UFSM

CIÊNCIA e NATURA

ISSN 2179-460X
Acesso aberto

Ci. e Nat., Santa Maria, v. 43, e19, 2021 • https://doi.org/10.5902/2179460X43690
Submissão: 22/04/2020 • Aprovação: 22/04/2020 • Publicação: 18/05/2021

Configuration and organization of Primary Health Care regarding actions to promote infant food and nutrition in a city located in the Zona da Mata of Minas Gerais

Tatiane Cristina Serafim[I], Bruno David Henriques[I], Raquel Maria Amaral Araújo[I], Carolina Araujo dos Santos[II], Emanuelle Emília Ferreira Parreiras[I], Mikelen de Oliveira[I], Marina Alves Vechi[I], Abel Mendonça Alves[I], Mateus Capobiango Bicalho[I], Victor Emanuel Ribeiro[I], Felipe Oliveira Martins[I], Bernardo Melo Gaspar[I], Sara Fassarella Donato[I], Brunnella Alcantara de Chagas Freitas[I]

[I]Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil
[II]Departamento de Nutrição e Saúde, Universidade Federal de Viçosa, Viçosa, MG, Brazil

ABSTRACT

The study analyzed the promotion of infant food and nutrition for children under two years in the Primary Health Care in a city located in Minas Gerais. An exploratory and descriptive study interviewing managers, coordinating nurse, community health workers and mothers of registered children. The data were analyzed using the Shapiro-Wilk normality test and Fisher's exact test, Pearson's chi-square test and simple Student t test. The city did not implement the Strategy Amamenta e Alimenta Brasil. Strategy for Family Health performed childcare, but in an irregular or incomplete way. The main difficulties were low adherence by mothers and work overload by nurses. SISVAN's nutritional diagnosis reports are not used.55.6% of mothers participate in the childcare. 33.3% of mothers received guidance on breastfeeding before and after the baby was born. 22.2% received it during prenatal care and 5.6% received it only after the baby was born. Half of the mothers received guidance on healthy complementary feeding. No significant associations were found for the participation of mothers and the variables maternal education, maternal age, having an only child, being an adolescent mother. Mothers should be advised on the approach of the units to monitor the child's growth and development, preventing health problems.
Keywords: Infant nutrition; Health police; Primary health care

1 INTRODUCTION

Much of human potential is developed during childhood. The disorders that occur at this time lead to serious consequences for both individuals and their communities (BRASIL, 2015).

Schincaglia et al. (2015) highlight the importance of consolidating the National Food and Nutrition Policy (PNAN) in the Unified Health System (SUS), based on the promotion of adequate and healthy food, initiated during pregnancy and, since the child's first hours of life centered on the protective effects of breastfeeding and the proper introduction of complementary feeding. The success in the continuity of these actions depends on the effective participation of professionals from primary health care units in promoting breastfeeding to pregnant women, nursing mothers as well as other caregivers and family members present in the environment that assist the mother and her baby.

The implementation of actions to protect and promote breastfeeding and adequate complementary feeding depends on collective intersectoral efforts and presents itself as a major challenge for the health system, in a perspective of a comprehensive and humanized approach (BRASIL, 2015).

The National Food and Nutrition Policy aims to improve the conditions of food, nutrition and health of the Brazilian population through the promotion of adequate and healthy food practices, food and nutritional surveillance, prevention and comprehensive care of diseases related to food and nutrition. The Promotion of Adequate Healthy Eating (PAAS) corresponds to one of the PNAN guidelines and is inserted as a strategic axis of the National Health Promotion Policy (PNPS). Among the actions of this axis, the *Estratégia Amamenta e Alimenta Brasil* (EAAB) stands out (BRASIL, 2012).

The "National Strategy for Promotion of Breastfeeding and Healthy Complementary Food in SUS - Breastfeeding and Food Strategy Brazil (EAAB)", launched in 2012, aims to qualify the work process of primary care professionals in order to reinforce and encourage the promotion of breastfeeding and healthy eating for children under two years of age within the scope of SUS. This initiative is the result of the integration of two important actions by the Ministry of Health: Brazilian Breastfeeding Network and the “National Strategy for Complementary Healthy Eating” (ENPACS) (BRASIL, 2013).

