

## Original articles

# Community health workers and breastfeeding: challenges related to knowledge and practice

*Agentes comunitários de saúde e o aleitamento materno: desafios relacionados ao conhecimento e à prática*

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## ABSTRACT

**Purpose:** to identify the knowledge of community health workers on practices and promotion of breastfeeding.

**Methods:** this is a cross-sectional descriptive study aimed to investigate a sample of 148 health workers quantitatively and qualitatively. Data collection was performed by applying a semi-structured questionnaire with open and closed questions. The following variables were analysed: sociodemographic data, capacity to provide breastfeeding guidance, participation in training and courses, and knowledge of the breastfeeding benefits for mother and baby. Statistical analysis was performed with chi-square test, exact Fisher's test and G-test at significance level of 5%. Open questions were analysed according to the qualitative research technique.

**Results:** approximately, 45.95% of the health workers were not trained to provide nursing mothers with practical guidance on breastfeeding, and 63.30% never attended courses on breastfeeding. The majority of health workers mentioned breastfeeding benefits only for the baby, namely: nutrition, immunology, development, health, dentition, and bones. There was a statistically significant association between the capacity to provide breastfeeding guidance and participation in training ( $p < 0.001$ ).

**Conclusion:** the health workers had not participated in training courses to follow up nursing mothers, in addition to having a limited knowledge on practices and promotion of breastfeeding and paying late post-natal home visits.

**Keywords:** Community Health Works; Breastfeeding; Knowledge

## RESUMO

**Objetivo:** identificar o conhecimento de Agentes Comunitários de Saúde sobre as práticas e a promoção do aleitamento materno.

**Métodos:** estudo transversal, descritivo, inquérito, quanti-qualitativo realizado com amostra de 148 agentes. A coleta de dados foi realizada por meio da aplicação de um questionário semiestruturado, com questões abertas e fechadas. Foram analisadas as variáveis: sociodemográficas, capacidade para orientação sobre o aleitamento, participação em treinamentos/cursos, conhecimentos sobre vantagens do aleitamento para mãe e bebê. Realizou-se análise estatística descritiva, foram empregados os testes Qui-quadrado, Exato de Fisher e G, ao nível de significância 5%. As questões abertas foram analisadas segundo a técnica de pesquisa qualitativa.

**Resultados:** aproximadamente, 45,95% dos agentes não foram capacitados para realizar orientação prática das nutrizes sobre o aleitamento e 63,30% nunca participaram de cursos sobre amamentação. A maioria citou vantagens do aleitamento relacionadas, somente, ao bebê, emergindo as categorias: nutrição do bebê, imunológica, desenvolvimento/saúde do bebê, dentição/ossos. Houve associação estatisticamente significativa entre capacidade de orientar as mães na amamentação e participação em treinamentos ( $p < 0,001$ ).

**Conclusão:** os agentes não haviam participado de cursos de capacitação para acompanhar as nutrizes, apresentaram conhecimento limitado sobre a prática e a promoção do aleitamento, e as visitas domiciliares realizadas pós-parto ocorreram tardiamente.

**Descritores:** Agentes Comunitários de Saúde; Aleitamento Materno; Conhecimento

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## INTRODUCTION

Breastfeeding offers several benefits to the nursing mother, since it promotes early uterine involution, reduces the chance of breast cancer and prevents another pregnancy from occurring<sup>1</sup>. Moreover, breast milk is considered a complete food for the baby as it is natural, cheap and safe, thus contributing to the prevention of infections, allergies and non-nutritive sucking habits in the first years of life<sup>2,3</sup> as well as allowing the correct development of orofacial structures<sup>4</sup>. Breastfeeding can also provide immunological protection<sup>5</sup> and favour weight gain<sup>6,7</sup>. For being considered a complete food for children up to six months of life, breast milk should exclusively used<sup>3</sup>.

The Brazilian Ministry of Health and international organisations, such as the World Health Organization (WHO) and United Nations Children's Foundation (UNICEF), established the Baby-Friendly Hospital Initiative (BFHI), whose objective is to aware healthcare professionals about the importance of breastfeeding. The aim of such an initiative is to increase the rates of breastfeeding across the world<sup>8,9</sup>, which are still low<sup>3,10-13</sup>, by alerting on the necessity of a co-ordinated work for qualification of healthcare professionals and integration of healthcare services<sup>14</sup>.

