mothers and 77 grandmothers, biologically related, were recruited from eight public health centers in Montevideo, Uruguay, between June and August 2022. Participants completed a free word association task using the stimuli "breastfeeding" and "exclusive breastfeeding." Interviews were conducted by trained researchers via telephone, and participants were asked to provide 3–5 associations per term. Responses were analyzed using structural analysis with openEvoc software to identify core and peripheral elements of the social representations.

Results "Love" emerged as the central element in the social representations of both breastfeeding and exclusive breastfeeding for mothers and grandmothers, highlighting the emotional and symbolic importance of breastfeeding across generations. Among mothers, representations were emotionally rich and experientially grounded, with frequent references to "baby," "affection," "attachment," and health-related benefits. Mothers also acknowledged challenges such as "pain" and "tiredness." In contrast, grandmothers' representations were more heterogeneous and less detailed, especially for exclusive breastfeeding, which lacked a clear structure. Grandmothers frequently used normative or moral terms such as "correct," "essential," and "nutrition," and showed limited familiarity with exclusive breastfeeding as a defined concept. Health-related benefits were present in peripheral areas for both groups, while references to the mother's well-being were largely absent.

Conclusions The findings highlight intergenerational continuity in the emotional anchoring of breastfeeding but reveal differences in knowledge and cognitive engagement, particularly concerning exclusive breastfeeding. While mothers integrate biomedical and experiential dimensions, grandmothers rely more on traditional values. These results underscore the need for generationally tailored communication strategies that acknowledge emotional and practical experiences and actively involve grandmothers in breastfeeding promotion efforts to strengthen intergenerational support for optimal breastfeeding practices.

Keywords Breastfeeding, Exclusive breastfeeding, Social representations, Word association, Intergeneration

*Correspondence:
Alejandra Girona
mgirona@nutricion.edu.uy
Full list of author information is available at the end of the article

Background

Breastfeeding is a cornerstone of infant nutrition and maternal health [1–3]. Increasing breastfeeding rates could prevent an estimated 820,000 infant deaths and 20,000 maternal deaths from breast cancer each year globally [4]. Recognizing its importance, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend exclusive breastfeeding during the first six months of life, followed by continued breastfeeding alongside complementary foods until at least two years of age [5].

Building on this premise, global breastfeeding promotion efforts have mainly focused on increasing awareness of its benefits for maternal and child health, highlighting the risks of breastmilk substitutes, implementing changes in healthcare practices to support optimal infant feeding, and restricting marketing of breastmilk substitutes [6–9]. However, despite these widespread initiatives led by governments and non-governmental organizations, only 48% of infants worldwide were exclusively breastfed in 2023 [10].

Breastfeeding practices are influenced by a dynamic and multifaceted interplay of individual, social, cultural, and economic factors that shape parental feeding decisions [8]. In particular, intergenerational influences, particularly from grandmothers, emerge as a critical yet underexplored determinant. Within families, grandmothers often act as key advisors in infant feeding decisions, drawing on their own beliefs, experiences, and cultural norms [11, 12]. Their guidance can either reinforce breastfeeding practices or introduce competing norms that lead to early supplementation or cessation. Understanding these dynamics is crucial for sustaining breastfeeding, especially exclusive breastfeeding, across time and social settings.

This study places intergenerational perspectives at the center of analysis, examining how shared meanings and practices are transmitted between generations of women. In doing so, it draws on the Theory of Social Representations, a conceptual framework developed by Serge Moscovici to understand how collective knowledge is formed and communicated within society [13]. Social representations serve as systems of socially constructed meanings that guide perception, interpretation, and behavior in everyday life [14]. They constitute a form of common-sense knowledge, emerging through interaction and communication, which shapes how individuals and groups make sense of complex or unfamiliar phenomena—including breastfeeding decisions [15–17].

Within this theoretical tradition, the structural approach to social representations offers a particularly valuable lens for understanding the internal organization of representations [18]. According to this framework, social representations are not random collections of ideas but rather structured sets of information, beliefs, opinions, and attitudes organized around two core components: the central core and the peripheral system [18, 19]. The central core consists of stable, consensual elements that are deeply rooted in a group's culture and history, ensuring coherence and continuity over time social representations are structured sets of information, beliefs, opinions, and attitudes toward a specific subject [20, 21]. In contrast, the peripheral system accommodates individual experiences, social contexts, and practical constraints, allowing for flexibility, adaptation, and the negotiation of meaning in different situations [19]. This dual structure is essential for capturing both the durability of cultural norms and the diversity of individual perspectives within a social group [21].

In the context of breastfeeding, the structural approach enables researchers to uncover how certain values or beliefs, may constitute core elements of a representation, while other aspects, such as perceptions of formula use, work-related challenges, or generational advice, may form part of the peripheral system, reflecting more contextual or contested understandings [22, 23]. Analyzing the configuration of these elements provides insight into how breastfeeding is collectively constructed, sustained, and potentially transformed within families and communities.

Accordingly, breastfeeding promotion efforts must attend not only to individual knowledge and behavior but also to the broader symbolic and relational environment in which mothers receive information and support from family members, healthcare providers, and social networks. By identifying both stable cultural anchors and malleable elements within representations, interventions can be more effectively tailored to address emotional, symbolic, and intergenerational dimensions of breastfeeding.

The present study aimed to examine the social representations of breastfeeding and exclusive breastfeeding among Uruguayan biologically related mothers and grandmothers using a structural approach. Specifically, the study sought to identify the central and peripheral elements of these representations, providing insight into the shared meanings, emotional associations, and generational perspectives that shape how breastfeeding is understood and experienced.

Context of the study

The study was conducted in Uruguay, a high-income country in Latin America with a population of 3,444,263 inhabitants. In 2023, the country recorded 31,385 births, with an infant mortality rate of 7.3 per 1000 live births

[24]. Breastfeeding rates have shown both progress and setbacks in the country. In 2018, 88.5% of newborns were breastfed within the first 48 h after birth [25]. The rate of exclusive breastfeeding among infants under six months stood at 51% in 2023, down from 58% in 2018 [26]. Notably, 44.5% of infants received infant formula during their hospital stay, and over a quarter of mothers were advised to supplement breastfeeding with formula at discharge [25].

The promotion and support of breastfeeding are part of Uruguay's National Health Objectives 2030 [27], with several specific initiatives in place. Health institutions are required to provide prenatal breastfeeding counselling and free prenatal courses that include breastfeeding education [28]. Since 1996, the Baby Friendly Hospital Initiative has been implemented, and by 2014, 54 of 64 maternity hospitals had received certification [29].

National standards provide detailed guidance on breastfeeding promotion, formula prescription, and marketing regulations, aligned with the International Code of Marketing of Breastmilk Substitutes [30]. While the health sector shows high compliance [31], violations persist in product labeling [32, 33] and digital media advertising [34].

Maternity protection laws guarantee 14 weeks of leave and two daily breastfeeding breaks for women in formal employment [35]. Institutions with 20 or more female workers or students, or over 50 employees, must provide a lactation room [36]. However, these protections exclude informal workers, who represent 21.9% of the national workforce [37].

