ABSTRACT

Objective: to know the rate of adherence to exclusive breastfeeding and the difficulties that lead to early weaning. Method: a quantitative, observational study with a correlation design involving 102 mothers of newborns hospitalized in the joint accommodation of the UHS and the agreement, from June to July 2017. Data was produced by monitoring breastfeeding for 180 days in three distinct stages (30th, 90th and 180th day) through interviews with questions formalized by the checklist made by telephone contact. The data was then transcribed in full and analyzed by descriptive and inferential statistics. Results: the rate of adherence to breastfeeding in the first six months of life was 23.53%, considered reasonable according to the World Health Organization (WHO). The most frequent difficulties were insufficient milk (32.93%) and introduction of supplementation (24.39%). Conclusion: the rate of adherence to breastfeeding found, classified as “reasonable” by the WHO, is still lower than recommended. The main difficulties reported by breastfeeding mothers provide information for the health team to promote breastfeeding promotion and encouragement.

Descriptors: Breastfeeding; Breast milk; Early Weaning; Hospital discharge; Joint Accommodation; Child mortality.

RESUMO

Objetivo: conhecer a taxa de adesão ao aleitamento materno exclusivo e as dificuldades que levam ao desmame precoce. Método: estudo quantitativo, observacional, com delineamento de correlação, envolvendo 102 mães de recém-nascidos internados no alojamento conjunto do SUS e convênio, no período de junho a julho de 2017. Os dados foram produzidos pelo monitoramento do aleitamento materno por 180 dias em três etapas distintas (30º, 90º e 180º dia) por meio de entrevistas com perguntas formalizadas pelo checklist efetuado por contato telefônico. Em seguida, os dados foram transcritos na íntegra e analisados por estatística descritiva e inferencial. Resultados: a taxa de adesão ao aleitamento materno nos seis primeiros meses de vida foi de 23,53%, considerada razoável segundo a Organização Mundial da Saúde (OMS). As dificuldades mais apontadas foram leite insuficiente (32,93%) e introdução da suplementação (24,39%). Conclusão: a taxa de adesão ao aleitamento materno encontrada, classificada como “razoável” pela OMS, ainda está abaixo do preconizado. As principais dificuldades referidas pelas mães ao amamentar fornecem informações para que a equipe de saúde promova ações de promoção e incentivo à prática do aleitamento materno.

Descritores: Aleitamento Materno; Leite Materno; Desmame Precoce; Alta Hospitalar; Alojamento Conjunto; Mortalidade Infantil.
INTRODUCTION

Breastfeeding is recommended - by the World Health Organization (WHO) and the Ministry of Health - for six months and supplemented up to two years or more. Human milk has several immunological factors that protect the child against infections such as IgA, IgM and IgG antibodies, macrophages, neutrophils, B and T lymphocytes, lactoferrin, lysozyme and bifido factor. It is estimated that this food could prevent 13% of preventable-cause deaths in children under five worldwide. 55% of deaths due to diarrheal disease and 53% of those caused by lower respiratory tract infection in children from zero to six months, 20% and 18% from seven to 12 months, respectively, and 20% of all causes of death would be avoided in the second year of life.¹

Breastmilk is supplied with all the needs of the child up to six months of age and there is no need to supply water or teas, exclusive breastfeeding being considered when the child receives only human milk directly from the breast or milking.² For mothers, breastfeeding promotes uterine contraction, reduces the risk of diseases such as cancer, rheumatoid arthritis, osteoporosis and even the reduction of mood and stress.³

There is an increase in the rates of exclusive breastfeeding in Brazil, however, they are still lower than recommended by the World Health Organization, which classifies the prevalence of exclusive breastfeeding up to six months as very good in the range of 90 to 100 %; good, from 50 to 89%; reasonable, from 12 to 49% and bad, from zero to 11%. The II National Survey of Prevalence of Breastfeeding in the Brazilian Capitals and Federal District presents data that, in children under six months of age, the prevalence of exclusive breastfeeding is around 41%.⁴

