



## ORIGINAL RESEARCH ARTICLE

# Milk Moon and the Building of Bonds to be Born and to Live: A Necessary Reflection in the 21<sup>st</sup> Century

Semírames Cartonilho de Souza Ramos<sup>1</sup> , Ana Lúcia Basílio Carneiro<sup>2\*</sup> , Amanda Karolyne Gomes Chacon<sup>1</sup> , Cíntia Bezerra Almeida Costa<sup>1</sup> , Orácio Carvalho Ribeiro Jr<sup>2</sup>  and Roziane Marinho Ribeiro<sup>3</sup> 

<sup>1</sup>Department of Collective Health Nursing, Center for Health Sciences, Federal University of Paraíba, Brazil

<sup>2</sup>Department of Morphology, Health Sciences Center, Federal University of Paraíba, Brazil

<sup>3</sup>Uniprofessional Residency Program in Obstetric Nursing at the Federal University of Amazonas, Brazil

\*Corresponding author: Ana Lúcia Basílio Carneiro, Health Sciences Center - Department of Morphology, Federal University of Paraíba, University Campus I - University City, CEP: 58059-900, João Pessoa, PB, Brazil, Tel: +55-83-998162569



## Abstract

**Objective:** The study aimed to conceptualise and discuss the advent of the Milk Moon. The discussion and analysis take as a reference the COVID-19 pandemic period.

**Methods:** This is a qualitative study that presents the concept of the Milk Moon, based on collective subject discourse and elements of the Winnicottian theory in the construction of maternity. The technique consisted of analysing the verbal material collected with the methodological figures, key expressions and central ideas, to generalise the result and reveal a collective opinion.

**Results:** The Milk Moon process involves planning, skin-to-skin contact, bonding, exergestation and parenting.

**Conclusion:** The Milk Moon is a process of mothering, a humanised way of gestating, giving birth and physically and emotionally developing the mother-baby binomial and building identities, and can become an extremely rich period, of experiences, experiencing new realities and bonding between mother, baby and family. And in this process, the formation of the support network in the organisation of the Milk Moon in any context becomes a protective factor for the health of the mother-baby binomial.

## Keywords

Breastfeeding, Postpartum period, COVID-19, Pregnancy, Puerperium

## Abbreviations

DCS: Discourse of the Collective Subject; KE: Key Expressions; CI: Central Ideas

## Introduction

The development and transitions in women's lives involve ongoing neurobiological, psychosocial and cultural processes with critical and decisive stages in the present and future emotional balance. These processes involve their identity construction with collective influence and, in this way, becoming a mother is the result of being a woman, being a daughter, making choices and occupying her spaces. From this perspective, there are many challenges in assuming this new role and managing before, during and after maternity and parenting. In the article "Admirable New Motherhood", the authors Guimarães and Zornig (2022) reported:

"We believe that there is no such thing as challenge-free motherhood, However, the equation "woman + work + child" seems to be difficult to solve. Even if the woman has the full support of her partner, friends and family, other female tasks continue to be demanded and compete directly with pregnancy, childbirth and the postpartum period [1]."

A baby is born and with him or her woman, once a daughter, becomes a mother and takes on new roles [2]. The psychobiological and social changes of childbirth herald a transition and then come the postpartum period, or puerperium, popularly known as the protection period. The Ministry of Health [3] described the puerperium as:



**Citation:** Ramos SCS, Carneiro ALB, Chacon AKG, Costa CBA, Ribeiro OC, et al. (2023) Milk Moon and the Building of Bonds to be Born and to Live: A Necessary Reflection in the 21<sup>st</sup> Century. Int Arch Nurs Health Care 9:184. doi.org/10.23937/2469-5823/1510184

**Accepted:** April 15, 2023; **Published:** April 17, 2023

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“A state of essential, temporary emotional change, in which there is greater psychic vulnerability, as in the baby, and that, by some degree of identification, allows mothers to bond intensely with their newborn child, adapting to contact with it and meeting its basic needs.”

The course of that process, also called “quarantine”, lasting approximately 40 days, was described by Gonçalves & Hoga [4] as follows:

“The puerperium is a period that begins after childbirth, especially after the expulsion of the placenta, and ends when the genital organs and the general condition of the woman return to pre-pregnancy conditions when the woman resumes her reproductive function [4].”

In this context of psycho-emotional and hormonal changes and, in the face of all the vulnerability that characterises this phase, the mother-baby binomial follows the path of shared construction of bonds and maternal identity, a moment called by social representations as the Milk Moon.

The conceptual study of the term Milk Moon, still little explored, points to elements of the Winnicottian theory in the construction of motherhood, of paediatrician and psychoanalyst Donald Woods Winnicott (1896-1971), who brought contributions and reflections on the mother-baby relationship, discussing: Characterization of the good enough mother (one who recognizes the manifestations of her baby from gestation to postpartum); theory of personal maturation; dependence between baby and its mother and the stages of emotional dependence; naturalisation of the fact of being a mother; proposition of the baby-on-the-mother’s-lap model; the importance of the environment; the stage of the first feed; conceptualisation of holding and handling that deal with nurturing, support and sustenance from a maternal psychic state [5-7].

The Milk Moon is a period of seclusion, whereby the rescue of time in the woman’s life for arrangements to be made and the family’s routine to be reformulated to provide the necessary space and conditions for the establishment of adaptations, formation of bonds, of skin-to-skin contact, the establishment of breastfeeding, strengthening of affection and the relationship between the mother-child binomial, partner and family in the postpartum period [8]. It is a period in which this binomial needs time to coexist and the woman follows the natural course of her matrescence by recognising her child and seeking to become a mother. It represents a necessary time for the formation of emotional bonds and physical and sensory development.

To live the Milk Moon period is to understand it as a creative process to achieve fulfilment and fullness of life. In other words, it is a process, not a state of being, and it is necessary to be completely open to the experience

and to live the present moment taking responsibility for one’s choices [9].

The enabling environment and the senses, taste, smell and hearing, play an important role in mother-baby identification and bonding before and after birth, its development is favoured during the Milk Moon, mainly in the first year of life (primal period), the one that includes foetal life, the period around birth and the first year of life after birth and will influence the health, affective development and capacity to love of this new being [10].