Methods

This study employed an exploratory and descriptive qualitative approach, grounded in the structural approach to social representations theory [38]. The study focused specifically on mothers attending public health services, given that previous studies have reported lower exclusive breastfeeding rates in the public health sector compared to private health centers [25]. Data collection took place during the months of June, July and August in 2022.

Participants

A total of 154 women (mothers and grandmothers) participated in the study. Mothers were recruited from eight public health centers in Montevideo, each representing the facility with the highest volume of pediatric consultations in its respective municipality. These centers were selected to maximize the likelihood of recruiting eligible participants and to enhance sample diversity, as they serve a large and heterogeneous population of users from different neighborhoods and socioeconomic backgrounds. The clinics are part of the Primary Health Care Network of the public health subsector in the city of Montevideo. Access to the services provided by these centers is universal and free of charge.

The inclusion criteria required participants to be adult mothers residing in Montevideo with at least one child under 36 months old. They had to be either currently breastfeeding or have breastfed in the past, regardless of duration or type. Additionally, they needed to have a relationship with their own biological mother (the child's grandmother), who had also breastfed. Mothers whose children had medical conditions preventing breastfeeding were excluded.

Health center coordinators facilitated recruitment by sharing information and engaging mothers during pediatric, nutritional, and vaccination visits. Interested mothers who met the criteria provided their own and their biological mothers' contact information. Since grandmothers typically do not attend health visits, they were contacted by phone by the research team and invited to participate. Participation required consent from both the mother and grandmother. In one case, the grandmother declined to participate, and consequently, the corresponding mother's data were excluded from the study.

The total number of participants was determined based on recommendations for structural analysis of social representations [39]. Recruitment was evenly distributed across the eight health centers.

Data collection

Data collection was carried out through telephone interviews with both mothers and grandmothers. This methodological choice was influenced by the ongoing impact of the COVID-19 pandemic, which, at the time of the study, continued to limit in-person attendance at health clinics, particularly in services related to child care. Given this context, the use of remote interviews was considered the most appropriate and feasible approach, ensuring both participant safety and continuity of the research process. The research team consisted of undergraduate Nutrition students from Universidad de la República, who received training in social representations theory and structural approach techniques. Participants provided oral consent, which was formally recorded.

Social representations were explored using the Free Word Association technique [40, 41]. Participants were prompted with the stimulus phrases "breastfeeding" and "exclusive breastfeeding" and asked to mention the first words, thoughts, emotions, or memories that came to mind. The word association task was first performed with "breastfeeding" and then with "exclusive breastfeeding." Each participant had up to three minutes to respond, providing three to five associations per term. At the end

of the interview, sociodemographic data -including age, education level, occupation, and household size- were collected.

Data analysis

Data from the word association were analyzed using a structural approach to social representations [42, 43] with the assistance of the software openEvoc 1.0 [44]. This approach is based on the hypothesis that every social representation is organized around a central core, which serves as the element responsible for structuring and giving meaning to the representation [18]. According to Sá [42], two systems coexist within this structure. The central system is consensual, stable, and shaped by historical, sociological, and ideological conditions. It provides homogeneity to the group and plays a fundamental role in generating meaning and defining the organization of the representation. In contrast, the peripheral system is flexible, heterogeneous, and evolutionary, making it particularly sensitive to immediate contextual changes [44].

Lemmatization was first applied to group different inflected forms of the same word. This linguistic process involved identifying the lemma that represents all the inflected variants of a word. The task was manually carried out by two researchers with experience in qualitative research, with the goal of facilitating the subsequent structural analysis. The criteria used included preserving the root of the word, unifying by number (e.g., child and children) and gender (e.g., boys and girls), as well as grouping compound words. The procedure was conducted by the two researchers individually and no disagreements were found. After lemmatization, the frequency of elicitation for each word was determined by calculating the percentage of participants who mentioned it, along with its average order of elicitation—that is, the position in which it appeared during the word association task. Words mentioned by fewer than two participants within each group (mothers and grandmothers) were excluded from further analysis.

A scatter plot was generated to visually represent the social representations of each concept for both mothers and grandmothers. Words were plotted based on their frequency of mention (x-axis) and average order of elicitation (y-axis), enabling the identification of central and peripheral elements within the representations. Words with an average order of elicitation lower than the median across all words were categorized as having a low order of elicitation, while those above the median were classified as high [20]. Meanwhile, words were classified as having low or high frequency of elicitation. For each stimulus and participant group, a threshold was established at the point where the frequency of elicitation exhibited a sharp decline. The words were ranked in descending order based on their frequency of elicitation, and the largest drop in frequency between two consecutive words was identified. The threshold was then defined as the frequency of the most frequently mentioned word minus one. Words with frequencies at or above this threshold were considered frequently mentioned, while those below were categorized as infrequently mentioned.

Words that were both frequently mentioned and had a low order of elicitation were identified as the core elements of the social representation. Frequently elicited words with a high order of elicitation formed the first periphery—they were commonly mentioned but were not central for participants. Words with low frequency and high order of elicitation were classified as the second periphery, while those with low frequency and low order of elicitation were deemed irrelevant to the representation and categorized as part of contrasting elements. The words included in this last group were central for only a minority of the participants.

Results

A total of 77 mothers and 77 grandmothers, biologically related, participated in the study. Mothers had a mean age of 25 years (SD = 5), while the grandmothers had a mean age of 52 years (SD = 8). Table 1 presents their sociodemographic characteristics.

Social representations of breastfeeding

In the word association task using the term "breastfeeding," mothers elicited a total of 300 responses. After standardizing grammatical forms, the final corpus comprised 270 words, including 75 unique terms, of which 27 met the frequency threshold for inclusion in the structural analysis.

Figure 1a illustrates the structure of mothers' social representations of breastfeeding. The core of the representation consisted solely of the word "love." The first periphery contained the word "baby," indicating a strong but slightly less central association. The second periphery included a variety of less prominent elements, encompassing emotional aspects (e.g., "affection," "union"), health-related terms (e.g., "growth," "development"), and the word "pain." Finally, the contrast zone—which reflects elements significant to smaller subgroups of mothers—featured several health-related associations (e.g., "health," "healthy"), along with "attachment" and "tiredness."

Grandmothers elicited a total of 350 responses in the word association task with the term "breastfeeding." After processing, the final corpus consisted of 315 words, including 103 unique terms, of which 22 met the frequency criterion for inclusion in the structural analysis.