It is known that breastfeeding is a complex process that depends not only on the mother's willingness to breastfeed. There are several factors that will influence the effectiveness of this practice, such as: culture, insertion of breastmilk complementation with industrialized formulas and the support of a professional team that encourages and provides the necessary information in order to avoid the appearance of problems that will lead to to early weaning.⁵ Research indicates that the factors that may be more detrimental to breastfeeding are: incorrect latching, nipple fissures, low milk production, breast pain⁶ and also the duration of maternity leave.⁷ The perception of insufficient milk, that is, the mother's belief that breast milk is inadequate in quantity or nutritional quality to meet the baby's needs is another frequently highlighted factor.⁸ This phenomenon appears to exist in many countries without cultural and sociodemographic boundaries.⁹

It has been shown, through a meta-analysis of three developing countries, that children who were not breastfed had a six-fold increased risk of dying from infectious diseases in the first two months of life than those who were breastfed. Six months of exclusive breastfeeding and continued breastfeeding in the first year of life could also prevent 1.3 million infant deaths worldwide, according to systematic reviews by the Bellagio Child Survival Study Group.¹⁰

It is understood that health professionals should provide breastfeeding, as well as be able to provide appropriate information and demonstrate practical skills in breastfeeding management, however, studies have shown that professionals are not able to promote breastfeeding.¹¹ Communication is indispensable to identify the difficulties, build a bond with the nursing mothers and establish a plan of care. Understanding and considering the beliefs, knowledge and experiences of parents, encouraging positive behaviors, allow mothers to feel capable of breastfeeding their children, promoting autonomy and avoiding early weaning.¹²

OBJECTIVE

- To know the rate of adherence to exclusive breastfeeding and the difficulties that lead to early weaning.

METHOD

This is an observational, quantitative, field study, with a correlation design, carried out in a hospital of the child and motherhood of São José do Rio Preto that serves users of the Unified Health Service (UHS) and the Health plan. The institution has 181 beds, of which 47 are for the joint accommodation. Of these, 30 are UHS beds and 17, health plan beds.

A convenience sample was selected involving 102 mothers of newborns hospitalized in the joint accommodation of UHS and health plan, from June to July 2017, who met the following inclusion criteria: to be newborn in the UHS housing unit and agreement; be exclusively breastfeeding at the time of discharge and have a residential or cellular telephone. The data was collected by the researcher in three different stages. In the first, the mothers were interviewed about 30 days after discharge; in the second stage, around 90 days after hospital discharge and in
the third stage, around 180 days after hospital discharge. The monitoring of breastfeeding was carried out through an interview with questions formalized by the checklist made by telephone contact. For the mothers who were not found, seven telephone contact attempts were made. Not being successful, they were excluded from the study. This monitoring started 30 days after discharge and continued on the 90th and 180th days after the baby was born. It is noteworthy that, during monitoring, mothers who introduced some type of liquid or solid food into the baby's diet were excluded from the sample. The instrument for data collection was based on the recommendations included in the Ten Steps to Successful Breastfeeding of the Baby-Friendly Hospital Initiative.

Resolution 466/12 was met, and the project was approved by the Research Ethics Committee of the Medical School of São José do Rio Preto under CAAE 68928817.2.0000.5414 and Opinion no. 2,106,842. All the puerperal participants signed the Free and Informed Consent Term (FICT) before hospital discharge.

Descriptive and inferential statistics were used for data analysis. The profile of the studied sample was described, contemplating the analyzed variables and their unfolding. The data was expressed in absolute and relative numbers in this first part. In the inferential analysis, the analysis of independence and prediction among the variables proposed in the scope of work was used. For this, the Multiple Linear Regression test was used, within the expected standards. It is worth mentioning that the results of independence among the proposed variables were obtained by means of analysis between the values of P (significance). Finally, all the analyses were obtained by the SPSS Statistics Software linked to the functionalities of the Excel tool (version 2016).

RESULTS

The data was collected in three distinct stages. In the first, the mothers were interviewed approximately 30 days after discharge; in the second stage, approximately 90 days after hospital discharge, and in the third stage approximately 180 days after hospital discharge.