The Breastfeeding-Friendly Primary Care Initiative (BFPCI), proposed by the Ministry of Health, was launched by the Rio de Janeiro State Secretary of Health with the aim of improving the rates of breastfeeding and promoting support to nursing mothers in the Basic Health Units (BHUs). This initiative proposes that BHUs, in conjunction with hospitals, implement the "Ten Steps to Successful Breastfeeding" and qualify the healthcare professionals<sup>15</sup>, with the latter being crucial. It is fundamental to listen to the healthcare professionals in the evaluation process so that strategies can be adequately planned in order to improve the quality of the services provided<sup>6,14</sup>.

The community health worker (CHW) plays an important role in the successful breastfeeding as he or she is the healthcare professional who is next to the nursing mothers, acting as an integrating link between healthcare staff and community<sup>14,16</sup>. Therefore, these professionals need to be able to handle health

problems, interfere with them and thus transform the reality of the families. CHWs should know not only their service territory, but also monitor and follow up the pregnant<sup>17,18</sup>.

Assessing the knowledge these professionals have about the practice and promotion of breastfeeding contributes to solidify the importance of qualifying multiprofessional teams (e.g. physicians, nurses, speech-language therapists, nutritionists, dentists), since they conduct an integrative work by providing support and clarifying doubts raised by pregnant and nursing women<sup>16</sup>.

Considering the importance of breastfeeding to general health and development of orofacial structures, the objective of this research study was to identify the CHW's knowledge about practices and promotion of breastfeeding.

## METHODS

The Human Research Ethics Committee of the Universidade Estadual Paulista "Júlio de Mesquita Filho" approved the present study according to process number FOA 2201/2011 and the Resolution number 466/12 established by the National Health Council was rigorously fulfilled.

A cross-sectional descriptive study was performed in order to investigate CHWs who are linked to the Family Health Strategy (FHS).

All these CHWs working in a city in the State of São Paulo were invited and included in the study on the first day of multidisciplinary lectures during the World Breastfeeding Week commemoration. Of the total of 182 CHWs working in the local public healthcare services, 148 (81%) participated in the present study after signing an informed consent form, which included a questionnaire. Those who did not sign the informed consent form were excluded from the study.

The data collection method used was based on the application of a semi-structured questionnaire with open and closed questions on the CHW's perception and knowledge about breastfeeding. The questionnaire was completed without inducement or consultation (Figure 1).

### QUESTIONNAIRE

Gender: ( ) M ( ) F      Age: \_\_\_\_\_      Education Level: \_\_\_\_\_

Name of the BHU in which you work: \_\_\_\_\_

How long do you work as a Team? \_\_\_\_\_

What is the name of the Family Health Care Team? \_\_\_\_\_

1) Has the frequency of pre-natal home visit been determined in your BHU?

( ) Yes ( ) No      If so, how often is the pregnant woman visited? \_\_\_\_\_

2) Do you take part in pre-natal home visits?

( ) I do not take part in this type of activity ( ) Often ( ) Sometimes ( ) Never or very rarely.

3) Approximately, on average, how often do you make these visits per week? \_\_\_\_\_

4) Approximately, how many pregnant women are there in your coverage? \_\_\_\_\_

5) Did you do any training or course on breastfeeding?

( ) Never ( ) Once a week ( ) Twice a week ( ) At least 3 times a week

6) In your pre-natal home visits, do you talk about the importance of breastfeeding?

( ) I do not take part in this type of activity ( ) Often ( ) Sometimes ( ) Never or very rarely

7) Has the frequency of post-natal home visit been determined in your BHU (infants up to 6 months old)?

( ) Yes ( ) No      If so, how often is the mother visited? \_\_\_\_\_

8) Do you take part in post-natal home visits?

( ) I do not take part in this type of activity ( ) Often ( ) Sometimes ( ) Never or very rarely

9) If so, how many mothers do you visit, on average, per week? \_\_\_\_\_

10) In these activities, are the mothers guided about breastfeeding?

( ) I do not take part in this type of activity ( ) In almost all visits ( ) Very rarely

11) What is the age of the infants when you make the first post-natal home visit?

( ) up to 3 days ( ) up to 7 days ( ) up to 15 days ( ) up to 30 days ( ) more than 30 days ( ) I do not take part in this type of activity

12) In these visits do you usually check the breastfeeding attachment and correct possible mistakes?

( ) I do not take part in this type of activity ( ) Often ( ) Sometimes ( ) Never or very rarely

13) How long should breastfeeding be initiated after childbirth? \_\_\_\_\_

14) For how long should the infant be breastfed? \_\_\_\_\_

15) At what age should the infant be given breastfeeding complemented with other alimentation?