Table 1 Socio-demographic characteristics of the participants

Characteristic	Number (percentage) of participants	
	Mothers ($n=77$)	Grandmothers ($n=77$)
Age (years)		
18–39	76 (99)	2 (3)
40–60	1 (1)	67 (87)
61 or more	0 (0)	8 (10)
Education level (years)		
0–3	4 (5)	7 (9)
4–6	19 (25)	35 (45)
7–9	35 (45)	26 (34)
10–12	11 (15)	7 (9)
13 or more	8 (10)	2 (3)
Marital status		
Single	45 (58)	15 (19)
Concubinage	28 (37)	15 (20)
Married	4 (5)	29 (38)
Divorced	0 (0)	12 (15)
Widow	0 (0)	6 (8)
Occupation		
Takes care of household chores	25 (32)	12 (16)
Working	29 (38)	38 (50)
Unemployed	18 (23)	7 (9)
Pensioner	0 (0)	8 (10)
Annuitant	1 (1)	2 (2)
Does not work	5 (6)	10 (13)
Household size		
1	0 (0)	23 (30)
2	2 (3)	20 (26)
3	17 (22)	9 (11)
4	19 (25)	13 (17)
5	14 (18)	7 (9)
6	4 (5)	3 (4)
>7	21 (27)	2 (3)

Sixteen words overlapped with the social representation of mothers, while six were unique to grandmothers: "life," "nutrition," "correct," "tenderness," "necessary," and "essential." In contrast, several words that appeared in mothers' representations were not frequently mentioned by grandmothers, such as "pain," "tiredness," "attachment," "union," "care," "to breastfeed," "development," and "growth."

Figure 1b presents the structure of grandmothers' social representations of breastfeeding, revealing both similarities and differences when compared to mothers' representations. As in the case of mothers, the central core included the word "love." However, in grandmothers' representation, "baby" also appeared in the core, rather than in the periphery. The first periphery of the representation was empty, as no words met the criteria for this quadrant. The second periphery and contrast zone contained terms related to both emotional and health-related dimensions of breastfeeding, as in the representation of mothers.

Social representations of exclusive breastfeeding

Regarding the term "exclusive breastfeeding," mothers produced a total of 300 responses. The final corpus consisted of 283 words, including 91 unique terms, of which 32 met the frequency criterion for structural analysis. As with the broader representation of breastfeeding, the central core was composed solely of the word "love," which was also the most frequently mentioned term (Fig. 2a). The first periphery was empty, as no word met the criteria of both high frequency and early elicitation. The second periphery, located in the upper-left quadrant, included words that were mentioned less frequently and held lower centrality for participants. These terms reflected a range of associations, including health-related aspects of exclusive breastfeeding (e.g., "development," "health," "growth," "bones"), the recommended duration ("until 6 months of age"), emotional dimensions (e.g., "affection"), negative experiences (e.g., "pain"), and relational themes (e.g., "family," "dependency"). Lastly, the contrast zone comprised additional health-related terms (e.g., "healthy," "protection"), bonding-related words (e.g., "connection"), the word "tiredness," and various references to the duration of breastfeeding.

For grandmothers, the word association task on exclusive breastfeeding yielded 292 responses, resulting in 110 unique terms, of which 32 met the frequency criterion for structural analysis. The responses were highly heterogeneous, with no single term mentioned by more than 20% of participants. As a result, the social representation lacked a clearly defined structure, with many words showing similarly low frequencies but varying in their average order of elicitation (Fig. 2b). The central core of grandmothers' representation included the terms "love" and "food." The second periphery featured words such as "baby" and "care," along with several health-related terms associated with exclusive breastfeeding (e.g., "benefits," "calcium," "development," "vitamins"). Finally, the contrast zone comprised the word "milk," additional health and nutrition-related terms (e.g., "healthy," "health," "nutrition"), and references indicating limited knowledge or uncertainty (e.g., "don't know") (Fig. 2b).

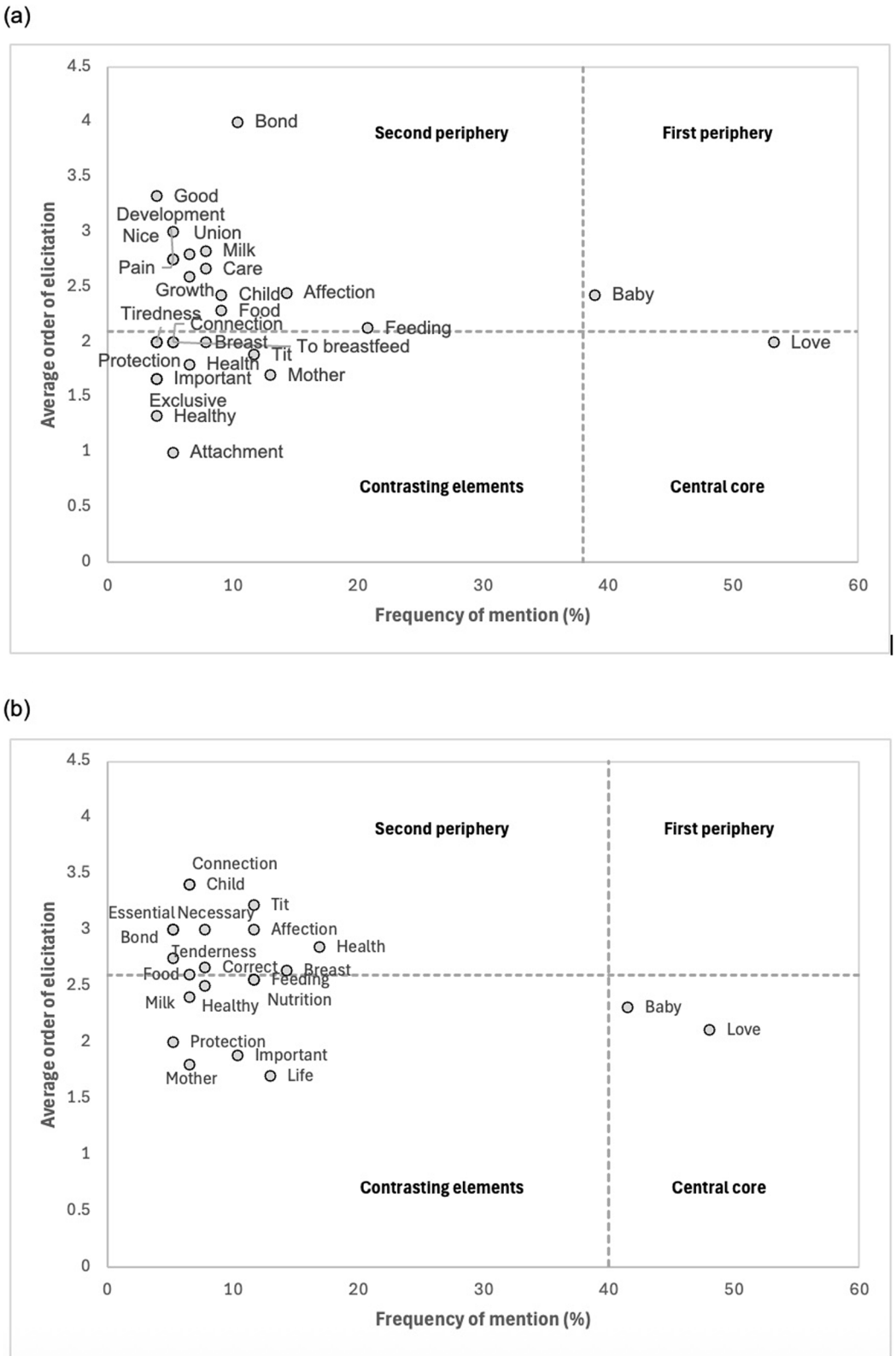

Fig. 1 Structure of the social representations of breastfeeding for: **a** mothers, and (**b**) grandmothers. The dotted lines represent the thresholds used to distinguish the central and peripheral elements of the social representations