Throughout the research, there was a loss of 26 mothers due to the impossibility of contact: ten in the first stage; nine in the second and seven in the third. Mothers who could not be contacted and left exclusive breastfeeding were excluded from the sample.

The experiment was started in relation to the rate of adherence to exclusive breastfeeding, with a sample of 102 mothers who had recently left the hospital and who were in the exclusive breastfeeding model. At that time, the rate of adherence to exclusive breastfeeding was 100%.

After approximately 30 days, in the first stage, we tried to contact the 102 mothers to continue the study. Thus, 64 (62.75%) remained in the exclusive breastfeeding process and 28 (27.45%) started the process of non-exclusive breastfeeding. The rate of adherence to exclusive breastfeeding during the first stage was 62.75%.

After approximately 90 days, in the second stage, 64 (62.75%) mothers remained in the study. A new telephone contact was made to continue the work. Of these, 41 (41.18%) remained in the exclusive breastfeeding process and 14 (13.73%) mothers started the process of non-exclusive breastfeeding. The rate of adherence to exclusive breastfeeding during the second stage was 41.18%. Compared to the rate of the first step, a decrease of 21.57% in adhesion was obtained. Rates were calculated over the total sample number of 102 mothers.

The third stage was performed after approximately 180 days, of which 41 (41.18%) mothers remained in the study. A new telephone contact was made to continue the work. It was observed that 24 mothers (23.53%) remained in the process of exclusive breastfeeding and ten (9.80%) started the process of non-exclusive breastfeeding. The adhesion rate during the third stage was 23.53%. If compared to the rate of the first stage, there was a decrease of 38.22%.

The study was completed with 24 (23.53%) mothers who were able to remain exclusively breastfed for six months, according to the World Health Organization.
There were two ways of measuring the mean time of exclusive breastfeeding: when the mother moves from exclusive breastfeeding to non-exclusive breastfeeding, allowing the calculation of time and when the experiment ends, that is, when remains in exclusive breastfeeding until the sixth month of life, as advocated by WHO. This time was calculated in the four steps: 30<sup>th</sup>, 90<sup>th</sup>, 180<sup>th</sup> day and total (mean time of all mothers who were exclusively breastfed).

It is reported that after the 30<sup>th</sup> day, 28 mothers went to non-exclusive breastfeeding. The average time for all was one month. After the 90<sup>th</sup> day, 14 mothers went to non-exclusive breastfeeding. The mean time was approximately 2.36 months or 71 days.

It follows that after the 180<sup>th</sup> day ten mothers went to non-exclusive breastfeeding and 24 remained exclusively breastfed until the sixth month of life, concluding the study time. Therefore, the mean time in this period was approximately 5.62 months or 169 days.

It is summarized from the experiment that 26 mothers lost contact, therefore, they are not included in table 2. In total, 52 mothers started non-exclusive breastfeeding at some time and 24 mothers remained exclusively breastfed until the sixth month of life, as advocated by WHO. Therefore, the mean time of exclusive breastfeeding was approximately 3.31 months or 99 days.

In the 30<sup>th</sup>, 90<sup>th</sup> and 180<sup>th</sup> days, the total profile of the sample was subdivided, also according to the Exclusive Breastfeeding Time (EBF). The difficulties were initially listed in the form of a checklist, based on evidence, such as: insufficient milk; incorrect areola/nipple latching; position of the baby; nipple fissures; engorgement; breast pain; duration of maternity leave; introduction of supplements and introduction of complementary feeding and reminding that mothers could point to more than one difficulty.

Table 2. Months in which mothers left exclusive breastfeeding. São José do Rio Preto, (SP) 2017.