16) Do you think you are able to observe the breastfeeding attachment and guide the mother to improve the technique?

( ) Yes ( ) No

17) Please, list three benefits from breastfeeding to mother or infant:

18) Please, list three major aspects to be checked during nipple attachment for a good breastfeeding:

19) Please, list two suggestions you would give to a mother with engorged breasts or fissured nipples:

**Figure 1.** Questionnaire used for data collection.

The study variables were the following: age group, gender, education level, FHS service time, qualification courses or training, pre-natal home visits. Other variables regarding the knowledge on breastfeeding were also considered: ideal beginning of breastfeeding, benefits of breastfeeding to mother and infant, adequate exclusive breastfeeding, beginning of complementary feeding with other foods, benefits of breastfeeding to pregnant women, important aspects for a good breastfeeding, suggestions for engorged breasts or fissured nipples, and guidance to pregnant and nursing women.

After application of the questionnaire, the data were digitalised and categorised for analysis with BioEstat software, version 5.4. A descriptive statistical analysis was performed, including chi-square test, Fisher's exact test and G-test at a significance level of 5% ( $\alpha=0.05$ ), in order to verify any association between education level, age and training as well as between beginning of breastfeeding, period of exclusive breastfeeding and beginning of complementary breastfeeding.

As for the open questions on the perception of CHWs about breastfeeding, the items were: "List three benefits of breastfeeding to the mother or infant"; "List three important aspects related to a good breastfeeding"; and "List two suggestions that you would make to mothers with engorged breasts or fissured nipples."

For qualitative analysis of the open questions, we used the social representation method which is based on the way how individuals of a given society, belonging to a social group, express their reality and interpret it<sup>19</sup>.

After critically reading the answers given by the CHWs, content analysis was performed according to three steps: pre-analysis, exploration of the material, and treatment of results. The answers were categorised and analysed depending on the content expressed by the social players involved<sup>20</sup>, that is, the categories of "benefits of breastfeeding to the mother" (i.e. cancer prevention, slimming, uterine involution/less bleeding/fast recovery, breast milk production)

and of "benefits of breastfeeding to the infant" (i.e. nutrition, immunology, development/health, dentition/bones). Other three categories emerged during the material collection, namely: practicality, economy and affectivity. The categories related to important breastfeeding issues which should be assessed were: breastfeeding positioning; mother's attitudes; and sucking. With regard to suggestions of treatment for engorged breasts and fissured nipples, the answers were categorised as adequate, inadequate and consultation with doctor/nurse.

In order to keep the anonymity of the respondents, the abbreviation CHW followed by a number (e.g. CHW1, CHW2...) was used for identification of the respondents and their answers.

## RESULTS

Analysis of the profile of the CHWs demonstrated that the majority of the respondents were female, predominantly aged between 40-49 years old (mean age of 38.32 years). One can also notice that the major part of these professionals had complete secondary education and worked in the service for at least five years, but they reported that they never had any training or course on breastfeeding (Table 1).

With regard to the home visits, the frequency of pre-natal home visits was determined in the BHU of the CHWs, being frequently made by the majority of them, with a mean of two pregnant women *per week*. It was found that the majority of the coverage micro-areas had five or less pregnant women, with most CHWs often speaking about the benefits from breastfeeding in the pre-natal home visits (Table 2).

According to the majority of CHWs, the frequency of post-natal home visits was determined in their BHU so that they often participated in these visits. Less than half of the CHWs did not indicate the average number of pregnant women visited, with most reporting that they guided the mothers about breastfeeding in all visits (Table 3).

**Table 1.** Profile of the Community Health Workers in 2016

	n	%
<b>Age (years)</b>		
19  -  29	24	16.21
30  -  39	48	32.43
40  -  49	50	33.80
50  -  59	19	12.83
60  -  66	4	2.70
Did not answer	3	2.03
Total	148	100.00
<b>Gender</b>		
Female	138	93.24
Male	9	6.08
Did not answer	1	0.68
Total	148	100.00
<b>Education level</b>		
Complete primary education	3	2.03
Complete secondary education	98	66.22
Incomplete secondary level	2	1.35
Complete higher education	28	18.92
Incomplete higher education	9	6.08
Technical education	4	2.70
Did not answer	4	2.70
Total	148	100.00
<b>Time working as a CHW</b>		
Less than 5 years	104	70.27
Between 5 and 10 years	22	14.87
More than 10 years	18	12.16
Did not answer	4	2.70
Total	148	100.00
<b>Have you ever attended a training or course on breastfeeding?</b>		
Yes	55	37.16
No	92	62.16
Did not answer	1	0.68
Total	148	100.00
<b>Do you feel capable of guiding mothers to improve the breastfeeding technique?</b>		
Yes	68	45.95
No	68	45.95
Did not answer	12	8.10
Total	148	100.00

