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Breastfeeding Abandonment Causes and Success Factors in Relactation*

Theme: Promotion and prevention.

Contribution to the discipline: Our study outcomes were utilized for the development of a care protocol in the Mother-Child Unit at a private clinic hospital, aiming to strengthen breastfeeding throughout relactation. The causes of abandonment and the success factors in such process were considered in order to contribute from the Nursing perspective to the restoration of the children health, along their growth and development and also to the promotion of the mother-child bond?

ABSTRACT

Objective: To identify the causes of breastfeeding abandonment and the success factors associated with relactation in mothers with children attended in a specialised health institution. **Methodology:** Descriptive transversal design through non-probabilistic convenience sampling, with 100 mothers and their children. A structured survey was used and central tendency measurements and frequencies were analysed. The study was approved by the Ethics committee of the School of Health Sciences at the University Pontificia Bolivariana. **Results:** The average age was 26.8 years; 73 % had a low socioeconomic level; 59 % were cohabitating; 46 % were housewives; 32 % had a high school degree; 57 % were first-time mothers; 74 % had a high obstetric risk; and 59 % had children by caesarean section. Causes of breastfeeding abandonment were newborn hospitalization (79 %) and low birth weight (52 %). Health professionals suggested substitutes

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for hypogalactia in 18 % of the mothers. Incorrect maternal posture: 66.1 and 61 % with no previous experience. Relactation success factors were: chronological age under one month (48 %); effective newborn breast sucking (89 %); good newborn breast grasping (71 %). During the non-breastfeeding period, 72 % received mixed milk, 82 % did not breastfeed between 8 and 30 days, 98 % of the mothers were willing to relactate, 91 % considered the support of their families and health professionals as good. **Conclusion:** Children hospitalization was the main cause of breastfeeding abandonment and the main success factors for relactation were effective breast sucking, mothers' readiness and support.

KEYWORDS (Source: DeCS)

Breastfeeding; breastfeeding disorders; infant nutrition; feeding methods; child care.

Causas de abandono de la lactancia materna y factores de éxito para la relactación*

RESUMEN

Objetivo: identificar las causas de abandono de la lactancia materna y los factores de éxito para la relactación en madres con hijos atendidos en una institución de salud. **Metodología:** descriptivo, transversal. Muestreo no probabilístico a conveniencia, con una muestra de cien madres y sus hijos. Se utilizó una encuesta estructurada y se analizaron las medidas de tendencia central y las frecuencias. El estudio fue aprobado por el comité de ética de la Escuela de Ciencias de la Salud de la Universidad Pontificia Bolivariana. **Resultados:** las participantes tenían una media de edad de 26,8 años; el 73 % era de estrato socioeconómico bajo; el 59 % se encontraba en unión libre; el 46 % eran amas de casa; el 32 % contaba con bachillerato completo; el 57 % eran primigestantes; el 74 % tenía un alto riesgo obstétrico; y el 59 % tuvieron a su hijo por cesárea. Causas de abandono de la lactancia: hospitalización de los neonatos (79 %) y bajo peso al nacer (52 %). El personal de salud sugirió sucedáneos por hipogalactia en el 18 % de las madres. Postura incorrecta de la madre: 66,1 y 61 %, sin experiencias previas. Factores de éxito para relactar: edad cronológica menor de un mes (48 %); el bebé succionó al ponerlo al pecho (89 %); buen agarre (71 %). Durante el periodo de no lactancia, el 72 % recibió leche mixta, el 82 % no lactó entre 8 y 30 días, el 98 % de las madres estuvieron dispuestas a relactar, el 91 % consideró bueno el apoyo de sus familias y del personal de salud. **Conclusión:** la hospitalización del hijo fue la principal causa de abandono de la lactancia, y los principales factores de éxito para la relactación fueron la succión efectiva, la disposición de las madres y el apoyo.

PALABRAS CLAVE (Fuente: DeCS)

Lactancia materna; trastornos de la lactancia; nutrición del lactante; métodos de alimentación; cuidado del niño.