<table>
<thead>
<tr>
<th>Records</th>
<th>% Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Month</td>
<td>28</td>
</tr>
<tr>
<td>1.5 Months</td>
<td>2</td>
</tr>
<tr>
<td>2 Months</td>
<td>6</td>
</tr>
<tr>
<td>3 Months</td>
<td>6</td>
</tr>
<tr>
<td>4 Months</td>
<td>3</td>
</tr>
<tr>
<td>4.5 Months</td>
<td>1</td>
</tr>
<tr>
<td>5 Months</td>
<td>5</td>
</tr>
<tr>
<td>5.5 Months</td>
<td>1</td>
</tr>
<tr>
<td>6 Months</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
</tr>
</tbody>
</table>

They were in non-exclusive breastfeeding, in the contact made on the 30<sup>th</sup> day, 28 mothers (27.45%), out of 102 initially analyzed. In this period, the exclusive breastfeeding time corresponds to one month (Table 2). The difficulties most mentioned by the mothers were: introduction of supplementation (35.29%); insufficient milk (33.33%); nipple fissures (13.73%); incorrect pick (9.80%) and other (7.84%).

On the 90<sup>th</sup> day contact, it was detected that, of the 64 mothers, 14 (13.72%) went on to breastfeed non-exclusively. During this period, two mothers remained exclusively breastfed for 1.5 months; six mothers, for two months and six mothers, for three months (Table 2). The mentioned difficulties were: insufficient milk (38.89%); duration of maternity leave (16.67%); introduction of supplementation (16.67%); (5.56%) and others (27.78%). The difficulties identified as other (27.78%) are: reflux, low child weight and mastitis.
It was found, in the context made on the 180th day of the experiment, that of the 41 mothers who remained exclusively breastfed, ten (9.80%) went on to breastfeed non-exclusively. During this period, three mothers remained exclusively breastfed for four months; one mother, for 4.5 months; five mothers and a mother for 5.5 months (Table 2). The most mentioned difficulties were: length of maternity leave (30.77%); introduction of complementary feeding (30.77%); insufficient milk (23.08%); fissures and other mammals (7.69%). The difficulty pointed out as another was mastitis.

It can be seen in the total profile of the sample that the two most frequent difficulties were: insufficient milk (32.93%) and introduction of supplementation (24.39%), according to table 3.

<table>
<thead>
<tr>
<th>Difficulties</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient milk</td>
<td>27</td>
<td>32.93</td>
</tr>
<tr>
<td>Introduction of suplementation</td>
<td>20</td>
<td>24.39</td>
</tr>
<tr>
<td>Nipple fissures</td>
<td>8</td>
<td>9.76</td>
</tr>
<tr>
<td>Duration of maternity leave</td>
<td>7</td>
<td>8.54</td>
</tr>
<tr>
<td>Incorrect nipple latching</td>
<td>6</td>
<td>7.32</td>
</tr>
<tr>
<td>Introduction of complementary feeding</td>
<td>4</td>
<td>4.88</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>7.69</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>82</td>
<td>100</td>
</tr>
</tbody>
</table>

In the sociodemographic profile of the 102 mothers who participated in the study, it was noted that 45 (44.12%) were married in relation to marital status; 31 (30.39%) declared a stable union and 26 were single (25.49%). Regarding the maternal age, it was verified that 13 mothers (12.75%) presented age between 15 and 20 years; 25 (24.51%), from 21 to 25 years; 25 (24.51%), from 26 to 30 years old; 30 (29.41%), from 30 to 35 years old; seven (6.86%), 36 to 40 years and two mothers (1.96%) were over 40 years old. Regarding the weight of the newborn, three mothers (2.94%) newborns with up to two kilos were identified; 36 (35.29%), from 2.01 to 3 kilos; 59 (57.84%), from 3.01 to 4 kilos and four (3.92%) newborns were over four kilos.

The degree of dependence of independent variables (marital status, maternal age and birth weight) and the dependent variable (exclusive breastfeeding time) were determined by performing the inferential analysis of the sample using the Multiple Linear Regression test. The value of p < 0.05 was considered significant showing the dependence of the variable. It was observed that none of the variables, marital status (p = 0.078), maternal age (p = 0.373) and birth weight (p = 0.385) had statistical evidence of exclusive breastfeeding.

