



DOCENCIA - INVESTIGACIÓN

Experiences of human milk donation in Andalucía-Spain: a qualitative study

Experiencias de donación de leche humana en Andalucía-España: un estudio cualitativo

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ABSTRACT

Introduction: The benefits of feeding human milk to infants have been well-documented. Collecting excess human milk from lactating mothers is an important social service. The Human Milk Banks depend on donors, and knowing the subjective aspects of donors seems quite important.

Objective: Compiling the experiences, beliefs, motivations and difficulties concerning milk donation in a group of donors belonging to the Human Milk Bank of Granada- Andalusia.

Methods: A descriptive qualitative study was conducted from May to June of 2013. The sample consisted of 7 women who donated milk to the Human Milk Bank located in the Virgen de las Nieves hospital of Granada. Data was collected using a semi-structured interview.

Results: Most of the interviewees were over thirty years old, had completed or were in the process of completing university, married, and had one or two children. During the interview, the following subjects were discussed with the mothers: Decision of becoming a donor, support to the donor, motivation for donating, and difficulties donating.

Conclusion: The results of our study suggest that many mothers are still not aware that there are milk banks present in their location. Expanding the number of milk banks in Spain is essential for hundreds of premature babies who are in need of this necessary resource.

RESUMEN

Introducción: Los beneficios de la lactancia materna para los bebés han sido bien documentados. Recoger el exceso de leche humana de madres lactantes es un servicio social importante. Los bancos

dependen de las donaciones de madres lactantes, por ello la importancia de conocer los aspectos subjetivos que interfieren en la donación.

Objetivo: Conocer las vivencias, creencias, motivaciones y dificultades respecto la donación de leche de un grupo de mujeres donantes en el Banco de Leche Humano de Granada-Andalucía.

Métodos: Estudio descriptivo, con abordaje cualitativo, realizado en el período de mayo y junio de 2013. La muestra estuvo constituida por 7 mujeres que donaron leche en el banco de leche humana del Hospital Virgen de las Nieves de Granada. Para la recogida de datos se utilizaron entrevistas semi-estructuradas.

Resultados: Las informantes tenían en su mayoría más de treinta años, con nivel universitario, casadas y con uno o dos hijos como máximo. De los discursos de las madres emergieron las siguientes categorías: Decisión de hacerse donante; Motivaciones donación; Apoyo donación y Dificultades donación.

Conclusión: Como se evidencia, el banco de leche es todavía poco conocido. Todavía existen pocos bancos de leche en España, intentar ampliar esa red sería fundamental para cientos de prematuros que necesitan de esa leche.

INTRODUCTION

It is proven that breast milk is the ideal food for newborns¹. It is the food of choice for the first 6 months of life for all children and should extend at least through the first year and beyond that age if both mother and child desire¹⁻³.

In situations in which breastfeeding is contraindicated or difficult (preterm or low birth weight or cases where pathology of the mother or the infant prevents her to breastfeed him directly), the World Health Organization¹, the Unicef² and the Spanish Association of Pediatría⁴ (AEP) set donated human milk as resource of first choice for maintenance of milk intake. In this context, Human Milk Banks (HMB) play a key role in ensuring the food supply.

A HMB is a medical device dedicated to collect milk from donors, process, store, and deliver, following all health requirements, for newborns who may need it. Therefore, it is responsible for the donor selection, storage, processing, analysis and milk distribution^{2,5}.

The donors are healthy women in the first semester of their lactation period with milk production higher than her child needs, and who are willing to donate it for free will⁶. To be a donor, the mother should undergo a detailed clinical examination, in order to protect her and the recipient's health. Exclusion criteria are smoking, drinking or exciting substances in large quantities, practice risk of communicable diseases, chronic diseases or current use of any medications⁷.

The first world's milk bank was established in Vienna in 1909. Since then, milk banks were being implemented in many countries. There are well-established national associations in the United States of America, United Kingdom, Italy and Brazil^{5,7,8}. The Brazil is the world leader of national network of BLH^{8,9,10}, and has the largest (213 banks in 2013)¹⁰ and more complex network, implemented as a strategy of the Ministry of Health to improve the health of mothers and infants^{5,7,11}.

In 2008 was created the Spanish Association of Milk Banks. One of its main objectives is promote the creation of milk banks in Spain and facilitate cooperation between

national milk banks and European milk banks^{5,7}. Since the opening of the first BLH in 2001, Spain now has seven milk banks, which aim to feed hundreds of infants¹². Virgen de las Nieves Hospital's milk bank in Granada was installed based on the Brazilian model. It started its functioning in May of 2010 and it is the only operating HMB in Andalucía.