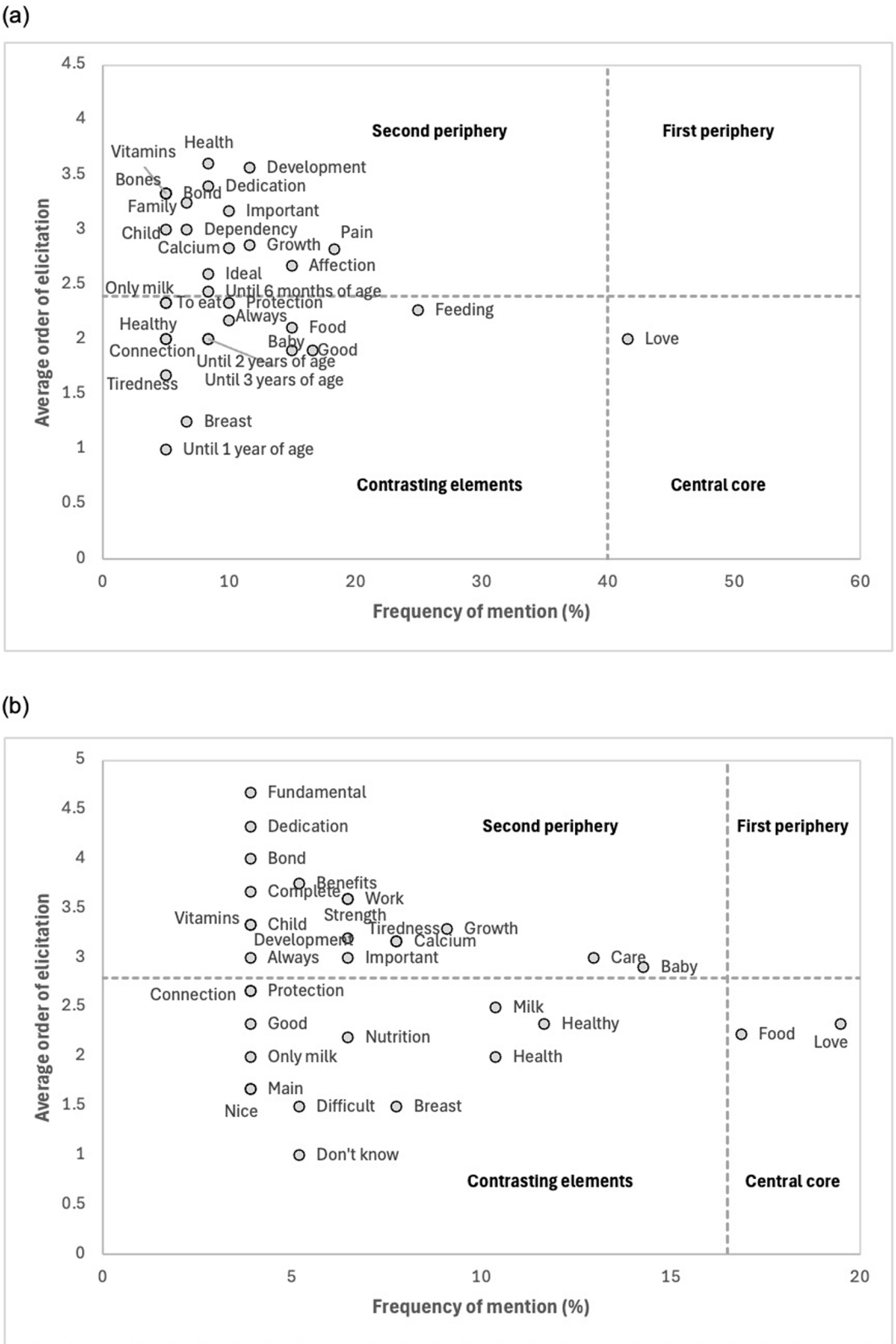

Fig. 2 Structure of the social representations of exclusive breastfeeding for: **a** mothers, and (**b**) grandmothers. The dotted lines represent the thresholds used to distinguish the central and peripheral elements of the social representations

Discussion

The promotion of optimal breastfeeding practices requires the adoption of a biopsychosocial approach that accounts for psychological, social, and cultural factors [8]. This study approached the topic through the lens of the theory of social representations, exploring the structure of the social representations of breastfeeding and exclusive breastfeeding among two generations of Uruguayan mothers. Differences emerged in the content, structure, and elaboration of representations when comparing general breastfeeding to exclusive breastfeeding, as well as when contrasting mothers and grandmothers.

The word "love" emerged as a central core element in the social representations of both breastfeeding and exclusive breastfeeding, highlighting a deeply rooted emotional and symbolic framing of the practice. This finding suggests that the emotional dimension of breastfeeding takes precedence over social, cultural, or biological aspects in how it is collectively understood by two generations of women. The centrality of love anchors breastfeeding within a moral and affective discourse, positioning it not merely as a biological or nutritional act, but as an expression of maternal devotion and emotional connection.

This emphasis on emotional meaning aligns with previous research conducted in diverse cultural settings, which has shown that breastfeeding is often associated with positive emotions and ideals of good motherhood [45–52]. However, other studies relying on a structural approach to social representations—both in Uruguay and Mexico—have not identified "love" as part of the central core of breastfeeding representations, but rather as a component of the first periphery [47, 48]. The emergence of "love" as a central element in this study may be partially explained by the socioeconomic profile of participants. The sample was composed primarily of low-income mothers and grandmothers, for whom emotional bonds and caregiving may be emphasized as core maternal responsibilities in the face of material scarcity [53–55]. Thus, the centrality of love in the representations of breastfeeding observed in the present work may reflect not only cultural ideals of motherhood but also the socio-structural conditions that shape how maternal practices are experienced, valued, and transmitted across generations.

In this sense, the social representations of both breastfeeding and exclusive breastfeeding among mothers were characterized by strong emotional content and grounded in personal experience. Beyond the central element of "love", frequently evoked terms included "baby", "affection", "union", "attachment", and "care"—all of which emphasize a relational construction of breastfeeding centered on the intimate bond between mother and child. Notably, other individuals outside the mother–child dyad were largely absent from these representations. The word "family" appeared only in the second periphery of mothers' representations of exclusive breastfeeding, indicating its limited relevance in the collective understanding of the practice. This dyadic focus has also been observed in prior studies [47, 56–59]. However, given that peer and family support are key predictors of breastfeeding continuation [60–62], promoting broader social involvement, particularly from partners and extended family members [63], could help improve breastfeeding outcomes. Over time, such efforts may also reshape prevailing social representations to reflect a more collective, inclusive, and supportive view of infant feeding practices.