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Causas de abandono do aleitamento materno e fatores de sucesso para a relactação*

RESUMO

Objetivo: identificar as causas de abandono do aleitamento materno e os fatores de sucesso para a relactação em mães de filhos atendidos em uma unidade de saúde. **Metodologia:** descritiva e transversal. Amostragem não probabilística por conveniência, com 100 mães e seus filhos. Um questionário estruturado foi utilizado e as medidas de tendência central e as frequências foram analisadas. O estudo foi aprovado pelo comitê de ética da Escola de Ciências da Saúde da Universidad Pontificia Bolivariana, Colômbia. **Resultados:** as participantes tinham em média 26,8 anos de idade; 73 % eram de classe social baixa; 59 % estavam em união estável; 46 % eram donas de casa; 32 % contavam com ensino médio completo; 57 % eram primigestas; 74 % tinham alto risco obstétrico, e 59 % tiveram seu filho por cesariana. Causas de abandono do aleitamento: hospitalização dos recém-nascidos (79 %) e baixo peso ao nascer (52 %). A equipe de saúde sugeriu a hipogalactia como causa da substituição do leite materno em 18 % das mães; postura incorreta da mãe em 66,1 % e 61 % devido à falta de experiência. Fatores de sucesso para relactar: idade cronológica menor de um mês (48 %); sucção do peito por parte bebê (89 %); pega correta (71 %). Durante o período de não aleitamento materno, 72 % receberam aleitamento misto; 82 % não lactaram entre 8 e 30 dias; 98 % das mães estiveram dispostas a relactar; 91 % consideraram o apoio de suas famílias e da equipe de saúde como bom. **Conclusões:** o internamento do filho foi a principal causa do abandono do aleitamento materno, e os principais fatores de relactação foram a sucção efetiva, a disposição das mães e o apoio.

PALAVRAS-CHAVE (Fonte: DeCS)

Aleitamento materno; transtornos da lactação; nutrição do lactente; métodos de alimentação; cuidado da criança.

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Introduction

Breastfeeding is one of the World Health Organisation (WHO) recommendations, aiming to increase up to 50 % by 2025 (1). It is also considered as the best option for premature newborn feeding at any gestational age and is associated with a lower incidence of infections, adequate weight increase and prevention of diseases such as obesity (2, 3)

If breastfeeding has been discontinued or if milk production has decreased, it can be restored by using a technique called *relactation*. It is defined as the restoration of breast milk production by a woman who has stopped breastfeeding, but also the restart or increase of milk production after having previously decreased or stopped completely. A woman who has either recently or in the past stopped breastfeeding her child can produce milk again for her own or her adopted child, even without an additional pregnancy (4, 5).

The study by Hormann *et al.* reported relactation benefits such as its usability when breastfeeding is delayed due to children or mothers hospitalization, or when newborns were premature or too sick to tolerate oral intake (4). The study by Mehta *et al.* (6) showed that relactation is also effective for those mothers who fed their children with formula, those who had breast problems or for babies who were hospitalized without oral intake for a long time; authors concluded that this process could be successful with a good support focused on the mothers. Dehkhoda (2) stated that restoring breastfeeding should be attempted at every opportunity and in any situation, due to the positive impact on the children daily weight. Also Tomar (7) argued that relactation was an effective intervention to promote exclusive breastfeeding.

The relationship has also been shown to have benefits such as optimizing child nutrition and strengthening the mother-child mutuality. According to the study by Dehkhoda *et al.* (2) there was a positive impact on the children daily weight with an increasing tendency- and on the increase in the mutuality between mother and child. Similarly, the study by Lommen, Brown and Hollist (8) showed that the link between mother and child was strengthened when eye contact was set up through the process of relactation, and the research by Cazorla *et al.* (9) showed that in the process of induced breastfeeding the closeness between mother and child increased.

The technique of relactation is established when the milk production has decreased or abolished either due to lack of stimulus or in the absence of pregnancy and is reactivated through nipple stimulation and psycho-affective therapy, until the amount of milk produced is adequate for the newborn (2, 7, 10, 11). One of the techniques of relactation consists of connecting the lower end of an orogastric tube to a cup with milk and the other end to the child's mouth next to the nipple, in order to provide a continuous flow of food while the child is breastfeeding, thus stimulating the breast and the nipple (4).

The motivation of the mother as well as the family and health professionals' support are the main success factors for the achievement of the relationship, as argued by Dehkhoda *et al.* (2) and other studies (2, 6, 12).

In our region, the relationship and its advantages are unknown. This was demonstrated by Calderón *et al.* (13), who found that 60.5 % of the nursing staff did not know the meaning of relactation. Also, the study by Cazorla *et al.* (9) reported that health professionals do little to promote relactation as they are not familiar with this process.

In line with this, researchers' interest arose in investigating the causes of breastfeeding abandonment and the success factors for relactation in mothers with children hospitalised in a specialised institution, where issues interfering with breastfeeding often occur. The idea was to motivate and help mothers to restart breastfeeding and consequently contributing to the reduction of children mortality associated with malnutrition in local, regional and national contexts. Accordingly this study aimed to identify the causes of breastfeeding abandonment and the success factors for breastfeeding restart in mothers with children attended in a specialised health institution in the city of Medellín, in 2018.