**Table 2.** Answers given by the Community Health Workers regarding the pre-natal home visits in 2016.

	n	%
<b>Has the frequency of pre-natal home visits been determined in your BHU?</b>		
Yes	136	91.89
No	11	7.43
Did not answer	1	0.68
Total	148	100.00
<b>Do you take part in pre-natal home visits?</b>		
Often	123	83.11
Sometimes	18	12.16
I do not take part in this activity	3	2.03
Never or very rarely	1	0.67
Did not answer	3	2.03
Total	148	100.00
<b>Approximately on average how many pregnant women do you visit per week?</b>		
Up to 2	95	64.19
More than 2	19	12.84
None at the moment	7	4.73
Did not answer	27	18.24
Total	148	100.00
<b>Approximately how many pregnant women are there in your coverage area?</b>		
0	8	5.41
≤ 5	117	79.05
> 5 ≤ 10	15	10.14
> 10	2	1.35
Did not answer	6	4.05
Total	148	100.00
<b>In your pre-natal home visits, do you talk about the benefits and importance of breastfeeding?</b>		
Often	127	85.81
Sometimes	13	8.78
I do not take part in this activity	2	1.35
Never or very rarely	3	2.03
Did not answer	3	2.03
Total	148	100.00

**Legend:** BHU – Basic Health Unit.

**Table 3.** Answers given by the Community Health Workers regarding the post-natal home visits in 2016.

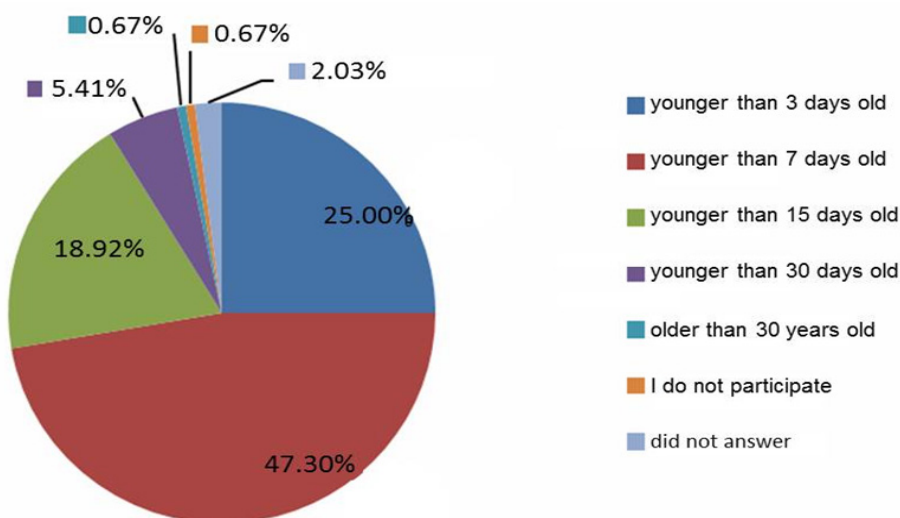
	n	%
<b>Has the frequency of pre-natal home visits been determined in your BHU?</b>		
Yes	133	89.86
No	5	3.38
Did not answer	10	6.76
Total	148	100.00
<b>Do you take part in pre-natal home visits?</b>		
Often	109	73.65%
Sometimes	27	18.24%
I do not take part in this activity	4	2.71%
Never or very rarely	2	1.35%
Did not answer	6	4.5%
Total	148	100.00
<b>If you take part, how many post-natal home visits do you make on average per week?</b>		
1	45	30.40
Up to 2	10	6.76
More than 2	5	3.38
When the infant is born	14	9.46
At each birth	9	6.08
I do not take part	1	0.68
Did not answer	64	43.24
Total	148	100.00
<b>In these activities, are the mothers guided about breastfeeding?</b>		
In almost all visits	131	88.52
Very rarely	6	4.05
I do not take part in this activity	4	2.70
Did not answer	7	4.73
Total	100	148

Legend: BHU – Basic Health Unit.

With regard to the first home visit the mother-infant dyad receives after hospital discharge, it was found that most of the CHWs had made it within seven days after childbirth, whereas only one-quarter of them made home visits within three days (Figure 2). It was found that the majority of CHWs were used to checking the breastfeeding, often correcting the possible mistakes (Figure 3).