Health-related benefits also emerged as prominent themes in the representations of both breastfeeding and exclusive breastfeeding, although they were not included in the central core. Terms such as "growth", "development", "health", and "protection" appeared frequently in the second periphery and contrast zones, suggesting that biomedical discourses are well integrated into participants' collective understanding of breastfeeding. This aligns with findings from studies conducted in diverse cultural contexts [52, 64, 65], including Uruguay [48, 49], which consistently highlight a widespread awareness of breastfeeding's health benefits for the child. In particular, a previous study in Uruguay using a structural approach similarly identified health-related terms in the periphery of mothers' social representations of breastfeeding [48], suggesting that biomedical knowledge is present but not central to how breastfeeding is collectively understood. In contrast, these same health-related elements have been found to occupy a central position in the social representations of breastfeeding among health science students [47], reflecting their formal training and alignment with public health discourse. This comparison underscores how the structure of social representations can vary according to professional background, education, and degree of exposure to biomedical frameworks, highlighting the importance of tailoring breastfeeding promotion strategies to the knowledge systems of different audiences.

It is notable that participants did not explicitly mention the health benefits of breastfeeding for mothers, as their representations were primarily centered on the well-being of the child. Similar results were reported by other studies relying on a structural approach to social representations of breastfeeding [47, 48]. This indicates a gap in knowledge or emphasis and underscores the importance of increasing awareness about the maternal health benefits of breastfeeding to promote a more comprehensive understanding of its value [1].

The peripheral elements of the representation also included terms associated with responsibilities and tasks assigned to motherhood, such as caregiving and feeding. In addition, ambivalent or negative associations with breastfeeding, such as "pain", "tiredness", and "dependency", emerged within the second periphery and contrast zones of mothers' social representations. This pattern reflects a more nuanced and experience-based understanding of breastfeeding that encompasses both its emotional rewards and its physical and psychological demands, consistent with findings from previous studies [47, 48]. Their presence underscores the role of personal experience in shaping how breastfeeding is collectively conceptualized. Prior research has similarly highlighted that negative emotional responses and breastfeeding-related stress, particularly when associated with difficulties or complications, are significant factors influencing early cessation of breastfeeding and increased reliance on infant formula [49, 66–69]. Recognizing and addressing these challenges through supportive healthcare practices and realistic public messaging may be critical for sustaining breastfeeding efforts and improving maternal well-being.

Interestingly, grandmothers' responses revealed a notable absence of terms linked to the physical or emotional challenges of breastfeeding, such as "pain", "tiredness", or "dependency". This absence may reflect a combination of factors. First, from a structural theoretical perspective, the nature of free word association tasks emphasizes shared, socially structured knowledge rather than subjective meanings. Therefore, deeply personal or negative experiences may be less likely to emerge unless they are widely normalized or socially validated. Second, grandmothers may have selectively recalled or reframed their experiences through a cultural lens that valorizes maternal sacrifice and resilience, leading to an omission of hardship in their collective representations.

For mothers, exclusive breastfeeding was still anchored in "love," mirroring their general representation of breastfeeding. However, the representation was marked by greater complexity and ambivalence. Alongside emotional elements (e.g., "affection") and health-related benefits (e.g., "growth," "health," "bones"), mothers also evoked temporal references (e.g., "until 6 months of age"), as well as negative or burdensome experiences (e.g., "pain," "tiredness," "dependency"). Compared to breastfeeding, the social representations of exclusive breastfeeding revealed how the latter is represented as a more cognitively and emotionally demanding practice. This pattern reflects a more informed and embodied understanding of exclusive breastfeeding, likely shaped by current public health campaigns, personal experience, and the cognitive demands of adhering to specific feeding guidelines. However, the inclusion of references to duration highlights an awareness of temporal guidelines, but the scattered positioning of these terms suggests variability in how clearly or confidently these guidelines are understood or enacted.

Grandmothers' social representations of breastfeeding and exclusive breastfeeding were likewise anchored in the term "love", indicating a degree of intergenerational continuity in the emotional framing of breastfeeding. Notably, the word "baby" appeared in the central core of grandmothers' representations, unlike in mothers', where it was located in the periphery, suggesting a more infant-centered perspective that may reflect traditional caregiving roles and values [70–72]. Grandmothers' second periphery and contrast zone included both emotional elements (e.g., "tenderness") and health-related terms (e.g., "development," "vitamins"), though these appeared with less frequency and more variation than in mothers' representations. In addition, some terms that were prominent among mothers, such as "pain", "tiredness", "attachment", "union", and "care", were absent or infrequent in grandmothers' responses. Instead, words unique to grandmothers' representations included "life", "nutrition", "correct", "necessary", and "essential", which suggest a more normative or moral framing of breastfeeding as a duty or proper maternal behavior. This contrast may reflect generational differences in exposure to biomedical discourse and the normalization of breastfeeding as a public health imperative, as well as the less salience to challenges with the challenges associated with breastfeeding.

For grandmothers, the structure of the social representation of exclusive breastfeeding was markedly less structured and more fragmented, with no single term reaching high frequency. The central core included "love" and "food," indicating a dual emphasis on emotional and nutritional aspects. However, the lack of a first periphery and the diffuse distribution of words in the second periphery and contrast zone reflect lower familiarity and less internalized knowledge of the concept. This may reflect generational differences in exposure to contemporary health recommendations and limited direct experience with the concept as it is currently defined and promoted. Unlike mothers, grandmothers did not consistently refer to the recommended duration of exclusive breastfeeding or its specific health benefits. This suggests a generational gap in knowledge and engagement with evolving definitions and recommendations. Whereas mothers often reflected the influence of public health discourse, grandmothers appeared to draw more from generalized cultural narratives, personal memories, or assumptions about infant care.

Taken together, results from the present work contribute to the broader application of social representations theory in public health by demonstrating how lay representations of health behaviors are shaped by personal experience, intergenerational transmission, and cultural norms. From a theoretical perspective, the findings illustrate how anchoring, and objectification processes operate differently across generations and practices [73]. While both mothers and grandmothers anchored breastfeeding in love and care, making it socially meaningful by linking it to familiar emotional categories [20, 74], mothers also objectified it through current health discourses, internalizing biomedical recommendations and translating them into concrete knowledge (e.g., the six-month benchmark, developmental benefits). In contrast, grandmothers anchored breastfeeding in traditional values and moral narratives, with limited evidence of objectification through contemporary public health frameworks.