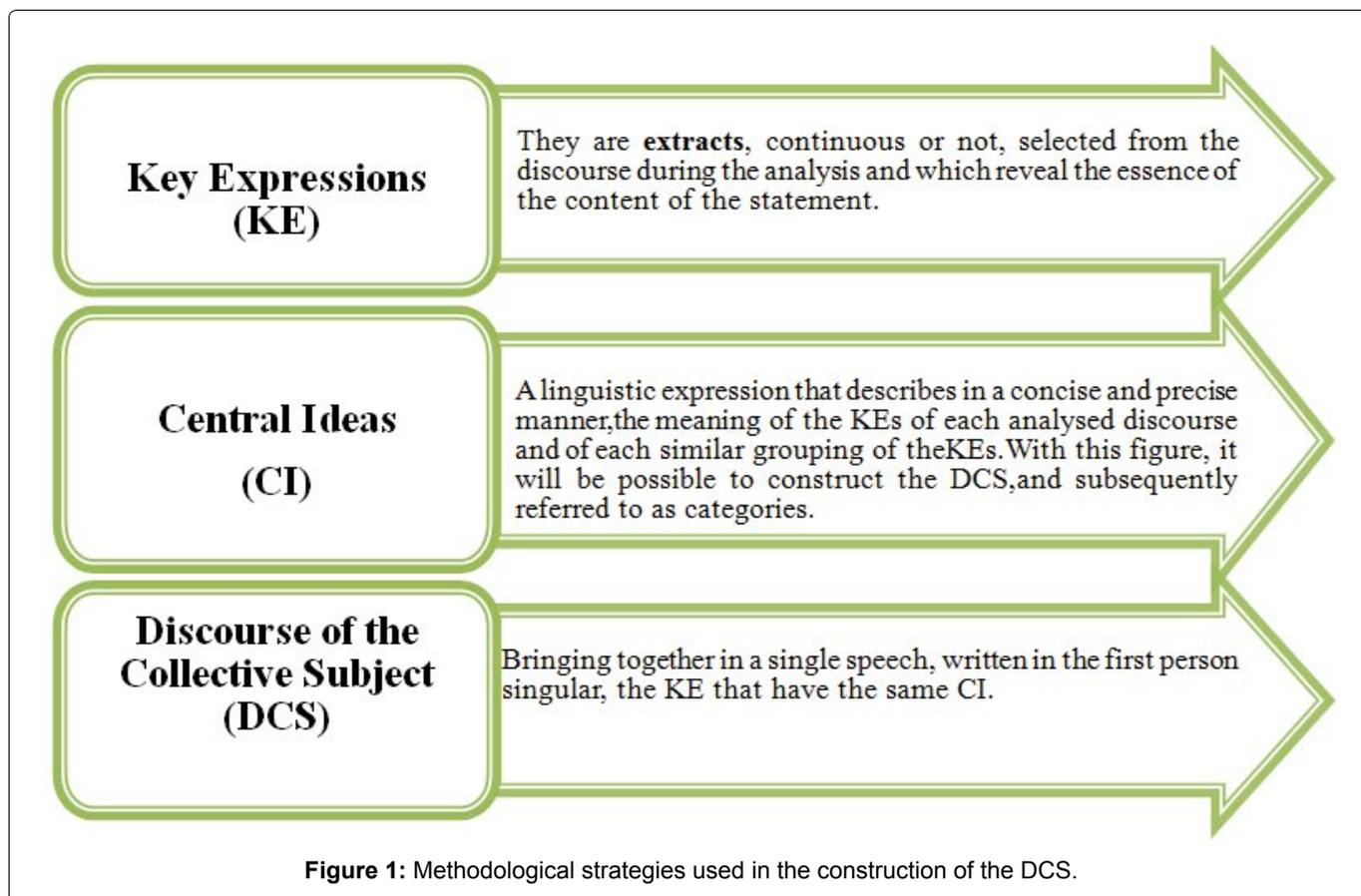
That said, it is worth considering that at the end of 2019, the world was surprised by an unprecedented crisis, caused by the coronavirus disease (Coronavirus disease 2019 - COVID-19), initially identified in the city of Wuhan, the capital of the province of Central China, from where it has advanced to almost every country in the world [11-13].

This pandemic event was considered the greatest health emergency experienced by the world in many years [12,13]. In this context, social isolation and quarantine measures were implemented which affected the family and social life of the world’s population.

Similarly, the challenges posed by the COVID-19 pandemic also affected the Milk Moon process, as habits of seclusion and temporary social withdrawal, surrounded themselves with greater visibility and importance, adding to the challenges of this early life. The care of isolation and transmission of the disease became paramount and new adaptations to life routines are imposed on the mother-baby binomial and the family.

The cocktail of hormones released by mother and baby in labour, delivery and during the breastfeeding period has an important role in ensuring the necessary transformations. Each of these hormones, with special emphasis on oxytocin, is considered the hormone of love which, in addition to its mechanical effects, is involved in several behavioural processes, and has a specific role in the interaction between mother and baby [10]. The baby at birth will unveil a world still little experienced, with many novelties and surprises. The baby may recognise movements and sounds already familiar during pregnancy. Promoting this encounter in a protected and healthy way for the new family imposes several attitudes on those involved, especially in this period of heightened vulnerability due to the pandemic.

Thus, considering the importance and the absence of studies on the Milk Moon process, it is necessary to develop articles that explore this theme, to provide greater knowledge to nurses and other professionals, thus aiming to contribute with subsidies for the guidance of pregnant and postpartum women and their families. Thus, this study aimed to conceptualise and discuss the Milk Moon and the challenges faced during the COVID-19 pandemic period.



## Methods

This study is qualitative research that uses the Discourse of the Collective Subject (DCS) technique, due to scarce literature on the topic. The DCS guides the interpretative process of opinion polls, social representations and social names that can be found in newspapers, magazines, and statements, that is, verbal materials. This qualitative analysis procedure enables a generalisation of results so that a collective opinion is revealed as a statement in the form of discourse. To carry out the construction of the DCS, methodological figures [14] were used (Figure 1) to generalise the result and reveal a collective opinion conceptualised below:

Similar central ideas were gathered into categories to represent the CIs found in the speeches. In this way, the construction of the DCS was carried out based on the KEs and the CIs, falling within the same Category. The focus was on the CIs and the KE to construct the DCSs corresponding to each meaning that emerged. Seventeen sources were identified, where the authors conceptualised the Milk Moon. For sample composition, the saturation method was used.

To assess the theme we conducted searches in several databases (Lilacs, PubMed®, EMBASE, CINAHL) and grey literature, to propose a concept for the term Milk Moon and, at the same time, discuss this process experienced during the pandemic period. The following terms were included in the search strategy: “breastfeeding” and “postpartum period”, as there is no specific descriptor for the term ‘Milk Moon’.

## Results and Discussion

To elaborate on the concept of the **Milk Moon**, the DCS analysis method was used and from this analysis two DCSs were built, which gave support to the formulation of the proposed concept. Seventeen websites were selected that featured texts about Milk Moon. On these websites, companies and professionals from various categories were identified as discussing and conceptualising the Milk Moon (Table 1).

After following the steps described, two DCSs were constructed, as shown in Figure 2 and Figure 3.