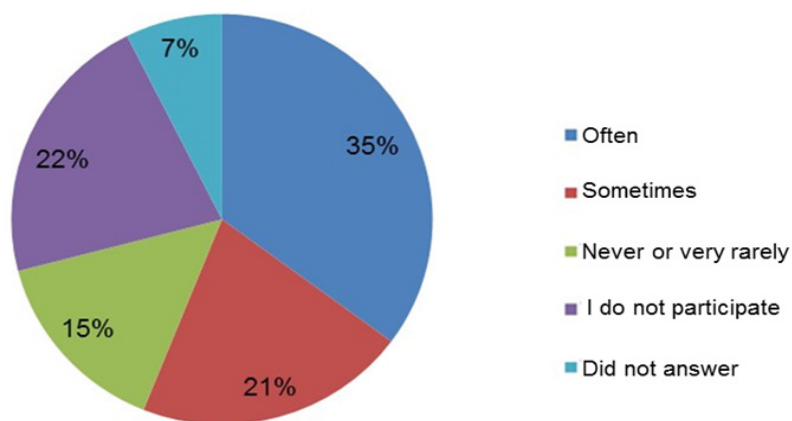
Breastfeeding was initiated soon after the childbirth (i.e. up to three hours) and the length of exclusive breastfeeding was thought to last up to 6 months of life<sup>1</sup>. There was a significant statistical association between capacity of CHWs to guide mothers on breastfeeding techniques and their participation in training or courses ( $p < 0.001$ ) (Table 4).

**How old was the infant when made the first post-natal home visit?**



**Figure 2.** Percentage distribution of Community Health Workers according to the first home visit after discharge of the mother (2016).

**In the home visits, do you usually check the breast-feeding and correct any possible mistakes?**



**Figure 3.** Percentage distribution of community health workers according to home visits made for checking breast attachment and correcting possible mistakes (2016).



**Table 4.** Results of statistical tests for the association between characteristics of the Community Health Workers and their knowledge on the practices and promotion of breastfeeding (2016).

Variables	Statistical test	p-value*	Significant
Right moment to begin breastfeeding X education level	Fisher's exact test	p=0.4736	N
Right moment to begin breastfeeding X age	G-test	p=0.4499	N
Right moment to begin breastfeeding X training or course	Chi-square test	p=0.8423	N
Period of exclusive breastfeeding X education level	Fisher's exact test	p=0.2496	N
Period of exclusive breastfeeding X age	G-test	p=0.5793	N
Period of exclusive breastfeeding X training or course	Fisher's exact test	p=0.4548	N
Right moment to introduce other foods X education level	Fisher's exact test	p=0.6422	N
Right moment to introduce other foods X age	G-test	p=0.6669	N
Right moment to introduce other foods X training or course	Fisher's exact test	p=0.4403	N
Capacity to guide mothers about breastfeeding techniques X training or course	Chi-square test	p<0.001	Y
Participation in post-natal home visits X training or course	Fisher's exact test		N
Participation in pre-natal home visits X training or course	Fisher's exact test		N

**Note:** \*p<0.005; N=No; Y=Yes

**Legend:** N – No; S- Yes.

In the quantitative analysis on the benefits of breastfeeding, it was noticed that the majority of the CHWs cited three ones, whereas the others cited two or one benefit. The rest of the respondents did not cite any benefit, which would possibly indicate a lack of knowledge. Similarly, as for the important issues related to a good breastfeeding, a great part of the CHWs listed three major aspects to be considered and a small part listed two aspects only, whereas some left the question unanswered.

With regard to the benefits of breastfeeding to the infant, the following answers were considered correct: normal infant growth, reduction in anaemia, prevention against infections, protection against allergies, immunisation and comprehensive feeding, thus corroborating the literature<sup>1,4,13,21,22</sup>. As for the question on the benefits of breastfeeding to the mother, the following answers were considered correct: reduction in the risk of breast and uterus cancer, slimming, protection against another pregnancy, a cheaper and safer way of feeding which is always ready for consumption and at ideal temperature, proximity between mother and infant, and strengthening of affective bonds<sup>13,21,22</sup> (Table 5).

**Table 5.** Distribution of the answers given the Community Health Workers regarding the benefits from breastfeeding and categories identified (2016).