Food and Nutritional Surveillance is required in this context, enabling the constant assessment and organization of nutritional care in SUS. For this diagnosis, the Food and

Nutritional Surveillance System (SISVAN) and other health information systems should be used (BRASIL, 2017).

Nutritional Surveillance is an extremely important instrument for the benefit of children and other groups of the population susceptible to nutritional problems, and it is essential to make use of its data in order to guide policies and programs supporting the development of strategies for both prevention and treatment of diseases as well as actions to promote health in addition to food and nutrition security (BRASIL, 2015; DEVINCENZI; FRUTUOSO, 2018).

In order to reorganize health practices within the scope of Primary Health Care, aiming at comprehensive care, it is mandatory that the workers become familiar with the health problems and the needs of the population in their territory as well as the possible factors that promote their health. In this way, the use of the information contributes to the organization of the work process (BRASIL, 2015). However, SISVAN coverage stands as a major challenge for food and nutrition surveillance in the country (DEVINCENZI; FRUTUOSO, 2018).

In this way, this study aimed to analyze the configuration and the organization of Primary Health Care concerning the actions to promote infant food and nutrition for children under two years of age in a city located in the Zona da Mata of Minas Gerais.

2 METHODS

This is an exploratory, descriptive study, in which interviews were conducted with managers, primary care health professionals and mothers of children under two years of age who are users of the primary health care in a city located in the Zona da Mata of Minas Gerais. The city has 18 “Strategy for Family Health” located in the neighborhoods of the cities, with 18 nurses coordinating the teams and 78 community health workers.

The sample consisted of two current municipal managers, the nurses coordinating the teams of the “Strategy for Family Health”, community health workers and mothers of children under the age of two registered and living in the area embraced by the Strategy for Family Health in the city. Managers, every nurse and every community health agent

from every Family Health Strategy unit in the city were invited to participate. Professionals who were on vacation or leave were excluded from the research. The definition of the age group of children followed the same one covered by the EAAB.

To conduct the interview with the mothers, two units were selected, one where regular child care was performed weekly and another one where child care was performed irregularly. The interviews were conducted weekly from September 17th to December 13th, 2019. The professionals were interviewed at their workplaces while the mothers were approached on a child care consultation day and on the vaccination day of the selected Family Health Strategy unit. The interviews were conducted by the researcher and properly trained volunteer students who used a semi-structured questionnaire.

Four instruments were developed for the different segments to be analyzed. The questions were formulated based on the National Primary Care Policy, the National Food and Nutrition Policy (BRAZIL, 2012), Ordinance No. 1920, of September 5, 2013, which institutes the National Strategy for the promotion of breastfeeding and healthy complementary food in the SUS - Amamenta e Alimenta Brasil Strategy and the benchmark of Food and Nutrition Surveillance in Primary Care (BRASIL, 2015). For nurse managers interview consisted of questions that dealt with the identification of actions to promote food and nutrition for children under two years of age which are carried out at the unit, the frequency with which it occurs and the professional (s) in charge, description of the activities carried out during the child care, identification of weaknesses and potentialities in the development of actions, degree of satisfaction with the adherence of mothers to the proposed actions, adherence to EAAB and operationalization of SISVAN. The community health workers were inquired about the identification of actions carried out by the unit aiming the promotion of infant feeding , the degree of satisfaction of the community health workers in relation to the mothers' adherence to these actions promoted by the unit, conduction of an active search for children, participating in training on breastfeeding, complementary healthy feeding SISVAN and anthropometry, knowledge of EAAB and SISVAN. For municipal managers, the questions dealt with the implementation of the EAAB in Primary Care, degree of

satisfaction regarding the functioning of SISVAN and issues related to its operationalization , existence of an instrument for organizing child health care for breastfeeding and complementary healthy feeding assistance in Primary Health Care, identification of weaknesses and potentialities for the management of actions to promote infant food and nutrition in Primary Health Care in the city. The mothers were asked questions about receiving guidance on breastfeeding and healthy complementary feeding at the registered unit health care, difficulties during breastfeeding and the search for the unit in these cases, in addition to identification, participation and degree of satisfaction regarding the actions towards promoting food and nutrition by Strategy for Family Health registered.