Methodology

Design: descriptive, transversal. Population: mothers with children attended in a health institution. Inclusion criteria: mothers with children under six months of age, belonging to the Kangaroo Family Program, hospitalised in basic-care and paediatrics units with breastfeeding cessation for more than seven days. Exclusion criteria: mothers with mental disorders and being HIV positive. Non-probabilistic sampling at convenience for a total of 100 mothers with their newborns.

The researchers accessed the selected units daily to verify that the mothers, with their children, met the inclusion criteria. A structured survey designed by the researchers, with more than ten years of experience in the mother-child area was used. The most relevant variables (mothers' knowledge and support, causes of abandonment, and success factors) analysed in scientific studies on relactation were taken into account (6, 7, 14, 15), and information for mothers was extracted from the manuscript by Elizabeth Hormann and Felicity Savage - reviewed by the WHO Technical Working Group on Breastfeeding - entitled "Relactation: review of experience and recommendations for practice" (4). This served as a reference to investigate the most significant variables and to respond to the objective of the study, since it supports the causes of breastfeeding abandonment and –success in relactation, based on the experience and scientific evidence produced for more than ten years.

The variables were classified in four headings: (1) socio-demographic, obstetric and newborn characteristics; (2) knowledge, experience and support of the mother in breastfeeding and relactation; (3) information about causes of breastfeeding abandonment; and (4) information regarding success factors for relactation.

To collect data on the breastfeeding technique, mothers were observed after being asked to put her child on to the breast, using a checklist and without any previous training-though instructions were given to them when errors in the technique were identified.

For the quantitative variables, the mean and its standard deviation and the median with interquartile ranges were estimated. For the qualitative variables, absolute and relative frequencies were calculated, and the program Epi-info version 3.5.4 was used for statistical analysis.

The study was endorsed by the Ethics Committee of the School of Health Sciences in the Universidad Pontificia Bolivariana and the Scientific Directors of the health institution. The researchers kept the bioethical principles of human research: justice, respect, beneficence and non-maleficence taking into account the provisions of Resolution 8430 of 1993, which establishes the scientific, technical and administrative standards for health research. This project was defined as a minimum-risk research. Informed consent was requested from all participating mothers and for minors their legal representative consent was required. Data confidentiality was guaranteed and anonymity was maintained.

Results

Socio-demographic characteristics

The mothers' age had a normal distribution with a $p = 0.09$, a mean of 26.8 years and a standard deviation of 6.3 years. According to the socioeconomic level, 73 % belonged to a were low income. With regard to marital status, 59 % were in a partner relation. About their education, 32 % had completed a high school degree, while 25 % had a technical training. Table 1 presents the obstetric and newborn characteristics.

Table 1. Obstetric and newborn characteristics

Variable		Frequency	Percentage
Number of Deliveries	None One > 2	57 11 32	57,0 11,0 32,0
Obstetric classification	High risk	74	74,0
	Low risk	26	26,0
Type of delivery	Spontaneous	41	41,0
	Caesarean section	59	59,0
Newborn Chronological age	<1 month	48	48,0
	1 month	28	28,0
	>2 months	24	24,0
Newborn weight in grams at birth, as classified by the WHO	4000 gr or more	1	1,0
	2500 gr to 3999 gr	22	22,0
	1500 gr to 2499 gr	52	52,0
	1000 gr to 1499 gr	24	24,0
	500 gr to 999 gr	1	1,0
Newborn hospitalization	Yes No	79 21	79,0 21,0
Non-lactation interval	8 to 30 days 31 to 90 days >91 days	82 17 1	82,0 17,0 1,0

Source: own elaboration.

Causes of Breastfeeding Abandonment

Seventy-nine percent of the children were hospitalized, 52 % had low birth weight and 24 % had very low birth weight. 14 % of the mothers were hospitalised after delivery. In 18 % of the cases, the health staff suggested supplementing the baby's diet with milk substitutes due to hypogalactia.

Breastfeeding technique was observed as a possible cause of abandonment and it was found that very few mothers raised their feet (5 %), 35 % supported their feet, and 49 % had straight backs. In total, 66.1 % of the mothers had incorrect posture. Sixty-one percent of the mothers had no previous experience with breastfeeding, and 57 % were new mothers.