This study aims to understand the experiences, beliefs, motivations and difficulties regarding milk donation of a group of women who donate milk in Granada. Knowing these meanings can redirect the practices carried out by the professionals involved with the binomial mother-baby, so there would be more awareness of mothers and the consequent expansion of the number of donors.

METHODS

This is a descriptive study, conducted according to the principles of qualitative research, which is characterized by providing the researcher the ability to capture the way in which individuals think and react, allowing understanding of the dynamics and structure of the situation under the terms of who lives it¹³. In this regard, the focus of this study was phenomenological and the phenomenon being studied is the milk donation to HMB.

The project was approved by the Ethics Committee for Biomedical Research of the Province of Granada. The population consisted of 7 women who donated milk during May and June 2013 in the Virgen de las Nieves Hospital's HMB in Granada. After they accept and sign the informed consent, semi-structured interviews were conducted in a single meeting with each informant. The interview content consist of the following questions: Why did you decide to become a milk donor?, What did your family and friends think of this decision? Have healthcare workers (nurses and doctors) influenced in your decision to donate?, Did you have any difficulty to donate?.

A structured model adapted from Flick was used for the analysis and interpretation of data¹⁴: 1) transcript of the interviews, 2) discovery of codes and development of families or categories of analysis; 3) coding the interviews based on the categories identified; 4) data interpretation in the context in which they were collected.

Atlas-ti 6.2 computer program was used as a tool; designed to facilitate qualitative analysis to provide reliability, accuracy and quality of the results¹³.

RESULTS

Table I presents the sociodemographic characteristics of the 7 women who participated in the study.

Table1 : Characterization of donor mothers' milk bank Granada, 2013.

INTERVIEWEES	MOTHER'S AGE	MARITAL STATUS	CHILDREN	OCCUPATION	SCHOOLING
M1	39	Single	1	Firefighter	Professional training
M2	34	Married	2	Mathematician	Graduate
M3	21	Married	1	Student	Professional training
M4	32	Married	1	PhD in lyrics	Graduate
M5	35	Married	2	Nurse	Graduate
M6	27	Married	1	Doctor	Graduate
M7	39	Married	2	Teacher	Graduate

According to the categories analyzed, we have found the following results:

Decision to become a donor

In terms of the factors that influenced the decision to become a human milk donor emerged two subcategories: Milk Bank Information and Perceived social and family environment (Table 2).

- *Milk Bank Information*: how women get to know the milk bank or knew of the possibility of human milk donation. They are aware of the milk bank, at first, through handouts delivered to them after discharge postpartum. Subsequently, they develop curiosity about the subject and do a personal quest for information on how they can become donors.

- *Perceived social and family environment*: refers to the opinion that family and friends have over the decision of being a human milk donor. Donors report that their immediate environment (family and friends) tend to have a very positive reaction after knowing that they contribute with their milk, since many of them do not know about the existence of the milk bank and its purpose.

Table 2: Fragments of the interview about the decision to become a donor.

SUBCATEGORIES	FRAGMENTS OF THE INTERVIEW
Milk Bank Information	<i>When you go back home (after delivery) you get all the child's papers and receive a handout that tell you all about milk donation, in addition to it, a friend of mine who is a pediatrician told me about donation personally(M6)</i>
	<i>I heard about milk donation online, specifically through an association called Mami Lactation and they told me that milk is needed (M2).</i>
	<i>when my daughter was in the hospital because she became ill, I read the papers (about the milk bank) and got informed (M3).</i>
Perceived social and family environment	<i>In fact everyone freaks out because nobody knows there is a milk bank (M1).</i>
	<i>They see me with the breast pump and I comment "I donate milk", and all seem amazed. They say I'm a good person for that, but I'm ashamed cause I do it not because I'm a good person but in fact they have a very positive reaction. (M4).</i>

Motivations to Donate

After analyzing the speeches of mothers about the motivations that led them to become milk donors, four sub-categories emerged (Table 3).

- *Belief in the benefits of breastfeeding*: female participants attribute a number of positive meanings to breastfeeding. The mothers believe that breast milk is the best food that one can give to children, based on their own experience as mothers.
- *"Having a lot of milk"*: mothers expressed that one of the main motivations for donating milk was overproduction, which caused them engorgement, with consequent pain and discomfort. The donation is then converted into an opportunity to relieve the symptoms of engorgements.
- *Altruism*: another motivation of donors was act selflessly for the benefit of another, in this case, benefit of babies in difficult conditions, as most children are premature receptors.
- *"If it happens to my baby"*: In addition to altruism, some mothers said they decided to donate because they think that one of their future children may need it and would be great if someone could donate milk for their children too.