Quantitative data were tabulated in Microsoft Excel Office 365 Excel and analyzed in SPSS 23. For data analysis, descriptive statistics (absolute, average and median frequency) were used. In order to verify the distribution of variables, the Shapiro-Wilk normality test was used. Fisher's exact test, Pearson's chi-square test and simple Student t test were used to analyze associations. $p < 0.05$ were considered significant. To analyze the degree of satisfaction of those involved in activities to promote infant food and nutrition, the Likert five-point scale (1932) was used.

A pilot test was carried out in one of the neighborhoods in the city to assess the adequacy of the collection instrument developed for the research and to make possible adjustments.

The study was conducted according to the ethical aspects of research with human beings defined by the Resolution 466/2012, of the National Health Council. All individuals who agreed to participate were informed about the objectives of the study and signed the Free and Informed Consent Form. The project was approved by the Human Research Ethics Committee of the Federal University of Viçosa, under opinion Nº 3,207,173.

3 RESULTS

All nurses were interviewed (n = 18). As for the community health workers, 63 individuals were interviewed. There were seven refusals while eight professionals were

not found due to vacation, sick leave or incompatibility of time for the interview. There were 36 mothers interviewed, 18 registered in a Strategy for Family Health unit that offered child care on a regular basis weekly and 18 mothers registered in a unit that offered child care irregularly.

3.1 Analysis of the organization of actions to promote child food and nutrition from the perspective of mothers and health professionals

The evaluation of actions to promote infant food and nutrition for children under two years of age are presented in tables 1, 2 and 3 from the perspective of the coordinating nurses of the Strategy for Family Health units, community health agents and mothers registered in areas covered by the units, respectively. Two managers of the municipal health department were also interviewed. According to them, the city has not implemented EAAB. When asked if technical support is provided on the topic of breastfeeding and healthy complementary food, through training and permanent education for primary care health professionals, they reported that these training courses are offered every four months by companies participating in infant formula and diets, by network nutritionists who are multipliers of this knowledge to Primary Health Care professionals. The secondary care provided by nutritionists and the program Saúde na Escola offered through lectures with an emphasis on good nutrition for public school students- were pointed out as potential for management of actions to promote child food and nutrition. In relation to the difficulties in managing actions to promote infant food and nutrition in primary health care in the municipality, it was mentioned the lack of involvement of other departments that could be associated such as the Department of Education and Social Assistance. Regarding the functioning of SISVAN, the managers reported that the system's supply leaves many gaps due to its connection failures. However, managers reported that the information generated by SISVAN is returned monthly to the Primary Health Care which sends the reports to the professionals.

Regarding the implementation of EAAB, 83.3% (N = 15) of the nurses stated that the unit was not part of the strategy. This fact corroborates the lack of knowledge of the strategy by most community health workers, 93.7% (N = 59). In the two units where the

implementation was mentioned, both nurses reported that there was a responsible tutor, but they denied the existence of an action plan, however, one of them mentioned the existence of monitoring of the strategy, but did not describe it. As for the development of actions to promote infant food and nutrition for children under two years of age, childcare was offered by 94.4% (N = 17) of nurses.

Table 1 – Evaluation of actions to promote infant food and nutrition from the perspective of the nurses coordinating the teams of Strategy for Family Health (n=18). In the city located in the Zona da Mata of Minas Gerais. Brazil (2019)