Success Factors for Relactation

Ninety-eight percent of the mothers were willing to recount. The minimum time for stopping breastfeeding was eight days, and the maximum was three months. 89 % of the newborns sucked when the breast was placed. The feeding type of the child during the time spent not directly breastfeeding was mixed at 72 % (breast milk and artificial milk) and only artificial at 28 %. Ninety-one percent and 85 percent of the mothers responded that support from their families and health personnel was good, respectively.

Most of the children were found to have a good breast grasp (the infant's chin was touching or almost touching the breast [69 %], the lower lip was everted [75 %], the mouth was wide open [69 %], more areola was seen above the upper lip [71 %]). The baby's posture, in most cases, was correct (the mother held the infant's entire body with her arm [62 %], the infant's body was attached to the mother's body [57 %], the baby's head and body were well aligned [70 %]). The mother's experience in breastfeeding was considered a success factor, as 90 % had no difficulty latching on to the breast.

Discussion

Our study found that hospitalized children with low and very low birth weight, hospitalized mothers and hypogalactia stimulated early breastfeeding cessation. On the contrary López *et al.* (14) showed that both children and mother health status was not a major reason for stopping breastfeeding early, with a percentage of 11.63 %. Oribe *et al.* (15) reported that the most frequent reason found was work (31.1 %), followed by hypogalactia (19.4 %). The study by Vila Candel *et al.* (16) reported that hypogalactia (21.8 %) and a lower recommendable newborn weight increase (14.9 %) were the most frequent factors leading to early abandonment. It is important to note that these three studies selected the population in outpatient settings, different from the context where this study was conducted.

In hospital settings, Lau (17) reports that long-term hospitalization in the rough environment of a neonatal intensive care unit was interrupted at the early start of breastfeeding, as well as for high-risk infants with chronic conditions, such as bronchopulmonary dysplasia and cardiac or congenital abnormalities. Mehta *et al.* (6) studied hospitalised mothers with their children and showed that 31.24 % of them stopped breastfeeding because of low milk flow, due to the health status of the infants. The research by Gianni *et al.* (18) showed that 71 % of the neonates had at least one comorbidity during their stay in hospital: 23 % had respiratory difficulties; 18 % hypoglycaemia; and 35 % jaundice which consequently meant a barrier for breastfeeding.

In our study, another reason for abandonment was that healthcare staff suggested feeding the newborn with milk replacers because of hypogalactia and receiving medications that are incompatible with breastfeeding. Similarly, the study by Oribe *et al.* (15) reports that healthcare professionals were the main source for stopping breastfeeding, but the reason given was poor weight gain (70.8 %). Other studies found that the most important causes of abandonment were the mother's perception of insufficient milk or hypogalactia.

Thus, we consider that it is important to intervene, immediately, to those mothers who manifest expressions such as "It is dried up or my milk doesn't let down" and to analyze if it is a wrong perception about hypogalactia, to avoid the early abandonment of breastfeeding. Tomar (7) showed that the most common cause (with 53,1 %) was insufficient milk. As expressed by Vila *et al.* (16), it is important to consider that most of the reasons for hypogalactia expressed by mothers are based on subjective perceptions, which can be affected by a variety of external factors, including professional advice.

In the present study, it was shown that the position for breastfeeding in most mothers was not correct, and we consider this aspect a barrier to breastfeeding. The studies presented by Borre Ortiz *et al.* (19) and Mehta *et al.* (6) presented similar results, as no mother knew the correct position. On the other hand, Gallardo *et al.* (20) showed that the nurses, when evaluating the breastfeeding technique, found that half of the cases were not correct (50 %).

We also found that most of the mothers had no previous experience with breastfeeding, probably because they were primiparous, young and had the caesarean delivery. The study by Crippa *et al.* (21) identified that caesarean section had a negative effect

on early initiation of breastfeeding, and that factors such as age, ethnicity, education, unfavorable experiences with breastfeeding, having twins, and feeling reduced in milk production were risk factors for early discontinuation.

Studies by Oribe *et al.* (15), Tomar (7) and Mehta *et al.* (6) express that a woman's previous experience of breastfeeding may have an effect on her ability to relactate, since this probability is higher in women who have previously breastfed. The study by Zingler *et al.* (22) refers to the fact that relactation is possible in mothers who rent wombs, but that the induction of lactation in this group was aimed at offering to mother and child the possibility of experiencing the emotional and affective benefits of breastfeeding, strengthening the mother-child bond and allowing the transfer of protective antibodies from the mother, rather than the production of sufficient milk as such. The comparative study by Crippa *et al.* (21) found that 57 % of foreign mothers who had had positive breastfeeding experiences were more likely to breastfeed on demand compared to 45.5 % of Italian women in the same situation.