Next, the DCSs are presented (Figure 4), referring to the meanings that emerged from the surveyed collectivity (Table 1, Figure 2 and Figure 3). It is the moment of the “collective self”, constituted from the concepts described by each professional and team identified:

### The search for a concept: What is the Milk Moon?

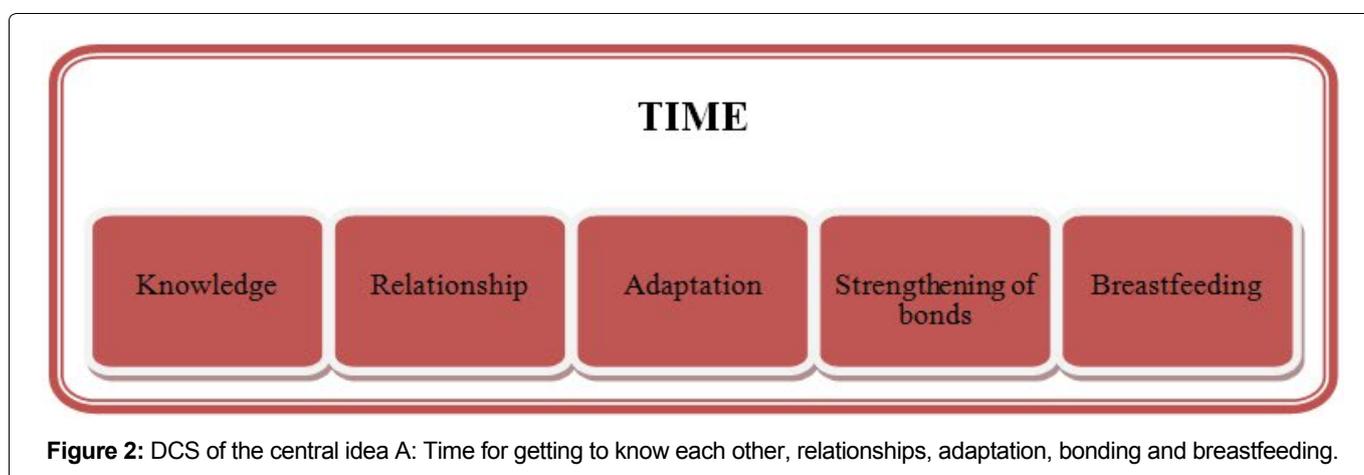
Taking the DCSs constructed above (Figure 2, Figure 3 and Figure 4) as a basis, we formulate the following concept:

“Milk Moon is a temporal and affective process that marks the puerperium phase, necessary for mother and baby to get to know each other and to adapt to the new life and breastfeeding.”

The Milk Moon happens together with the puerperium, a period in which the changes caused by

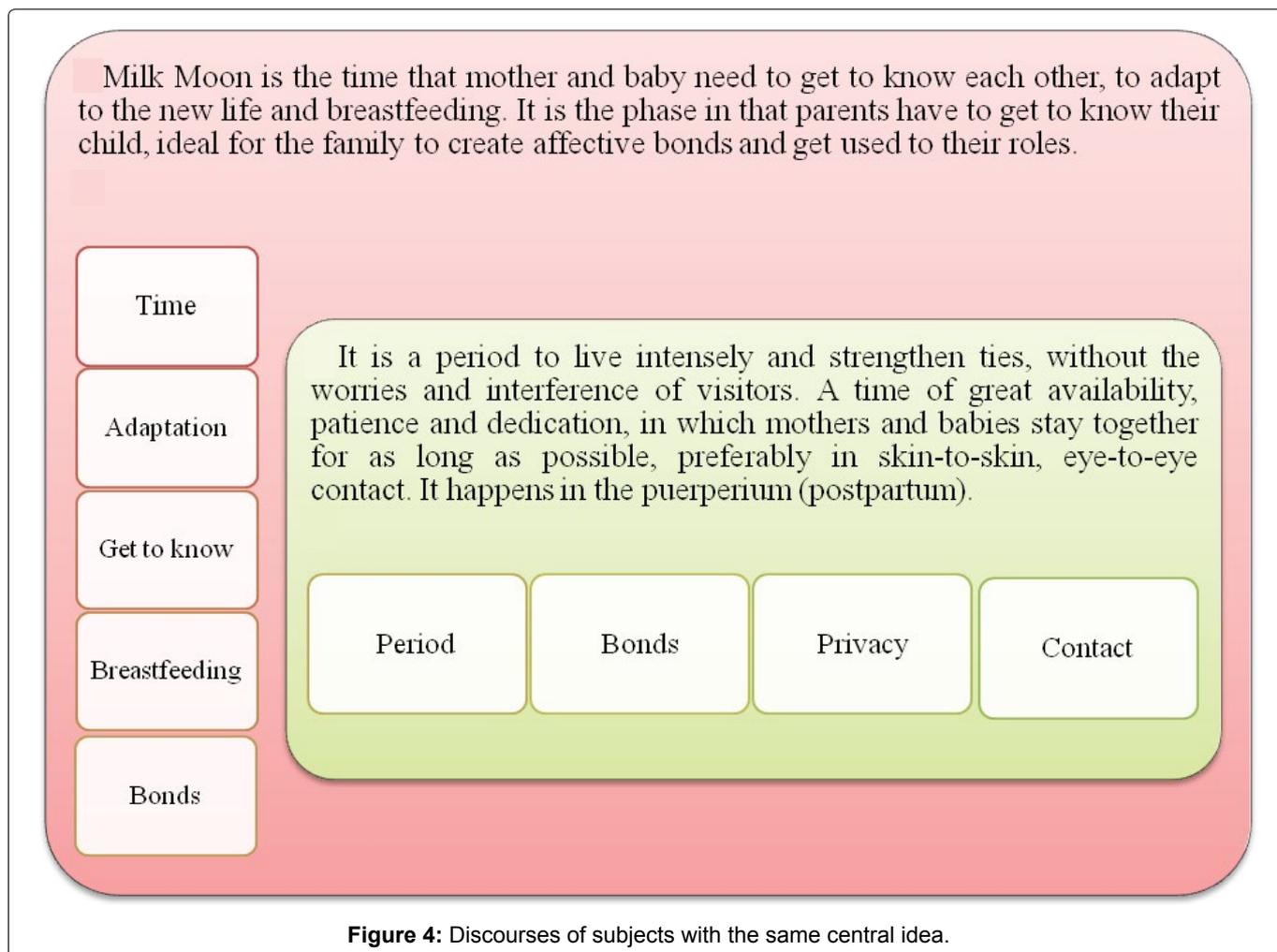
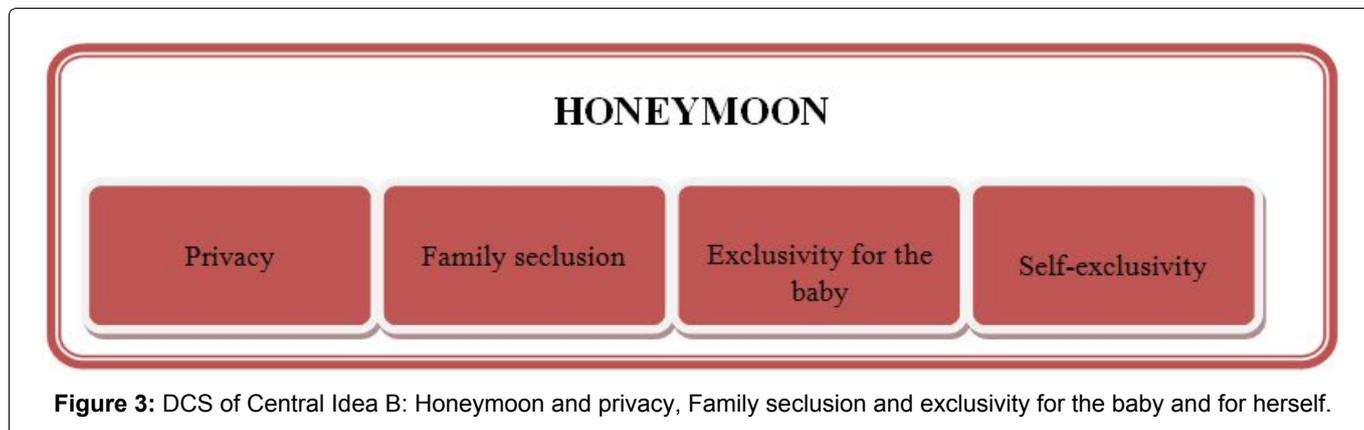
**Table 1:** Central ideas about milk moon.