Taken together, the findings of the present work carry several implications for both research and public health practice. First, they underscore the importance of generationally sensitive communication strategies in breastfeeding promotion efforts. While mothers appear to engage with both emotional and biomedical framings, grandmothers, despite their critical role in infant care, may be less familiar with contemporary health terminology and concepts such as exclusive breastfeeding. Public health campaigns should therefore aim to explicitly include grandmothers, bridging knowledge gaps and empowering them as informed supporters of optimal breastfeeding practices. Second, the study highlights the need to address not only the health benefits of breastfeeding but also its emotional complexity and practical challenges. Acknowledging ambivalent aspects, such as pain, tiredness, and dependency, can make promotional messaging more authentic and aligned with mothers lived experiences. Health communication that validates both the emotional significance and physical demands of breastfeeding is likely to be more effective in supporting informed and sustained breastfeeding practices. In sum, a deeper understanding of how breastfeeding and exclusive breastfeeding are socially represented can inform more nuanced, inclusive, and effective strategies to promote maternal and child health, while recognizing the cultural and emotional frameworks through which these practices are interpreted.

Limitations

The primary limitation of this study lies in the use of the free word association technique, which provides only a partial glimpse into social representations. While well-suited for the structural approach to social representations, this method does not permit a deep exploration of the complexity and nuanced meanings behind certain concepts, such as "love." Its focus on the most frequent and salient elements may overlook individual differences and culturally specific interpretations. Nonetheless, the study successfully generated hypotheses about the structure of breastfeeding-related social representations among participating mothers and grandmothers. Additionally, it identified key categories that organize these representations and lay the groundwork for further, more detailed investigation. Future research incorporating complementary qualitative methods could provide richer, more comprehensive insights into the social representations within this population.

Additionally, the sequential use of free word association tasks for two closely related terms, breastfeeding and exclusive breastfeeding, may have led to a priming effect, potentially influencing participants' responses and limiting the analytical distinction between the two concepts. For example, presenting these stimuli consecutively could have induced an artificial centrality of certain terms, such as "love," in both representations. This overlap compromises the analytical independence of each representational object, weakening the ability to clearly interpret the specificities associated with each stimulus and increasing the risk of interpretive bias. Future studies should consider alternative methodologies or counterbalancing strategies to mitigate this effect and better capture the nuanced differences in the social representations of these closely related constructs.

While qualitative research is not intended to produce generalizable findings, it is important to acknowledge that the study sample consisted exclusively of mothers and grandmothers from the public healthcare system in Montevideo. As such, the perspectives captured may not reflect those of individuals from the private healthcare sector or from other regions of the country. Given that social and cultural backgrounds can influence individuals' experiences and beliefs about breastfeeding, future research should aim to include more diverse participant profiles to enrich the understanding of breastfeeding-related social representations across different contexts.

Conclusions

Exploring the social representations of breastfeeding offers valuable insights into the attitudes and meanings that shape its practice. The present study revealed that both mothers and grandmothers construct breastfeeding as an emotionally significant act, with "love" emerging as the central and most enduring element across generations. This emotional anchoring underscores the moral and relational dimensions of breastfeeding, while biomedical aspects, such as health benefits for the infant, were positioned in the peripheral zones of participants'

representations, suggesting these are less central to how breastfeeding is socially understood.

The findings also point to important differences between representations of breastfeeding and exclusive breastfeeding, indicating that these concepts occupy distinct symbolic and cognitive spaces. Breastfeeding was more broadly recognized and affectively charged, reflecting its cultural familiarity and emotional salience. In contrast, exclusive breastfeeding was a less stable and more cognitively demanding construct—particularly for grandmothers—likely due to its technical definition and the temporal specificity it entails. This instability suggests that exclusive breastfeeding may not yet be fully integrated into the everyday knowledge systems of older generations.

Abbreviations

SD	Standard deviation
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Acknowledgements

Sincere thanks to the mothers and grandmothers for their generous participation, to Dr. Virginia Cardozo from Intendencia de Montevideo for her ongoing support, and to Lucia Arrascaeta, Jessica Pino, María Paz, and María González for their valuable collaboration to data collection.

Authors' contributions

Alejandra Girona: Conceptualization, Methodology, Investigation, Formal analysis, Writing – Original Draft, Writing – Review & Editing. Lucía de Pena: Conceptualization, Methodology, Formal analysisWriting – Review & Editing. Hugo Cristo Sant Anna: Methodology, Formal analysis, Writing – Review & Editing. Gastón Ares: Formal analysis, Writing – Original Draft, Writing – Review & Editing. Rita Heck: Conceptualization, Methodology, Writing – Review & Editing, Supervision.

Funding

Financial support was obtained from Espacio Interdisciplinario (Universidad de la República, Uruguay).

Data availability

The datasets are available upon request to the corresponding author.

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with National Research Regulations on Human Subjects and received approval from the Ethics Committee of the Faculty of Nursing (Approval No. 4787110). Participants provided written (mothers) or oral (grandmothers) informed consent to participate.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Author details

[1]Escuela de Nutrición, Universidad de la República, Avenida Ricaldoni S/N, Montevideo, Uruguay. [2]Facultad de Medicina, Universidad de la República, Montevideo, Uruguay. [3]Centro de Artes, Universidade Federal do Espírito Santo, Vitória, Brasil. [4]Instituto Polo Tecnológico de Pando, Facultad de Química, Universidad de la República, Pando, Uruguay. [5]Faculdade de Enfermagem, Universidade Federal de Pelotas, Pelotas, Brasil.