We also found that mothers in the health institution where this study was conducted meet conditions for successful relactation, such as support from family and healthcare staff. Most responded that the support from these professionals of the neonatal services and kangaroo program, as well as from the family, was good. Similarly, Hormann and Savage (4) say that the factors related to the success of the relationship are the support of the family and healthcare staff. The study by Mehta *et al.* (6) reported that relactation was possible in 100 % of the mothers when they received continuous and positive support from family members and trained healthcare workers. The studies by Azabache and Caravedo (5) and Gianni *et al.* (18) refer to the influence of maternal education and motivation on breastfeeding success and relactation. This is essential because the mother will be involved in a difficult process that will demand dedication, patience and perseverance from her.

Another success factor found was that most mothers were willing to restart breastfeeding. A similar situation was observed in the study by Azabache and Caravedo (5), which reports that 93,7 % of the mothers had the desire to exclusively breastfeed their baby before delivery. The study by Lommen, Brown and Hollist (8) reported some of the reasons that motivated mothers to restart breastfeeding were: the desire to provide better nutrition to their baby and to develop a closer bond with their child, and an "instinct" that motivated them to restart it.

In the present study, it was shown that the most frequent non-lactation interval was 8 to 30 days, a result that we consider positive, since the document reviewed by a WHO expert group (4) argues that relactation success is related to the non-lactation interval. This was also reported in the study by Tomar (7), who found that while the non-lactation interval was 15 to 30 days, the relactation success was 95 %, but when the interval was longer than 60 days, the success was 52.6 %. These results showed that the incidence of failure was higher with the increasing gap in lactation time. Most women can relactate at any time (even years) after the birth of their last child, but it is easier for women who have recently stopped breastfeeding or if the infant sucks occasionally (4).

In our study, we found that when the mother was asked to put the baby to the breast to observe the breastfeeding technique, most of the newborns sucked and had a good breast grasp, which we considered positive for the relactation. The study by Gianni *et al.* (18) stated that factors related to the baby, such as developmental immaturity, generally led to problems such as difficulty in gripping, lethargy and ineffective sucking, which may predispose them to poor outcomes in the initiation of breastfeeding. However, the study also highlighted that very premature children usually develop competent nutritional sucking at low gestational ages (18). About correct breast grasp, Crippa *et al.* (21) studied the problems of breastfeeding in late pre-term infants and showed that 29.5 % of this group of children had poor breast grasp before discharge, less likely to be exclusively breastfed after discharge, and required more time to acquire breastfeeding skills.

In our study, most of the newborns were chronologically younger than one month, which was related with a greater possibility of success for re-integration, as also stated by Hormann and Savage (4). The study by Mehta *et al.* (6) found an association between successful relactation and newborn age under six weeks, a result that is statistically significant with $p < 0.001$. Moreover, the study by Tomar (7) reported that relactation was successful in 95.5 % of the cases, when the children were under two months, while it was successful in only 64.5 % of the cases, when the babies were older than four months.

During the time spent non-breastfeeding directly at breast, the type of newborn food was mostly mixed (breast milk and artificial formula milk). This was an auspicious fact for the successful restart of breastfeeding due to the maintenance of the breast stimulation. The study by Tomar (7) showed that 88 % of the chil-

dren were bottle-fed and 37.2 % with animal milk. Consequently, these authors reported that it took longer for bottle-fed children to initiate relactation due to nipple confusion.

This study concludes that the main cause of breastfeeding abandonment was children hospitalization, followed by low birth weight, new mothers with no previous breastfeeding experience and the incorrect breastfeeding position of the mother. Success factors were family and health professionals support, mother's motivation, shorter non-breastfeeding interval, child effective sucking, and chronological age under one month.

Our results were part of a *care protocol that was* implemented in the institution where this study took place, which was adapted to the characteristics and health conditions of the population in need of highly complex maternal and child cares towards contributing to the restoration of the children's health, their healthy growth and development as well as the promotion of mother-child mutuality.

This *protocol* for *relactation care* was designed for mothers in the Kangaroo Family Programme, and includes the following phases: 1) asking about the mother's motivation to relactation, 2) listening to the mother and strengthening her confidence, 3) evaluating from the Nursing scope both the mother and newborn situation, 4) stimulating the mammary gland if there is milk production, and 5) using a relactator if there is no milk production. This initiative emphasise the importance of breastfeeding so that it could be restarted once it has been interrupted and promotes permanent support for the mother in such process by the Nursing professional.

Conflict of Interest: None declared.

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