SOURCES OF RESEARCH AUTHOR (A)/PROFESSION/TRAINING	CENTRAL IDEAS
Caroline Crespo (2015) [15] Doula	<b>Time</b> for mother and baby to get to know each other, adapt and strengthen bonds.
Thaís Campos (2016) [16] Physiotherapist and Massage Therapist	1. <b>Time</b> to get to know each other, puerperium, mother-baby bonding. 2. <b>"Honeymoon"</b> between mother and baby.
Mônica Almeida (2016) [17] Speech therapist, breastfeeding consultant Founder of Aconchego	1. <b>Time</b> alone. 2. <b>Honeymoon</b> , knowledge, bonding, breastfeeding.
Patrícia Amorim (2022) [18]	<b>Time</b> without visits, knowledge, skin-to-skin contact, or bonding.
Regina Reis (2016) [19] Corporate Communication	Relationship, bonding.
Portal da Mulher (2017) [20]	<b>Time</b> , exclusive dedication, bonding, breastfeeding, and skin-to-skin contact.
Giovana Balogh (2018) [21] Journalist, Reporter, Doula, Breastfeeding Consultant, Gentlebirth Instructor, Influencer Marketing	Period/ <b>time</b> , knowledge, adaptation, breastfeeding.
Universo do Cuidado Blog (2018) [22]	<b>Time</b> , knowledge, bonding, roles, breastfeeding.
EP Group - Empresa Paulista de Notícias Ltda. (Paulista News Company Ltd.)	<b>Time</b> , close ties, skin-to-skin contact, privacy, no visitors.
Isabel Valente (2016) [23] Founder member of APDMGP	<b>Time</b> , puerperium, knowledge, touch.
Camila Bastos Pagamisse (2017) [24] Social Communication	<b>Honeymoon</b> between mother and baby, seclusion, exclusivity for the baby and herself.
Laynna Feitoza (2018) [8]	<b>Honeymoon</b> between couple, mother and baby, privacy.
Karin Petermann (2017) [25] Founder of Mamãe & Cia.	<b>Honeymoon</b> , knowledge, relationship, breastfeeding.
Lillo Blog (2022) [26]	<b>Honeymoon</b> , knowledge, bonds.
Ficar Grávida (2020) [27]	<b>Honeymoon</b> , time to be together, knowledge, skin-to-skin contact.
Mil Dicas de Mãe Team (2018) [28]	<b>Honeymoon</b> , knowledge, relationship
Danone Baby Team (2017) [29]	<b>Honeymoon</b> , puerperium, physical contact, breastfeeding, bonding.



pregnancy and childbirth return to the pre-pregnancy state. Each binomial is particular, experiencing in a very specific way the time to live its Milk Moon, and it is not necessary to stipulate a time pattern, as its termination

is unforeseen and flexible. Therefore, there is no time rule for the period to happen; the time needed is that which the couple chooses to spend at ease with their child and following the needs and possibilities of each



family, ranging from 2 to 6 weeks [8], and may extend over several years given breastfeeding [30].

In this experience, the family creates affective bonds and establishes its roles. This requires availability, patience and dedication. The process can be compared to the honeymoon between couples [8], However, in the Milk Moon privacy involves the triad: Parents and baby, with an intense focus on the mother-and-baby relationship. The family's seclusion in this first moment collaborates with the necessary exclusivity for the mother and baby. As a result, the mother is available to care for and enjoy her baby, without worrying about other functions and without the interference of visitors.

The concept of the Milk Moon has been widely debated and addressed in events on the humanisation of labour and birth, and self-publishing is very common. In the current moment in which technology has facilitated access to mass communication and in real-time, mainly in social networks, the term has become popular and caused curiosity in students, researchers and professionals. Below we will address aspects and macro indicators related to the topic under discussion, making interlocations with the COVID-19 pandemic.

#### Events involved in the milk moon process

This process covers many interactive events involving the family nucleus and, specifically, the mother-

baby binomial, and this is what we will address in the following sections.

Furthermore, with an immature immune system, it is not interesting for the child to have contact with many people, especially during epidemics and pandemics. It is understood that the puerperium is a phase of many challenges for women, because she is still in the process of recovery and her attention is focused on the baby, and it is essential that both rest.

Considering the above, it is interesting that throughout gestation, awareness raising with information and intentions is conducted with family and friends about the Milk Moon and its schedule, so that they can also understand and help, as it is a convenient period for the establishment of the support network.

### Planning the milk moon

Planning the Milk Moon is the first step in this process and involves several aspects: Physical, environmental, financial, behavioural and communal, at the same time mobilises the parents' social support network, being indispensable in the establishment of partnerships and agreements, before the birth, so that the conditions for redeeming this time are the best possible.

The organisation of this moment, besides the parents, may involve family members such as mothers, mothers-in-law, aunts, partners, friends and/or professionals to cooperate with the various activities surrounding the baby's arrival, establishing a plan for the preparation of the environment, meals, household and out-of-home chores, of caring for other children, of visits that could/should be postponed, of the people who will be with her during this period of work permits and financial resources.

The planning should be structured in such a way that the woman is available to live intensely with her baby for as long as possible. The better the plan, the greater the possibilities for full dedication and quality coexistence. This period is favourable to the establishment of bonds, breastfeeding and skin-to-skin contact associated with the psychic, motor and emotional development of the newborn baby, as well as physical and emotional changes in the mother and her partner [31]. It is a process of neurobiological, psycho-emotional and everyday changes in the maternal and paternal identity construction; therefore, it must be viewed carefully.

It should be planned together with the people who will be involved, so that there is a partnership and a division of labour that will provide quality time, enabling the trinomial to develop its model of coexistence and recognition. In this sense, the partner plays a very important role in establishing bonds, and therefore is a key subject for the Milk Moon, and will be able to actively participate in the care and chores, in the division of tasks with other people who will be involved in the process. The closer the partner is to the mother

and baby, the stronger the bond between the three will be, the fact that will promote the development of security, affection and re-establishment of family relationships in the new model of family construction, that from the birth of the baby will be established. The partner will be the facilitator of the mother-baby fusion and his or her role is one of emotional support. By supporting motherhood, this partner should assume all the functions so that the mother can take on the related indispensable tasks: Breastfeeding, nurturing, soothing, cleansing and supporting the newborn baby [32].