Categories identified	n	%
<b>Prevention against cancer:</b> “Reduces the risk of breast cancer”; “Prevents breast cancer”; “Prevents breast cancer from occurring”.	23	15.54
<b>Slimming:</b> “The mother loses weight more quickly”; “Loss of weight”; “Helps keeping fitness”; “Facilitates the weight loss for the mother”.	25	16.89
<b>Uterine involution/less bleeding/recovery:</b> “Bleeding decreases”; “Uterus contracts more quickly”; “Helps contracting the uterus. making it become normal more rapidly”; “Mother recovers more quickly”; “Helps mother’s recovery”.	21	14.18
<b>Milk production:</b> “Breastfeeding helps mother produce more milk”; “After every breastfeeding the amount of milk increases”.	2	1.35
<b>Infant nutrition:</b> “Has all the nutrients the infant needs”; “The best alimentation”; “The right alimentation for the baby”; “Protects the child against malnutrition”; “A complete alimentation”; “Rich in vitamins and nutrients”; “It’s never weak”; “Breast milk is not weak”.	58	39.18
<b>Immunology:</b> “Strengthens the immunological system”; “The first vaccine (colostrums)”; “Prevents infectious diseases”; “Positive immunity”; “Prevents respiratory allergies”; “Creates anti-bodies”; “The baby stays protected”; “Colostrums is a natural antibiotic”.	99	66.89
<b>Development/health of the infant:</b> “Health for the baby”; “Growth”; “Improves the development”; “Healthy life”; “The child is less likely to get ill”; “The baby becomes stronger”.	68	45.94
<b>Dentition/bones:</b> “Improves dentition”; “Does not deform the baby’s teeth arch”; “Makes teeth stronger”; “Strengthening of the bones”.	19	12.83
<b>Economic benefits:</b> “Don’t need to buy milk”; “Mother saves money”; “It’s cheaper”.	3	2.00
<b>Practicality:</b> “It’s ready for consumption and doesn’t need preparation”; “Always ready to be consumed”; “It’s always at the ideal temperature”; “Practicality”; “It comes ready to drink”.	25	16.89

With regard to the breastfeeding issues, the answers were considered correct for infants with body weight within the normal range: breastfeeding positioning on the mother’s lap, nipple attachment, sucking, way of holding the breast away from the infant’s nose, waiting the infant to wake for feeding, offering both breasts to the infant (initially one of the breasts should be emptied and then the other), calmness of the mother and environment during breastfeeding, as recommended in the literature<sup>13,22</sup>.

In the case of low-weight infants, it is necessary to wake them to feed by freely offering breast milk and using artifices to assist their nutrition. These artifices are used, for example, in the case of premature infants, who are not strong enough to suck the breast milk. In this case, the breast milk can be given with a spoon or baby bottle<sup>1,6,7</sup>.

In those situations in which there is breast engorgement, the nursing mother can discard the

excess milk manually in order to facilitate the nipple attachment for the infant. In addition to using cold compresses on the breast to alleviate pain and edemas, offering breastfeeding freely or emptying the breast helps alleviating the discomfort and pain caused by milk accumulation<sup>9,23</sup> (Table 6).

The answers considered correct for the question on suggestions of treatment for engorged breasts were: manual milking, breastfeeding whenever the infant wants, correct breastfeeding positioning and checking nipple attachment, and massage and cold compress after milk withdrawal. As for fissured nipples, the following were considered: correct breastfeeding positioning for nipple attachment by the infant, checking the signs of a good nipple attachment, washing the breasts neither with soap nor excessively (once a day only), not applying ointment on the breasts, not interrupting the breastfeeding, keeping the nipples aired and sunbathed<sup>1,22</sup> (Table 7).

**Table 6.** Distribution of the answers given by the Community Health Workers regarding breastfeeding aspects to be checked and categories identified (2016).

Categories identified	n	%
<b>Breastfeeding positioning:</b> “Position of the infant on the mother’s lap”; “Observe whether the baby’s nose is free”; “Keeping the baby awakened during breastfeeding”; “The infant must be well accommodated”; “Keeping the baby close to the breast”, “The nose of the infant”.	108	72.97
<b>Mother’s attitudes:</b> “Calmness of the mother”; “Good alimentation”; “Seated position for breastfeeding”; “Change the child to the other breast when one becomes empty”; “Position of the mother to hold the infant.”	143	96.62
<b>Breast attachment/Sucking:</b> “The way the baby sucks to avoid air swallowing”; “Correct breast attachment to the nipple”; “Sucking”; “Observe whether nipple and aureole are completely inside the baby’s mouth”; “Observe how the infant is sucking the nipple”.	71	47.97

**Table 7.** Distribution of the answers given by the Community Health Workers regarding breastfeeding period and categories identified (2016).