Received: 2 May 2025 Accepted: 14 July 2025
Published online: 15 August 2025

References

1. Chowdhury R, Sinha B, Sankar MJ, Taneja S, Bhandari N, Rollins N, et al. Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. Acta Paediatr. 2015;104:96–113. https://doi.org/10.1111/apa.13102.
2. Horta BL, Loret de Mola C, Victora CG. Breastfeeding and intelligence: a systematic review and meta-analysis. Acta Paediatr. 2015;104:14–9. https://doi.org/10.1111/apa.13139.
3. Horta BL, Loret de Mola C, Victora CG. Long-term consequences of breastfeeding on cholesterol, obesity, systolic blood pressure and type 2 diabetes: a systematic review and meta-analysis. Acta Paediatr. 2015;104:30–7. https://doi.org/10.1111/apa.13133.
4. Victora CG, Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, et al. Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. Lancet. 2016;387:475–90. https://doi.org/10.1016/S0140-6736(15)01024-7.
5. UNICEF, World Health Organization. Implementation guidance: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services – the revised Baby-friendly Hospital Initiative. Geneva: World Health Organization; 2018. Available from: https://www.unicef.org/media/95191/file/Baby-friendly-hospital-initiative-implementation-guidance-2018.pdf. Accessed 14 Mar 2025.
6. Chepkirui D, Nzinga J, Jemutai J, Tsofa B, Jones C, Mwangome M. A scoping review of breastfeeding peer support models applied in hospital settings. Int Breastfeed J. 2020;15:95. https://doi.org/10.1186/s13006-020-00331-7.
7. Van T, Varadi D, Adams AC, Feldman-Winter L. Promotion, protection, and support of breastfeeding as a human right: A narrative review. Breastfeed Med. 2023;18:561–70.
8. Pérez-Escamilla R, Tomori C, Hernández-Cordero S, Baker P, Barros AJD, Bégin F, et al. Breastfeeding: crucially important, but increasingly challenged in a market-driven world. Lancet. 2023;401:472–85.
9. Rollins N, Bhandari N, Hajeebhoy N, Horton S, Lutter CK, Martines JC, et al. Why invest, and what it will take to improve breastfeeding practices? Lancet. 2016;387:491–504. https://doi.org/10.1016/S0140-6736(15)01044-2.
10. UNICEF, WHO. Global breastfeeding scorecard 2023. New York: UNICEF; 2023. Available from: https://www.unicef.org/documents/global-breastfeeding-scorecard-2023. Cited 28 Mar 2025.
11. Karmacharya C, Cunningham K, Choufani J, Kadiyala S. Grandmothers' knowledge positively influences maternal knowledge and infant and young child feeding practices. Public Health Nutr. 2017;20:2114–23.
12. Maviso MK, Kaforau LM, Hastie C. Influence of grandmothers on breastfeeding practices in a rural community in Papua New Guinea: A critical discourse analysis of first-time mothers' perspectives. Women Birth. 2023;36:e263–9.
13. Moscovici S. Why a theory of social representations? In: Deaux K, Philogene G, editors. Representations of the social: Bridging theoretical traditions. Oxford: Blackwell; 2001. p. 8–35.
14. Jodelet D. Madness and Social Representations. Oakland, CA: University of California Press; 1991.
15. Moscovici S. Social representations. Explorations in social psychology. Cambridge: Polity Press; 2000.
16. La JD. representación social: fenómenos, concepto y teoría [Social representation: phenomena, concept and theory]. In: Moscovici S, editor. Psicología social. Buenos Aires: Paidós; 1986. p. 470–3.
17. Villarroel GE. Las representaciones sociales: una nueva relación entre el individuo y la sociedad [Social representations: a new relationship between the individual and society]. Fermentum. 2007;17:434–54.
18. Abric JC. Prácticas sociales y representaciones [Social practices and representations]. México DF: Ediciones Coyoacán; 2001.
19. Abric JC. Central system, peripheral system: their functions and roles in the dynamics of social representation. Papers on Social Representations. 1993;22:75–8.

20. Abric JC. The search for the central core and the silent zone of social representations. In: Abric JC, editor. Methods for studying social representations. Ramonville Saint-Agne: Erès; 2003. p. 59–80.
21. Moliner P, Abric J-C. Central core theory. The Cambridge Handbook of Social Representations. Cambridge University Press; 2015. p. 83–95.
22. Pérez Bravo MD, Moreno Hernández A. Dando voz a las mujeres: representaciones sociales y experiencias sobre la lactancia [Giving women a voice: social representations and experiences of breastfeeding]. Dossiers feministes. 2017;107–17.
23. García-Magdaleno VG, Laureano-Eugenio J. Representaciones sociales frente a la lactancia materna en mujeres rurales y urbanas de Jalisco, México: estudio cualitativo [Social representations of breastfeeding among rural and urban women in Jalisco, Mexico: a qualitative study]. Rev Colomb Obstet Ginecol. 2019;70:83–93.
24. Ministerio de Salud Pública. Estadísticas vitales [Vital statistics]. https://uins.msp.gub.uy/. 2024.
25. Carrero A, Ceriani F, León C de, Girona A. Encuesta Nacional de Lactancia, Prácticas de Alimentación y Anemia en menores de 24 meses usuarios del Sistema Nacional Integrado de Salud [National Survey on Breastfeeding, Feeding Practices and Anaemia in children under 24 months of age using the National Integrated Health System]. Montevideo: UNICEF; 2019.
26. Ministerio de Desarrollo Social. Encuesta de Nutrición, Desarrollo Infantil y Nutrición - ENDIS 2023. Principales hallazgos [Nutrition, Child Development and Nutrition Survey - ENDIS 2023. Main findings]. Montevideo; 2024.
27. Ministerio de Salud Pública. Objetivos Sanitarios Nacionales [National Health Objectives]. Montevideo: Ministerio de Salud Pública; 2023.
28. Ministerio de Salud Pública. Pauta para la implementación de Cursos de preparación para el nacimiento en el marco de la Meta 1 [Guideline for the implementation of Birth Preparation Courses under Goal 1]. Montevideo: Ministerio de Salud Pública; 2018.
29. Organization PAH. The baby friendly hospital initiative in Latin America and the Caribbean: Current status, challenges, and opportunities. Washington, D.C.: PAHO; 2016.
30. Ministerio de Salud Pública. Norma Nacional de Lactancia [National Breastfeeding standard]. Montevideo: IMPO; 2017.
31. Ares G, de León C. Monitoreo del cumplimiento del Código Internacional de Comercialización de Sucedáneos de la Leche Materna en Uruguay [Monitoring Compliance with the International Code of Marketing of Breast-milk Substitutes in Uruguay]. Montevideo: Ministerio de Salud Pública; 2019.
32. Alcaire F, Antúnez L, Vidal L, De León C, Girona A, Rodríguez R, et al. The idealization of bottle-feeding: Content analysis of feeding bottles and teats packages in Uruguay. Public Health Nutr. 2020;24:3147–55.
33. Rodríguez R, de León C, Girona A, Alcaire F, Antúnez L, Ares G, et al. The idealization of infant formula: a longitudinal analysis of labels in Uruguay. J Hum Lact. 2023;39:519–28.
34. Karageuzián G, Vidal L, de León C, Girona A, Ares G. Marketing of commercial foods for infant and young children in Uruguay: sugary products, health cues on packages and fun social products on Facebook. Public Health Nutr. 2021;24:5963–75.
35. Parlamento del Uruguay. Ley N° 19161. Modificación del subsidio por maternidad y fijación del subsidio por paternidad y subsidio por cuidado del recién nacido [Law No. 19161. Modification of maternity allowance and fixing of paternity and childcare allowances]. Montevideo: IMPO; 2013.
36. Parlamento de Uruguay. Ley N° 19530. Aprobación de la instalación de salas de lactancia [Law No. 19530. Approval of the installation of breastfeeding rooms]. Montevideo: IMPO; 2017.
37. Instituto Nacional de Estadística. Mercado laboral [Labor maket]. https://www7.ine.gub.uy/Dashboard-%20ML-ECH/MercadoLaboral/. 2024.
38. Rateau P, Moliner P, Guimelli C, Abric JC. Social representation theory. Handbook of Theories of Social Psychology. 2012;477–97.
39. Wachelke J, Wolter R, Rodrigues MF. Effect of the size of the sample in the analysis of evocations for social representations. Liberabit. 2016;22:153–60.
40. Lo Monaco G, Bonetto E. Social representations and culture in food studies. Food Res Int. 2019;115:474–9. https://doi.org/10.1016/j.foodres.2018.10.029.
41. Lo Monaco G, Piermattéo A, Rateau P, Tavani JL. Methods for studying the structure of social representations: A critical review and agenda for future research. J Theory Soc Behav. 2017;47:306–31.
42. Sá C. Central core of social representations. Petrópolis: Vozes; 1996.
43. Wachelke JFR, Wolter R. Criteria for constructing and reporting prototypical analysis for social representations. Psicologia: Teoria e Pesquisa. 2011;27:521–6.
44. Sant'Anna HC. openEvoc: Um programa de apoio à pesquisa em representações sociais [A programme to support research into social representations]. In: Avelar L, Ciscon-Evangelista M, Nardi M, Nascimento A, Neto P, editors. Psicologia Social: Desafios contemporâneos. Vitória: GM Gráfica e Editora; 2012. p. 94–103.
45. Giannì ML, Lanzani M, Consales A, Bestetti G, Colombo L, Bettinelli ME, et al. Exploring the Emotional Breastfeeding Experience of First-Time Mothers: Implications for Healthcare Support. Front Pediatr. 2020;8:199.
46. Giordani RCF, Piccoli D, Bezerra I, Almeida CCB. Maternidade e amamentação: identidade, corpo e gênero [Motherhood and breastfeeding: identity, body and gender]. Cien Saude Colet. 2018;23:2731–9.
47. Grover-Baltzar GA, Sandoval-Rodríguez A, Macedo-Ojeda G, Chavira-Trujillo G, Corona-Ortiz MJ, de Alba M, et al. Social representations of breastfeeding in health science students: A first step to strengthening their training. Nurse Educ Pract. 2024;78: 103991.
48. Ares G, Girona A, Rodríguez R, Vidal L, Iragola V, Machín L, et al. Social representations of breastfeeding and infant formula: An exploratory study with mothers and health professionals to inform policy making. Appetite. 2020;151: 104683. https://doi.org/10.1016/j.appet.2020.104683.
49. Girona A, Vitola A, Brunet G, Ares G, Rodríguez R, de León C, et al. A qualitative exploration of mothers' perspectives on the barriers and enablers for infant formula use in Uruguay, an emerging Latin American country. Appetite. 2025;204: 107753.
50. Woollard F. Should we talk about the "benefits" of breastfeeding? the significance of the default in representations of infant feeding. J Med Ethics. 2018;44:756–60.
51. McFadden A, Toole G. Exploring women's views of breastfeeding: A focus group study within an area with high levels of socio-economic deprivation. Matern Child Nutr. 2006;2:156–68.
52. Guttman N, Zimmerman DR. Low-income mothers' views on breastfeeding. Soc Sci Med. 2000;50:1457–73.
53. Taylor T. Re-examining cultural contradictions: Mothering ideology and the intersections of class, gender, and race. Sociol Compass. 2011;5:898–907.
54. Phoenix A, Woolleett A, Lloyd E. Motherhood: Meanings, practices and ideologies. Thousand Oaks, California: Sage Publications, Inc.; 1991.
55. Marcús J. Ser madre en los sectores populares: una aproximación al sentido que las mujeres le otorgan a la maternidad [Being a mother in the popular sectors: an approach to the meaning that women give to motherhood]. Revista Argentina de Sociología. 2006;4:100–19.
56. Xiao X, Loke AY, Zhu S, Gong L, Shi H, Ngai F. "The sweet and the bitter": mothers' experiences of breastfeeding in the early postpartum period: a qualitative exploratory study in China. Int Breastfeed J. 2020;15:12.
57. Spencer RL, Greatrex-White S, Fraser DM. 'I thought it would keep them all quiet'. Women's experiences of breastfeeding as illusions of compliance: an interpretive phenomenological study. J Adv Nurs. 2015;71:1076–86.
58. Palmér L, Ericson J. A qualitative study on the breastfeeding experience of mothers of preterm infants in the first 12 months after birth. Int Breastfeed J. 2019;14:35.
59. Jackson C, Duishenkulova M, Altymysheva N, Artykbaeva J, Asylbasheva R, Jumalieva E, et al. Barriers and drivers to exclusive breastfeeding in Kyrgyzstan: a qualitative study with mothers and health workers. Int Breastfeed J. 2025;20:4.
60. Linares AM, Rayens MK, Dozier A, Wiggins A, Dignan MB. Factors influencing exclusive breastfeeding at 4 months postpartum in a sample of urban Hispanic mothers in kentucky. J Hum Lact. 2015;31:307–14.
61. Chepkirui D, Nzinga J, Jemutai J, Tsofa B, Jones C, Mwangome M. A scoping review of breastfeeding peer support models applied in hospital settings. Int Breastfeed J. 2020;15:95.
62. Jusrawati J, Suryaningsih EK. The role of family on breastfeeding: A scoping review. Malaysia J Nurs. 2023;15:138–51.
63. Hamnøy IL, Kjelsvik M, Baerug AB, Dahl BM. Breastfeeding mother's experiences with breastfeeding counselling: a qualitative study. Int Breastfeed J. 2024;19:34.