One must consider the existence of new family arrangements that are formed in the most diverse ways. An effective support network is therefore crucial for good planning. In the absence of a partner, contact should be maintained with family and friends who can help and contribute to the realization of this moment. It is known that women have mainly in their support networks female family figures, who have experience and have been through similar moments. Thus, people who form this support network can contribute directly by providing guidance, and information and clarifying doubts [33].

Today, the trend is to share all aspects of caring and providing between partners. The family moves forward with shared responsibilities and affection for the good development of their child.

### The environment

The experience of childbirth and the responsibilities results in a great psycho-emotional challenge for the woman. In addition to physical discomfort in the postpartum period, the first few weeks are marked by some emotions and feelings, often contradictory: Relief, joy/sadness, guilt, fear, anxiety, insecurity, disappointment, love, self-confidence, and grief. Given this, a support network and a tension-free environment are important, so that the pleasure of being with and caring for the child is not restricted [34,35].

The Milk Moon is a time set aside to enjoy the presence of the baby, and experience day-to-day life in the most intimate way possible. Several families prepare the environment so that there is minimal need to leave the house. Each one will organise it in the way that suits him or her best; lots of light, open windows, few people in the house, and sometimes they even move to another environment to ensure privacy. There is also planning for the organisation of the furniture for maximum functionality, as well as supplying the pantry, avoiding the need to go to the supermarket and markets.

Some families use meaningful objects in decoration and relaxing music. They prepare food in larger quantities and freeze it; reduce the visits, if possible, even of the cleaning lady/ housekeeper. These measures will certainly provide the woman with peace of mind and sufficient conditions for the building and consolidation

of the mother-baby bond. The environment will favour the emergence of feelings and instincts - "woman's natural instincts", to experience this construction of new tasks, knowledge and meanings of becoming a mother.

During the COVID-19 pandemic, this aspect suffered, intensely, the impacts of the recommendations for home-based care of the NB that guided to keep the rooms ventilated with adequate temperature and humidity; minimise or not allow visits and physical contact; clean and disinfect floors and furniture with 70% alcohol or dissolved chlorine compounds; as well as sanitising hands and faces frequently when making contact [36].

#### **Visits: To restrict or not to restrict?**

After the birth, the expectation around the baby is immense, everyone wants to see, to participate in the event in some way by showing solidarity and celebrating the great arrival. In this context, we have a mother experiencing one of the most demanding events of her life, childbirth, whether vaginal or surgical, it brings women several transformations followed by discomfort and new demands and adaptations.

The woman in the immediate postpartum period may have a painful episiotomy or sutured abdomen, with discomfort and difficulty moving. And at this moment, will be engaged between her own care and the demands on her baby, the feeds, the dirty nappies and the demanding crying. In the days that follow, breast engorgement, the milk descent, and changes in home and sleep routines put a visitor in a position of little help and will often even get in the way of the adaptation and discoveries that the new family formation will have to endeavour to recreate.

Furthermore, it is known that the emotional factor directly influences the production and quality of milk, in this way, the woman who is fragile due to childbirth, the puerperium and all the adaptation processes that the moment requires, can develop emotional distress arising from the opinions of third parties. For, besides having to deal with all the changes that the insertion of a new family member causes, they can still take it upon themselves to make comments or criticisms that end up negatively influencing and causing harm to the mother and baby [37]. The woman should have privacy in a suitable environment to experiment and conduct things her own way, having been assured the right to flourish and develop her maternal instincts.

If parents receive visitors in the very first days, they tend to become tense, sometimes confused by too many opinions and assumptions, and it is also common for the baby to become more restless and agitated. In addition to all these factors described above, the possibility of visitors being contaminated with SARS-CoV-2, the cause of COVID-19, is real, with the restriction of visits being a protective factor [36].

Moreover, faced with an immature immune system, it is not interesting for the child to have contact with many people, especially during epidemics and pandemics. It is understood that the puerperium is a phase of many challenges for women, because she is still in the process of recovery and her attention is focused on the baby, and it is essential that both rest.

Considering the above throughout gestation, it is interesting to raise awareness with information and intentions to family and friends about what the Milk Moon is and about the schedule so that they can also understand and help her, as it is a convenient period for the establishment of the support network.

In this sense, technology, today, is an ally of this moment, taking into account that it is possible to use communication resources using home videos and/or video calls, according to the mother's convenience and wishes. Using social media can be an important tool to inform, gently, through an invitation, when visits will be granted.

#### **Forming bonds**

It is well known that identity with motherhood can occur long before the birth of the baby. The woman as a child, depending on family relations, especially with her mother, can develop maternal feelings through the playfulness of being a mother, taking care of the little house and her "doll" daughters. For some women, the desire to be a mother may be present long before pregnancy and, therefore, she conceives the child in desire and affection, sometimes consciously or unconsciously; dreaming, idealising the process of being a mother.

For other women, there are ambivalent feelings and the formation of the bond is not immediate, it is gradual, and occurs with the mother-baby interaction and happens even amid these feelings. The relationship develops throughout pregnancy, which triggers the bonding process and the formation of affection through the relationship that is established between mother-baby-companion-family, through conversations with the foetus, caressing the belly, and feelings that are generated in this connection. Therefore, immediately after birth, it is crucial that skin-to-skin contact is allowed and breastfeeding is encouraged [34] as a bonding mechanism, thus boosted by the Milk Moon.

#### **Milk moon, breastfeeding and COVID-19**

Skin-to-skin contact favours breastfeeding, which is best established if the baby is fed within the first hour of life, the period when the newborn is alert and with an active suckling reflex by sucking will stimulate the production of oxytocin and prolactin, hormones responsible for the ejection and production of breast milk [30].

The benefits of breastfeeding are numerous, both

for mother and baby, it contributes to the strengthening of the immune system, reducing the risk of developing morbidities and allergic diseases. In addition to its high nutritional value, it is considered one of the most complete foods. It is worth noting that breastfeeding also intensifies and develops the bond between the mother-baby binomial [33].

In cases of suspected or maternal infection with SARS-CoV-2, the World Health Organization advises continued breastfeeding, because no causal link between SARS-CoV-2 transmission and breastfeeding has been established, and if infected mothers want to breastfeed, they should use hand hygiene measures and masks; emphasising further that the benefits of breastfeeding outweigh the possible risks of transmitting COVID-19 [38]. In its alert note, the Brazilian Society of Paediatrics [39] made the following recommendations:

1. Wash hands with soap and water for at least 20 seconds before and after touching the baby;
2. Wear a cloth face mask (completely covering nose and mouth) during feeds and avoid talking or coughing while breastfeeding;
3. The mask should be changed immediately in case of coughing or sneezing or at each new feed;
4. Avoid letting the baby touch the mother's face, especially the mouth, nose, eyes and hair;
5. After feeding in case of suspected or confirmed mothers with COVID-19, baby care (bathing, sleeping) should be carried out by another person in the house who does not have symptoms or who is not also confirmed of COVID-19. When changing nappies, the use of disposable surgical or procedure gloves is recommended.