Practices and categories identified	n	%
<b>Treatment of engorged breasts – Adequate answers:</b> “Always milking the breasts”; “Compress with cold water”; “Insist in breastfeeding”; “Do not give up breastfeeding despite pain”; “Change the breast frequently”; “Massage”; “Massage on the breast”.	36	24.32
<b>Treatment of engorged breasts – Inadequate answers:</b> “Compress with warm water”; “Place a warm cloth”; “Compress or shower with hot water”; “Stimulate the nipple with a breast pump”.	28	18.91
<b>Treatment of fissured nipples – Adequate answers:</b> “Apply the breast milk onto the nipple”; “Dry the breasts well”; “Morning sunbathing topless”; “Expose nipples to Sun to avoid fissures”; “Position the infant to allow for breast attachment to nipple and aureole”; “If the nipple is injured. avoid cleaning it too much. except before and after breastfeeding using the own milk”.	64	43.24
<b>Treatment of fissured nipples – Inadequate answers:</b> “Seek to always keep the breasts cleaned”; “Use banana peel on the nipple”; “Apply ointment prescribed by the doctor”; “Always use moistened cotton or gazes to keep the skin hydrated”; “Use papaya peel as my grandson’s mother told me about that”.	55	37.16
<b>Consultation with physician/nurse:</b> “Seek guidance from the nurse or your obstetrician who provided pre-natal care”; “Seek a gynaecologist for an adequate treatment”; “Both nurse and doctor should provide guidance”; “I would look for a nurse to list suggestions”.	32	21.62

The results obtained were shown to both administrators and healthcare workers of the city by means of a workshop so that the information gathered by the present study could be used in the planning and evaluation of programs for breastfeeding promotion by healthcare professionals.

## DISCUSSION

The results of the present study, which sought to assess the CHW’s knowledge about practices and promotion of breastfeeding, pointed to a deficiency in the implementation of courses for qualifying them

on this theme. Approximately, 45.95% of the CHWs reported that they do not feel able to provide practical breastfeeding guidance to mothers, thus confirming the lack of scientific knowledge on this practice<sup>24</sup>. This finding raises a reflection on the efficacy of educational interventions. Therefore, it is necessary to implement courses to qualify these professionals so that they acquire skills to guide the nursing mother accordingly.

It should be highlighted, based on the data collected in this study, the importance of qualifying multidisciplinary teams by means of courses on oral health, breastfeeding practice and physiology of pregnancy. In

a multidisciplinary team, ideally, the physician guides the mother on the importance of breastfeeding for her and infant; the nurse follows up the nursing mother to solve problems which may interfere with breastfeeding (e.g. breast engorgement, fissured nipples); the speech-language therapist explains on the importance of breastfeeding for adequate development of orofacial structures, in addition to nutritional, immunological and economic benefits; the nutritionist provides guidance and performs the correct nutritional follow-up of the nursing mother by explaining on specific breast milk nutrients which are fundamental for the health of both infant and mother; the dentist-surgeon provides guidance on the importance of breastfeeding for the correct development of the infant's stomatognathic system, in addition to contributing to the prevention of non-nutritive sucking habits, such as atypical deglutition and mouth breathing. CHWs should be aware of the importance of breastfeeding for the full development of the child, and in this sense, their qualification can involve physicians, nurses, speech-language therapists, nutritionists and even dentist-surgeons<sup>4,18</sup>.

The result of this study allows us to provide information for future planning of qualification activities and to alert administrators on possible deficiencies in the capacity of healthcare workers. Considering that there is a high staff turn-over in these positions, it is indispensable that these professionals be constantly qualified. As for the lack of qualification among CHWs on breastfeeding practices, it is necessary to implement health education strategies on a permanent basis to provide reflections on and analysis of the daily problems faced by these professionals, thus enabling the development of actions which can effectively contribute to the breastfeeding promotion<sup>5,6,21,25</sup>.

In another study<sup>22</sup>, it was found that the qualification of CHWs was effective after an educational intervention. The perceptions of these professionals were compared before and after such an intervention. The qualification result was positive, proving that there were favourable changes which contributed to the CHW's knowledge of the theme, including breastfeeding practices and follow-up of pregnant and nursing women.

The qualification of CHWs is considered a comprehensive activity as it includes theoretical-practical procedures, thus allowing development of skills and achievement of educational objectives in three domains: cognitive, affective and psychomotor.