Table 3: Fragments of the interview about the motivations to donate.

SUBCATEGORIES	FRAGMENTS OF THE INTERVIEW
<p>Belief in the benefits of breastfeeding</p>	<p><i>I raised my two children with exclusive breastfeeding up to six months without any bottle, or chamomile, or water, or any type of supplement and they are children who have grown very healthy and very thick and very large. Then I thought if I could give my milk to other children, why not ? Because this milk is very good, so I decided that I wanted to donate it (M7)</i></p> <hr/> <p><i>So as I'm well informed about breastfeeding and I'm fortunate that I am very knowledgeable and I have had a lot of support around me and from my family then I decided to be a donor, because I think it is necessary for children. (M5)</i></p>
<p>Having a lot of milk</p>	<p><i>Because I had a lot of milk. Then it was told me about the milk bank and I decided to become a milk donor; I felt bad throwing it out (M2)</i></p> <hr/> <p><i>I had a great amount of milk so it was better give the leftover to babies in need before I throw it out (M3)</i></p> <hr/> <p><i>I had plenty of milk because the baby only fed from one of my breast. She no longer wanted my breast and it hurts when milk is not removed. Then it was told me in the hospital about donation, so instead of throwing it out, I decided to give it away. (M6)</i></p>
<p>Altruism</p>	<p><i>I thought (donate milk) was good for the children who could not be breastfed and who were also premature. (M4)</i></p> <hr/> <p><i>If there is a way to help someone else, and on top are children, who are the most beautiful thing in the world, here I am. (M5)</i></p>
<p>If it happens to my baby</p>	<p><i>It can happen to me (not having milk) to the next child (M1).</i></p> <hr/> <p><i>In the future if I have another child and I couldn't breastfeed him for any reason, I'd like someone else to do it. (M3)</i></p>

Support to donation

The environment of the mothers has a positive influence on the willingness of participants to continue with the donation (Table 4). In this regard, we have found the following support elements:

- Milk Bank Support: support given to mothers by the milk bank staff to remain donors. The donors report that they feel reinforced by health professionals. They also attribute great importance to the constant effort they made to keep them motivated.
- Family Support to donation: donors also receive support from their family, especially their partners. In most cases, it was embodied by transferring them to the milk bank, or delivering the milk themselves

Table 4: Fragments of the interview about the support to donation.

SUBCATEGORIES	FRAGMENTS OF THE INTERVIEW
Milk Bank Support	<p><i>Sometimes I get discouraged, and then when I go to the Milk Bank and I see the joy they receive me and be thankful, I feel motivated to continue (M5)</i></p> <hr/> <p><i>The truth is that the hospital staff it is very nice, the milk bank is awesome. When I go and everybody says, "how nice, it makes us very happy" that's very beneficial for children, as it renews my will. (M2)</i></p>
Family Support to Donation	<p><i>My husband helps me out occasionally, carrying the milk. the baby is already too much work, and hospital is far away from home (M2).</i></p> <hr/> <p><i>My family agrees that I donate milk and when they have time available they take me to Granada to deliver the milk (M3)</i></p>

Difficulties to donate

This category describes the obstacles that mothers noticed to start and remain a milk donor. Participants identified four main barriers (Table 5):

- *Lack of knowledge of other health professionals*: lack of information about the existence of milk banks by health professionals who care for women in other units (hospital, health center), resulted in twice the trouble for many women, first to locate the milk bank and then to become a donor.

- *Distance from the milk bank*: one of the complicating factor for milk donation is the distance, in most cases, one have to travel from their homes in the interior of the province to deliver the milk to the center.

- *Incomprehension at Work*: many mothers report that they receive no support in their workplace, on the contrary, even receive insinuations about stop breastfeeding or at least introduce a complementary food supply earlier, so they could perform better at work without having to leave to breastfeed.

- *Reduction of milk by the process of breastfeeding itself*: women also highlight the fact that, eventually, they no longer produce as much milk as the moment when they decided to become donors, so they begin to decrease the frequency in donations. Although this is a natural process, in this case, women face it as a challenge to remain donors.

Table 5: Fragments of the interview about the difficulties to donate.