Medical reports have shown how the pandemic period impacted maternal emotions and feelings and the breastfeeding process. And in that sense, positive emotions may contribute to the Milk Moon in setting conditions such as comfort, calm, silence, and tranquillity, which favour breastfeeding. On the other hand, negative emotions of tension and fear as well as fatigue, pain and discomfort impair the milk let-down reflex which may affect the woman, contributing to breastfeeding failure [35].

### The milk moon and skin-to-skin contact in the formation of bonds

Skin-to-skin contact is part of a set of actions related to the new/old paradigm of looking at the woman and her baby as the protagonists of labour and birth and should start as early as possible in the first hour postpartum. The cadence of this first meeting is considered the *golden hour* and the woman's wish to be ready to receive her child must be respected. It is a time of the exchange in which the mother's microbiota

will be shared. The baby's breathing, circulation and temperature will be better balanced, in addition to the establishment of affection and bonds. The identification of the mother and the search for the maternal breast for the first feeding will be facilitated [30,40].

It should be noted that the understanding of human birth should not be limited only to physical detachment, one must also understand that there is an emotional fusion between them where the baby feels, remembers and rejects together with the maternal feelings. In this sense, they are two beings in one [32]. In this respect, the environment should favour this contact, the birthplaces should be quiet, and welcoming, with adequate and favourable lighting and temperature and health teams, should be sensitised regarding the importance and rights of women and babies regarding skin-to-skin contact, and should provide such an encounter even in surgical deliveries, where mother and baby are healthy [30].

Several advantages are described concerning skin-to-skin contact: a) The formation of affectionate bonds, favouring breastfeeding and the descent of the milk, makes the mother safer and calmer, especially with regard to the fear of switches and being taken away from her baby, reduces the risk of hypoglycaemia in the newborn, allows the establishment of the mother's bond with the real child [40]; b) Skin-to-skin contact is safe, inexpensive, aids in regulating the body temperature of the healthy newborn triggers important hormonal events and has short- and long-term benefits for the mother-child binomial. **Sensory stimuli**, touch, smell and temperature, stimulate the X pair of cranial nerves, the vagus nerve. These connections cause the mother to release oxytocin, the hormone responsible, among other actions, for the production and ejection of milk. This hormone increases the temperature of the breasts and warms the baby. On the other hand, oxytocin reduces maternal anxiety, and increases her calmness and social responsiveness [12].

And to conclude it is important to remember that one of the guidelines for the period of the Milk Moon is that the woman and her baby are given the possibility to experience intense skin-to-skin contact. It is therefore important that women are informed and empowered about their rights and at home organise themselves so that the need for privacy and separation is established in the best possible conditions [40], considering even the minimum use of clothing or, if they prefer, to be completely naked, or use a sling to facilitate skin-to-skin contact, which should not be restricted to the mother alone and may extend to her partner.

### Exterogestation and COVID-19

The Milk Moon also corroborates the principles of Exterogestation. It is believed that the baby continues to be 'gestated outside the womb' and proposes that

growth continues for a few months, and brings as limits the period when the baby begins to crawl [41]. The human baby is born prematurely and considers two nine-month periods, one intra-uterine (gestation) and the other outside of it (exerogestation) where the baby will present basic needs for communication, contact, movement and permanent food [32].

In this perspective, the Milk Moon is an essential period to promote the transition offering conditions similar to those the baby had inside the womb to promote maturation and attachment [42]. In the uterus, there was feeding through the umbilical cord on free demand, and this is also how breastfeeding is recommended; A place with low noise and comfortable lighting should be provided; the proximity to the mother's body also provides this similarity with the uterine environment, one should sleep together and carry the baby close to one body when moving, using the sling (baby carrier made of fabric adjusted to the body) to provide support and encourage skin-to-skin contact.

In this condition, the baby can follow the mother's breathing and hear her heartbeat, common noises inside the womb. The bath, preferably a hot tub, with warm water, similar to the inside of the womb with the amniotic fluid. Exerogestation provides a smoother and calmer transition and the affective bond between mother-baby-father-family. If the mother has COVID-19, may not be able to live this very special moment, due to the seriousness of the illness or other complications that impede bonding and care for the baby.

With the pandemic and social isolation, the possibility of a lack of a maternal support network made the planning of the Milk Moon even more valuable, which was an extra precaution in the prevention of COVID-19. Information and Communication Technology (ICT) provides remote contact with family and friends, access to information and participation in support groups. All of this helped communicate and maintain bonds and respective emotional support.

Certainly, many women will not be able to adequately experience their Milk Moon and perceive and experience exerogestation, considering the socio-economic precariousness of a large part of the Brazilian population. Social, economic and cultural organisation imposes demands that often, make it impossible for women to fully experience these moments as they would like, deserve and have a right to. As they are cultural beings, ways of caring are learned and vary; the current reality is that the female body is pathologized, and women are considered incapable of conceiving, gestating, giving birth and breastfeeding without the assistance of a specialist; and on the other hand, women need to meet the expectation of a natural and spontaneous knowledge of caring for their babies [43].

### **The triad: The couple as carers and providers**

We are not born parents, we become them.

Parenthood is made with complex ingredients. Some of them are collective, belong to society as a whole, change over time, and are historical, legal, social and cultural. Others are more intimate, private, conscious or unconscious, belong to each of the two parents as people, as future parents belong to the couple, and the father and mother's family history. At stake here is what is transmitted and what is hidden, childhood traumas and how each one contains them [44].

The Milk Moon is a precious moment to strengthen affective ties with other members of the family. The father is key in taking turns with the routines, in the mother's need for self-care and rest, in the domestic chores and the possible care for other children, as well as transmitting love and security to the woman [45].

The presence of the partner is also essential for emotional support and in the management of external activities, management of visits and protection against infection with SARS-CoV-2 or other pathogens, a condition that could bring various difficulties and suffering, making the process of the Milk Moon, breastfeeding, bonding and other events and care of this period impossible.

Knowledge sharing is known to be of great importance, for couples going through the pregnancy-puerperal period and the Milk Moon, especially in a pandemic context, provides articulation between them. Conversations and reflections for their preparation, as carers and providers of a new being, are indispensable for a satisfactory Milk Moon period [33].

### **Fatherhood and the father's role**

Emotional, cultural, religious and family issues will permeate the experience of fatherhood as a desired or undesired experience, desirable or not desirable, dictating how the relationship between man-woman and child will be established [46].

The process of bonding, paternal involvement, and the repercussions of gestation and becoming a father differs among individuals. Some men develop an empathic process in such a way that they even present symptoms related to Couvade Syndrome, symptoms that appear in men during their wives' gestational period, ranging from nausea, vomiting, and increased appetite to the perception of increased abdominal volume [35].

The "gestation" of the father-baby bond, for some fathers, can be slow. Becoming a father is an ongoing and complex process that shatters one's sense of self, generates processes of disarticulations and re-articulations, and calls parents to a new way of being in the world [43].