**DISCUSSION**

It is estimated that the rate of adherence to breastfeeding in the first six months of life, found in the study, was 23.53%, considered reasonable, according to the World Health Organization (WHO), which classifies the prevalence of exclusive breastfeeding up to six months as very good, in the range of 90 to 100%; good, from 50 to 89%; At baseline, within the first 30 days, 64 (62.75%) mothers remained in EBF, and at the end, 24 (23.53%) maintained EBF. The significant decrease in the percentage of adherence to the EBF was verified, which corroborates another cohort study, which monitored the breastfeeding of 225 mothers, in which, initially, 94.3% of the women were exclusively breastfed and 34.1% maintained the EBF until 180 days, being classified as reasonable by WHO. However, although in both studies the rate of adherence to breastfeeding in the sixth month of life is considered reasonable, in this study it has lower initial and final adhesion rates than the other study.

It is pointed out that the last survey of the prevalence of breastfeeding, performed in 227 Brazilian municipalities, by the Ministry of Health, shows that 87.22% of these municipalities have a situation considered reasonable by the WHO, as demonstrated in this study. It should be emphasized that in this survey, in relation to the continuity of breastfeeding, there were predominant municipalities with better situations than those identified in the set of capitals in the North, Northeast and Central-West regions, while the Southeast and South regions are characterized by earlier discontinuation of breastfeeding.14

It should be emphasized that the average time of exclusive breastfeeding found in this study is 99 days, a time that can be considered good when compared to a study in which the median duration of exclusive breastfeeding of all Brazilian capitals and FD

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Table 3. Total sample profile for difficulties. São José do Rio Preto (SP), 2017.

<table>
<thead>
<tr>
<th>Difficulties</th>
<th>n</th>
<th>%</th>
</tr>
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<td>100</td>
</tr>
</tbody>
</table>
was 54, 1 day. In a cohort study, 13 the results were similar, since the mean time of exclusive breastfeeding was 112.93. Another study, 15 which compared the mean duration of exclusive breastfeeding of preterm and full-term newborns, reported a time of 96.3 days for full-term infants and 121.6 for preterm infants, which resembles this study.

It was possible to identify, during the follow-up of breastfeeding for 180 days, the main difficulties pointed out by mothers during the breastfeeding process. The difficulties most pointed by mothers were insufficient milk (32.93%) and introduction of supplementation (24.39%). The difficulty referred to as ‘weak milk or low milk’ also stood out as the most mentioned by the mothers in the first six months of life during a research performed at a maternity hospital in São Paulo.13

The EBF practices among health professionals of a hospital, the only public maternity accredited to the Baby-Friendly Hospital Initiative, were analyzed in another study16 that identified, as a factor impeding breastfeeding, the use of industrialized milks in the introduction of supplementation, presented by 24.39% of the mothers participating in this study. For these health professionals, too little milk or insufficient milk were also identified as the third major risk for adherence to exclusive breastfeeding. The booklet of the Ministry of Health Breastfeeding and Complementary Food1 explains that it is common among the mothers to complain of ‘little milk’ or ‘weak milk’ and that this perception is often a reflection of maternal insecurity, reinforced by people close to them, baby crying and frequent breastfeeding, although the vast majority of women are biologically capable of producing enough milk to fully nourish their baby.

It is added that, when analyzing the variables time of EBF, maternal age, marital status and NB birth weight, no statistical evidence of dependence was found. A review study, 17 which investigated social factors that interfere with the duration of exclusive breastfeeding, demonstrates that maternal age is not a risk factor for early weaning. However, the study also points out that mothers under the age of 25 tend to abandon breastfeeding earlier. In this study, the predominant maternal age was 30 to 35 years (29.41%), and there was no statistical significance. The predominant marital status of the mothers participating in this study indicates that 44.12% were married and 30.39% declared stable marriage. Research18 points out that mothers who do not have a partner have a sixfold higher risk of breastfeeding for less time since the companion is a provider of support and encouragement for breastfeeding.

**CONCLUSION**

It has been shown that exclusive breastfeeding up to six months of life is of great importance due to its benefits conferred on the health of the child and maternal health and the reduction of infant-maternal mortality. However, the rate of adherence to breastfeeding found, classified as "reasonable" by WHO, is still below that recommended. The main difficulties mentioned by breastfeeding mothers - insufficient milk and the introduction of supplementation - provide information for the health team to promote breastfeeding promotion and incentive actions, as well as to develop strategies to solve the problems encountered during breastfeeding.

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