64. Fischer TP, Olson BH. A qualitative study to understand cultural factors affecting a mother's decision to breast or formula feed. J Hum Lact. 2014;30:209–16.
65. Callaghan JEM, Lazard L. "Please don't put the whole dang thing out there!": A discursive analysis of internet discussions around infant feeding. Psychol Health. 2012;27:938–55.
66. Zhang K, Tang L, Wang H, Qiu LQ, Binns CW, Lee AH. Why do mothers of young infants choose to formula feed in China? Perceptions of mothers and hospital staff. Int J Environ Res Public Health. 2015;12:4520–32.
67. Rahman A, Akter F. Reasons for formula feeding among rural Bangladeshi mothers: A qualitative exploration. Cerniglia L, editor. PLoS One. 2019;14:e0211761.
68. Bookhart LH, Anstey EH, Kramer MR, Perrine CG, Reis-Reilly H, Ramakrishnan U, et al. A nation-wide study on the common reasons for infant formula supplementation among healthy, term, breastfed infants in US hospitals. Matern Child Nutr. 2022;18(2): e13294.
69. Girona A, Brunet G, Ares G, Rodríguez R, de León C, Lozano M, et al. Factors influencing health professionals' decisions regarding the indication of infant formula: A qualitative exploration in Uruguay. J Hum Lact. 2024;40:550–66.
70. Jongenelis MI, Budden T. The influence of grandparents on children's dietary health: A narrative review. Curr Nutr Rep. 2023;12:395–406.
71. Rogers E, Bell L, Mehta K. Exploring the role of grandparents in the feeding of grandchildren aged 1–5 Years. J Nutr Educ Behav. 2019;51:300–6. https://doi.org/10.1016/j.jneb.2018.08.016.
72. Thet MM, Khaing EE, Diamond-Smith N, Sudhinaraset M, Oo S, Aung T. Barriers to exclusive breastfeeding in the Ayeyarwaddy Region in Myanmar: Qualitative findings from mothers, grandmothers, and husbands. Appetite. 2016;96:62–9. https://doi.org/10.1016/j.appet.2015.08.044.
73. Hakoköngäs E, Sakki I. The naturalized nation: Anchoring, objectification and naturalized social representations of history. J Soc Political Psychology. 2016;4:646–69.
74. Sá CP. Imagination and social representations. Rio de Janeiro: Museu da República; 2005.

Publisher's Note