One of the main roles of fathers is to support mothering and it permeates through: giving emotional support to the mother translated as care and support

with a very active attitude; facilitating and defending the mother-baby fusion, allowing the mother to disengage herself from material concerns; protect the “nest” from lectures, advice, criticism; actively support the mother’s introspection with affectionate accompaniment so that she can experience her blossoming as a mother with freedom; protect, mainly translated into economic support; accept and love, because in this period the woman is immersed in her intuition and an inner journey like uncontrollable whirlwinds. Therefore, man should not question his sensations, nor their ability to care, discussing minute things like how to lift the baby or feed it; it is time for acceptance and observation [32].

Research conducted with 15 men in Natal-RN, Northeast region of Brazil, observed the process of constructing fatherhood: The father’s interaction and participation in the puerperium; the development of caring attitudes towards the partner; advice that refers to the physical re-establishment and prevention of aggravations, such as encouraging ambulation; attitudes of dedication and concern for their child’s health. For these fathers, paternity leave does not meet their needs for time with their wife and child, the mother-baby binomial requires more dedication-time after birth. The men/fathers reported increased responsibility in the role of providers and the financial preparation for the arrival of the child [47].

Also, aiming at favouring paternal participation in this moment of family integration, the National Integrated Policy for Early Childhood was created in Brazil, which extends paternity leave to twenty days, justifying such a change in the fact that the father’s presence should be seen as a right of the child. This legal decision ensures the presence and participation of the father figure during the Milk Moon period [33].

It is worth mentioning here that the strategy to include the father in this process was created by the obstetric nurse, Edilson Albuquerque, in the state of Manaus, AM. The father/partner actively participates in the ritual of childbirth, for, besides cutting the umbilical cord, he takes the father’s oath [48,49]:

I \_\_\_\_\_, commit to care for, love and raise my child \_\_\_\_\_ under my care, teaching him/her to walk the paths that will lead you to true happiness. In this very special moment, I disconnect my child, because now, a mother is born, a father is born and my family is born.

The moment and the companion chosen (father, current partner, mother, friend) make the difference in the birthing process and place the family as the protagonist, preventing obstetric violence [49].

### **Parenting in the milk moon in pandemic times**

...parenting cannot terminate or enter quarantine [50].

The idealisation of the patriarchal model, formed by the heterosexual nuclear family composed of a father and mother is still very present, but since the 2000s it has become impossible to think about families without reflecting on the concept of parenthood and without considering issues of gender, ethnicity, culture and social vulnerability. Various configurations have been established since then: adoptive mothers/fathers, caregivers with no kinship to the baby, cisgender/heterosexual standard families, medically assisted reproduction, and single-parent families [43].

According to Rodrigues (2017), the family is an affiliative institution where the conception of places of care and cultural intercalation is possible without pre-established roles and functions. These diverse family arrangements are completely compatible with the principles of the Milk Moon, and it is possible to set up and implement egalitarian and creative family activities [51].

During the COVID-19 pandemic, parental activities/parental roles were the responsibility of the parent(s), because the distance and social isolation prevented the participation of other adults (grandmothers, aunts...) in the Milk Moon routine, inviting the man/partner to participate more actively in parenting [50]. This new context involves: isolation and social distance, teleworking, gender difference, marital relationships, individual, couple and NB (self) care and parental stress. In this way, the physical care for the mother-baby binomial was related to the right, the guaranteeing of food, protection, clothing, hygiene and prevention of accidents or illness.

### **The role of nursing in the milk moon in times of pandemic**

Nursing care in this pandemic context, should be humanised and develop comprehensive health care through nurturing and actions involving the multidisciplinary team with a focus on caring for the woman-mother, baby, father and other family members. In this sense, it plays an important role in explaining the Milk Moon and its importance in these pandemic times, as well as providing information and guidance for preparation and execution [52].

Health professionals play a considerable role in the care and attention of women, and the nurse is present at various stages: pregnancy, delivery/birth and postpartum. In this way, should present the woman with all possible information to guide her in these processes, ensuring a quality maternal experience.

Simple and direct communication is needed when approaching the woman, through which the nurse should encourage, inform, guide and support her in the processes and changes in her body and her life. The woman should be introduced to this possibility which is the Milk Moon, with its characteristics and advantages,

so that she can make a conscious choice within her possibilities, for not all women are in a position to experience a Milk Moon, either due to economic or social factors or even due to a lack of knowledge. Therefore, from the nursing consultation, professionals can present to pregnant women, who do not yet know about the Milk Moon, its benefits, contributions and the protective factor relating to COVID-19 and other infections.

In this light, health education represents an efficient strategy to meet women's needs within their particularities, observing their social and cultural reality to draw up a plan that best suits their lives and their families [53].

The nurse should always consider the profile of each woman and draw up an assistance plan, according to the needs and reality of each one, and is the responsibility of nursing: to use strategies for the best service and offer assistance with up-to-date information based on scientific evidence. Nursing, in addition to acting in various assistance procedures throughout women's life cycles, also has the role of raising awareness, educating and presenting options that favour the health and well-being of the mother, father and baby [53].

## Conclusion

The Milk Moon is a period rich in individual and collective experiences, providing the opportunity to experience new physical and emotional realities to all those involved in the process, especially the mother-baby binomial. As such, the Moon of Milk contributes to the process of becoming mother and father, in exergestation, breastfeeding, the formation of emotional bonds and in the processes of living and caring. Furthermore, the implementation of the Milk Moon during the COVID-19 pandemic was a protective factor.

In this phase of humanisation and adaptations that involve the affective and identity bonds that are built, social support formed by family and friends networks are necessary, favouring the formation of healthy bonds between the new member and other family members.

It is emphasised that despite the importance of the present study, limitations were identified when searching the databases, noting that it is a subject that has been little studied in the academic-scientific sphere. Therefore, it is necessary to develop further investments in research and publications on the subject, to broaden the knowledge about the Milk Moon and the impacts of the pandemic period, as well as involving other issues related to the maternity process.

## Financial Support

This work was financially supported by the Public Call n. 03/2020, Research Productivity PROPESQ/PRPG/UFPA. Research project code in SIGAA PVG13497-2020.

## Author's Contribution

Ramos, SCS: Conceptualization, original draft, supervision, analysis and interpretation of data for the work, final approval of the version to be published. Carneiro, ALB: Analysis and interpretation of data for the work, Writing - review and edition and final approval of the version to be published. Chacon AKG: Acquisition of data for the work, analysis and interpretation of data for the work. Ribeiro Júnior OC and Costa CBA: Critical review. Ribeiro RM: Writing - review and edition and final approval of the version to be published.