SUBCATEGORIES	FRAGMENTS OF THE INTERVIEW
Lack of knowledge of other health professionals	<p><i>Regarding donation no one had told me anything. In fact, neither my doctor knew about milk donation, nor does the health center (M2)</i></p> <hr/> <p><i>As I asked at the hospital and at first no one could tell me whether or not there was, (milk bank) was also a personal thing (milk donation) (M1)</i></p>
Distance from the milk bank	<p><i>To arrive at the milk bank in Granada takes me almost an hour to go and another hour to go back. So many times, I took my child with me to not leave him alone for a long period. A journey to carry milk like that is hard. I felt sorry for my son. Because, sometimes when I'm heading back to home, he got a bit desperate. I also do not like to go alone, and of course if I do not take him, I cannot be with him [...] I think it should be implemented more milk banks in the provinces (M5)</i></p> <hr/> <p><i>In fact, It causes me trouble. I have no way to deliver it (milk), because it is pretty far. Then, I get a bit discouraged. I have to wait till I have an appointment with the doctor because they cannot come to pick it up. (M3)</i></p>
Incomprehension at Work	<p><i>Even for breastfeeding there is no support in the workplace. From the experience I had with my another daughter, there is no special support, in fact, no one even stimulates you to donate (M7)</i></p> <hr/> <p><i>They have suggested me (at work) I shouldn't keep breastfeeding my child or should feed him another food earlier, so the child could hold it while I'm working (M4)</i></p>
Reduction of milk by the process of breastfeeding itself	<p><i>In the past three weeks have been harder to get milk because... I've adjusted a bit more with the baby demand. My breast no longer swells too much and I can't get milk as I use to (M7)</i></p> <hr/> <p><i>Right now the baby is already bigger and easily take the milk, and has been a while that I don't donate milk. (M6)</i></p>

DISCUSSION

The results of this study present an approach to the subject of human milk donation in Andalucía, providing the perspective of donors and the dynamics with which this practice is developed in Spain.

The informants were mostly over thirty years, with university education, married and with a child or two at most, these data are similar to those handled by 12 de Octubre Hospital (the largest milk bank in Spain) which indicate that donors usually have about 30 years, donate with their first child, have a stable partner and about half of them went to college⁶.

Despite the importance of human milk collected in BLH for the survival of newborns, disclosure on the subject is still very limited. The information is provided mainly in the process of hospitalization for childbirth in maternity, not covering prenatal care network or health centers (Table 2). The same factor can be observed in other studies^{14,15} pointing misinformation as one of the major problems for mothers decide not to donate milk.

It can be hypothesized that many potential donors have frustrated their intentions, not getting to implement their role as donors. Our data indicate that although they are aware of the existence of BLH through associations to support breastfeeding or online, personal desire is the main factor to be a donor.

It is pertinent to suggest that milk collection routines are reconsidered, with the establishment of milk collection in the donor's own home, as a solution to one of the major difficulties pointed out by the donors: the distance they have to travel to bring the donated milk. This system is now operational in Brasil¹⁶ and achieved great success by expanding the number of donors and the frequency of donation.

Currently, there is only one milk bank in Andalucía, which is localized in Granada. The participants themselves request the implementation of more HMB units. This would facilitate a rapprochement with the donor population and increase coverage to children who need donated milk.

An important aspect of our results concerns the recognition of donors in relation to the benefits and nutritional quality of breast milk. Altruism emerges as the main motivation for our participants, and acknowledge that the decision to donate, relates exclusively to women. The second most cited reason is excess milk production, when they realize that they can make a good use of the extra milk and avoid loss.

Another issue pointed out by the donors, and that makes them appear more sensitive to donating milk is put themselves in the place of mothers who experience difficulties breastfeeding their children, and even the thinking that this might occur to them in the future.

In other studies in Brazil^{14,15,16} and Guatemala⁸ the following reasons and feelings involved in donating milk are highlighted: solidarity, love, comfort, value of milk, personal satisfaction, retribution and altruism. In studies of Francia¹⁷ and USA¹⁸ mothers who had breast engorgement were led to donate their milk guided by health professionals.

CONCLUSION

As evidenced, the milk bank is still poorly known, mainly due to the lack of disclosure. Expand the network of milk banks in Spain would be essential for hundreds of premature babies that need milk and cannot access them due to the distance from their homes.

The need for greater promotion and guidance is shown on donation of human milk, with particular emphasis on the reasons given by the women in this study (altruism, benefits of breastfeeding, "Having a lot of milk," to take the place of other mothers), and also promote the support from relatives and health care professionals.

The conclusions that can be drawn from this study are limited by the use of convenience sample of donors, it is not known how representative their views and experiences are of the total population of donor milk.

To encourage the recruitment of new human milk donor, should be conducted educational / informative activities in prenatal care services, maternity, childcare and strengthen the system of communication with other health sectors.

Therefore an investment in research and scientific production should be increased in order to improve and ensure the life quality of children whose mothers cannot breastfeed.

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