In the present study, post-natal home visits within the first three days of the infant's life had not been not

performed by the majority of the CHWs. It was found that most CHWs made the home visit seven days after childbirth. During this interval, many women may face breastfeeding problems such as: breast engorgement, fissured nipples and even early weaning<sup>5,13</sup>. According to the WHO<sup>23</sup>, for a successful beginning and establishment of breastfeeding, the mothers need active support during pregnancy and after childbirth not only from the family<sup>13</sup> and community, but also from the healthcare system as a whole. Late home visits may be ineffective, since problems may occur and solutions unlikely to be successful<sup>5</sup>.

A study<sup>22</sup> reported that mothers not visited by a CHW within three days after childbirth were more likely to have breastfeeding problems than mothers visited by qualified professionals within the first week after childbirth, since they succeeded to overcome breastfeeding difficulties. This finding corroborates that home visit and follow-up by CHWs are fundamental as the problems found can be evaluated *in loco*.

When CHWs do not have the required knowledge, it is indispensable that they are assisted by other professionals in order to solve the problems found. For instance, in the case of breast engorgement or fissured nipples, it is crucial the involvement of a nurse. When the nursing mother raise doubts about the importance of breastfeeding to the health of mother and infant, then speech-language therapist, nutritionist and dentist-surgeon are crucial to guide and encourage the breastfeeding practice.

Research studies have demonstrated the efficacy of intervention by CHWs in the increase of exclusive breastfeeding rates. For this reason, the guidance, education and assistance provided by these professionals regarding the practice of breastfeeding should be strategies to be implemented worldwide for improving this rate<sup>4,26-28</sup>.

With regard to the benefits of breastfeeding, the majority of the CHWs report only advantages for the infant, suggesting that their knowledge on these benefits are limited to the child while revealing that they know very little on the advantages for the mother. In fact, this knowledge was evidenced in their answers about immunological ("... it protects the child against malnutrition and diseases because of the antibodies present in the milk." - CHW30) and nutritional aspects ("... it is the most complete food" - CHW58) of the breastfeeding. For the infant, breastfeeding is advantageous because not only contains all the necessary nutrients to protect against several forms of allergies or

infections, even decreasing significantly the mortality and morbidity rates, but also allows a normal development of the stomatognathic system and orofacial structures<sup>29-31</sup>.

The benefits from breastfeeding can be considered positive for mothers, family and even society, although the question has been formulated to assess the mother's and infant's health as CHWs act directly with the mother-infant dyad. Breastfeeding brings benefits to the family because it has no cost at all, that is, there is no need to buy milk formula. The breastfeeding benefits also extend to the society by consequently contributing to the decrease in the maternal-infantile mortality rate, in addition to resulting in healthy adult workers in the future, which has a positive impact on the society.

There was a high rate of correct answers on important breastfeeding issues to be regarded for a good feeding, thus revealing that CHWs have a good knowledge on basic concepts about the theme. However, one can highlight the high percentage of incorrect answers due to the influence of cultural values and popular beliefs<sup>32</sup>, such as "... to check whether the breast milk is weak". Therefore, it is necessary to create and implement qualification trainings for whole healthcare team<sup>5,6,14</sup> on a continuing basis, mainly the CHWs as they work next to the nursing mothers<sup>22,25,33</sup>.

Breastfeeding is mostly focused on the infant's needs only, disregarding that it is crucial to care, train and prepare the nursing mother for the establishment of a breastfeeding practice without interurrences<sup>12,21</sup>. The CHW should be prepared to listen to the mother's complaints and make her feel valued and understood by assisting her during periods of difficulty and doubt<sup>32</sup>. This evidences the need to develop permanent educational strategies for qualification of the healthcare staff, aiming to succeed in the breastfeeding promotion continuously.

News qualitative studies investigating the CHW's knowledge on breastfeeding practices and promotion should be conducted in other regions of Brazil in order to analyse the qualification of these professionals. It is important to carry out research to study the work provided by a multidisciplinary team based on social representation their perception.

## CONCLUSION

The data obtained from this study have revealed that CHWs have a limited knowledge on the practice and promotion of breastfeeding, but there was also a lack of qualification courses to allow them to follow

up the nursing mothers accordingly. The majority of the post-natal home visits occurred late. The service provided by the multidisciplinary team is crucial in the follow-up of the mothers, as well as the formulation of a FHS protocol for pre-natal home visits until the third day after childbirth. One can state that other strategies are still needed, such as improvement of the information system of the BHUs and FHS in order to improve the communication among healthcare professionals and access to pre- and post-natal data to better plan care actions and healthcare services themselves.

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