## References

- dos Santos IMFA, Zornig SMA (2022) Brave New Motherhood. *Revista Subjetividades* 22: e11982.
- Campos PA, Féres-Carneiro T (2021) I'm a mother: Now what? Experiences of puerperium. *Psicol. USP* 32: e200211.
- Filho AMS, de Lemos Serra AS, Rattner D, Cruz DRN, Cezimbra GSS, et al. (2005) Prenatal and Puerperium: Qualified and humanized care. Technical Standards and Manuals, (1<sup>st</sup> edn), Série A. Normas e Manuais Técnicos Série Direitos Sexuais e Direitos Reprodutivos, Brazil.
- Goulart GB, Komura HLK (2016) Time of love and adaptation: Promotion of women's health in the postpartum and newborn period.
- da Rocha MP (2006) Elements of winnicottian theory in the constitution of motherhood. Pontifical Catholic University of São Paulo.
- Caldas CNT, Cristina GI, C.V.M. dos Santos CVM, Cristina GI (2019) Whose primary concern is it?: Winnicottian theory and parental care in contemporary times. *Clinical Psychology* 31: 33-53.
- Ceron GG (2020) Donald woods winnicott's contributions to psychosomatics. *Psycho time* 52.
- Feitoza L (2018) 'Milk moon': the period after childbirth is aimed at creating bonds between mother, father and baby.
- Hermeto CM (2016) *The Book of Psychology*. (2<sup>nd</sup> edn), São Paulo, Brazil.
- Odent M (2002) *The Scientification of Love*. (2<sup>nd</sup> edn), Florianópolis: Saint Germain.
- Ran L, Wang W, Ai M, Kong Y, Chen J, et al. (2020) Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic. *Soc Sci Med* 262: 113261.
- Schmidt B, Crepaldi MA, Bolze SDA, Neiva-Silva L, Demenech LM, et al. (2020) Mental health and psychological interventions during the new coronavirus pandemic (COVID-19). *Estud Psicol* 37.
- Xiao C (2020) A novel approach of consultation on 2019 novel coronavirus (COVID-19)-related psychological and mental problems: Structured letter therapy. *Psychiatry Investig* 17: 175-176.
- Lefevre F, Lefevre AMC (2014) Discourse of the collective subject: Social representations and communication interventions *Texto Contexto Enferm* 23: 502-507.
- Crespo C (2015) Milk moon: The time needed for mother and baby to get to know each other. *Crescer*.

16. Cardoso T (2016) Skin-to-skin contact - Have you heard of it? In *Família Tagarela: autism & ADHD*.
17. Almeida M (2016) Consultoria em Amamentação. *Aconchego*.
18. Amorim P (2020) Skin-to-skin contact - What is it and what are its benefits?
19. Reis R (2016) *Mamães Facilidade e Dicas*.
20. Ajuda-Mulher (2017) Having “moon milk” after childbirth is essential: What it is, benefits and how to do it.
21. Balogh G (2018) Milk moon: What it is and why visits are not recommended during this period. *mães de peito*.
22. SEPAC (2018) Milk moon: What it is and how to take advantage of it, in *Universo do cuidado, dedicated to all stages of life. Blog Universo do Cuidado: be-a-bá dos pais*.
23. Valente I (2016) Lua de leite: Experience and postpartum care. *Associação Portuguesa Pelos Direitos da Mulher na Gravidez e Parto*.
24. Pagamisse CB (2017) Milk moon - Do you know what it is? *Maternal Blog: baú de menino e menina*.
25. Petermann K (2017) Milk moon - why it is important for your baby? *Mamãe & Cia*.
26. Lillo (2022) Milk moon: What it is and how to seize the moment. *Lillo*.
27. Ficar Grávida (2020) Milk moon: What is the importance for mother and baby. *Ficargrãvida*.
28. (2018) Milk moon: what it is and how to make the most of it. *MilDicasdeMãe*.
29. Danone (2017) Milk moon: The importance of bonding between mother and baby. *Danone*.
30. Brazil (2001) Parto, aborto e puerpério: Assistência humanizada à mulher. *Ministry of Health, Brazil*.
31. Bezerra LDA, Pereira AMM, Jorge HMF, de Melo LPT, Feitoza SR, et al. (2016) Benefits of skin-to-skin contact for the newborn. *RETEP-Rev. Tendên. da Enferm* 8: 2050-2055.
32. Gutman L (2016) Motherhood and meeting one's own shadow.
33. Alves YR, do Couto LL, Barreto ACM, Quitete JB (2019) Breastfeeding under the aegis of support networks: A facilitating strategy. *Esc. Anna Nery* 24.
34. de Jesus Andrade C, Baccelli MS, Benincasa M (2017) The mother-baby bond in the postpartum period: A Winnicottian analysis. *Vínculo* 14.
35. Maldonado MT (2017) Pregnancy psychology: Gestating people for a better society.
36. Mascarenhas VHA, Caroci-Becker A, Venancio KCMP, Baraldi NG, Durkin AC, et al. (2020) Care recommendations for parturient, postpartum women and newborns during the COVID-19 pandemic: A scoping review. *Rev. Latino-Am. Enfermagem* 28: e3359.
37. de Andrade Lima EC, de Almeida ÉJR (2020) Breastfeeding: Challenges faced by the mother in the breastfeeding process. *Brazilian Journal of Development* 6: 87188-87218.
38. Brazilian Society of Pediatrics (2020) Breastfeeding during COVID-19 times. *Brazilian Society of Pediatrics*.
39. (2020) Breastfeeding - COVID-19 - recommendations in the maternity ward and after discharge. *Brazilian Society of Pediatrics*.
40. Koller KT, Rejane SM, Vania S, Miguel RJ (2017) Skin-to-skin contact of the newborn with their mother from the multiprofessional team. *BDENF - Nursing* 11: 94-101.
41. Montagu A (1988) Touching: The human meaning of skin. *Summus Editorial Group* 34: 427.
42. Rivero HA (2017) The body and life: An ethnography of sensitive modes of childrearing. *Universidade Federal do Rio Grande do Sul*.
43. Teperman D, Garrafa T, Iaconelli V (2020) *Parenthood*.
44. Moro MR (2005) The ingredients of parenting. *Rev. latin. psychopathol. found* 8: 258-273.
45. Petito ADC, Cândido ACF, Ribeiro LO, Petito G (2015) The importance of the father's participation in the puerperal pregnancy cycle: A bibliographic review. *REFACER - Electronic Journal of the College of Ceres* 4.
46. Freitas MF, de Almeida Cardoso Coelho E, da Silva ATMC (2007) Feeling like a father: The male experience from the perspective of gender. *Cad. Public Health* 23.
47. de Oliveira EMF, de Brito RS (2009) Care actions performed by the father in the puerperium. *Esc. Anna Nery* 13: 595-601.
48. GloboPlay (2017) Obstetric nurse created program to strengthen bond between father and child during childbirth. *Encontro com Fátima Bernardes*.
49. LAEO (2021) The contribution of the companion to the humanization of childbirth and delivery.
50. Gaspar MF (2020) Parenthood, in *Palavras para lá da pandemia: cem lados de uma crise*, U.d.C. *Centro de Estudos Sociais* 76.
51. Rodriguez BC, Gomes IC, de Oliveira DP (2017) Family and naming in contemporaneity: A psychoanalytic reflection. *Est Inter Psychol* 8.
52. Rodrigues FR, Covos JS, Covos JF, Rodrigues BC (2018) Humanized prenatal care: Nursing strategies in preparation for active childbirth. *Revista Saúde em Foco* 9: 89-100.
53. Dodou HD, de Oliveira TDA, Oriá MOB, Rodrigues DP, da Costa Pinheiro PN, et al. (2017) The educational practice carried out by nursing in the puerperium: Social representations of puerperal women. *Rev Bras Nurse* 70.