Question	Answer	Number (N)	Frequency (%)
Child care in basic health units	Yes	17	94,4
	No	1	5,6
In case of child care, describe the activities performed during a consultation.	Feeding guidelines	8	50
	Weight Measurement	16	100
	Length Measurement	15	93,8
	Measurement of head circumference	12	75
	Verification of vaccines	11	68,8
	Development monitoring	11	68,8
	Accident prevention	1	6,3
	Identification of danger or risk for the child's health	5	31,3
	Guidance on other care for good health (personal hygiene, oral health, sleep, rest, physiological eliminations)	11	68,8
	Not answered due to the fact that the childcare is performed by the doctor	2	11,1
In case of undeveloped activities, why do they not occur? What are the weaknesses for non-development?	Lack of compliance by mothers	4	22,2
	Nurse work overload	2	11,1
	Lack of unit structure	1	5,6
	The system is host / advanced access	1	5,6
	Nonexistence of nutritionist to attend	1	5,6
	Supplement centralized by Unified Health System central pharmacy	1	5,6
	Not answered	7	50
Do you wish to develop any activity that could be conducted with this group?	Educational group activities / waiting room	6	33,3
	Routine Child care offered regularly by the nurse	2	11,1
	Performing house calls to newborns up to 7 days and routine childcare with the support of a regular nutritionist	1	5,6
	Frequent support from the Nutritionist / guidance on food at each stage of life	2	11,1
	Training / updating of the professionals of the team	1	5,6
	Shared follow-up with nutritionist and oral health (reference-counter-reference) and supplement offer according to the Ministry of Health guidance	1	5,6
	Wishes to carry out more activities, but did not specify which ones	1	5,6
	Did not answer	4	22,2

Continued...

...Continued			
How satisfied are you with the participation of mothers responsible for children under two years of age in the promotion of infant food and nutrition mentioned above? *	1 2 3 4 5	0 1 10 7 0	0 5,6 55,6 38,9 0
Is your unit part of the *Amamenta e Alimenta Brasil* (EAAB) Strategy?	Yes No I don't know	2 15 1	11,1 83,3 5,6
Does this unit collect information for the Food and Nutrition Surveillance System (SISVAN)	Yes No	18 0	100 0
Which information is collected for SISVAN?	Anthropometric data only Anthropometric data and food consumption markers SISVAN system is down Did not specify which ones	8 8 1 1	44,4 44,4 5,6 5,6
Have the data been added to SISVAN?	Yes No	18 0	100 0
Do you use the reports provided by SISVAN?	Yes No	0 18	0 100

Source: Authors (2020)
In were: *Being 1 totally unstatisfied and 5 totally satisfied

Table 2 – Evaluation of actions to promote infant food and nutrition from the perspective of the community health workers who are members of the Strategy for Family Health (n=63). Zona da Mata of Minas Gerais, Brazil (2019)

Question	Answer	Number (N)	Frequency (%)
How satisfied are you with the adherence of mothers of children under two years of age to the actions to promote infant food and nutrition?*	1	4	6,3
	2	7	11,1
	3	25	39,7
	4	19	30,2
	5	4	6,3
	Did not answer	4	6,3
Conducting active child search	Yes	59	93,7
	No	3	4,8
	Did not answer	1	1,6
Training on breastfeeding	Yes	62	98,4
	No	0	0
	Did not answer	1	1,6

Continued...

...Continued			
Training on complementary healthy nutrition	Yes	39	61,9
	No	14	22,2
	Did not answer	10	15,9
Training on SISVAN	Yes	42	66,7
	No	13	20,6
	Did not answer	8	12,7
Training on anthropometry	Yes	38	60,3
	No	17	27
	Did not answer	8	12,7
If in doubt about breastfeeding and complementary feeding, who do you turn to?	Doctor only	2	3,2
	Nurse only	24	38,1
	Community health worker only	2	3,2
	Nutritionist only	2	3,2
	Team members (2 or more professionals)	29	46
	Team members (2 or more professionals) and others (Municipal Health and Pastoral Department for Children)	2	3,2
	Others: Municipal Health Secretariat	1	1,6
	Did not answer	1	1,6
If in doubt about SISVAN, who do you turn to?	Doctor only	1	1,6
	Nurse only	29	46
	Community health worker only	8	12,7
	Nutritionist only	0	0
	Team members (2 or more professionals)	11	17,5
	Team members (2 or more professionals) and others (Nutrition and Municipal Health Secretariat sector)	4	6,3
	Other (Municipal Health Secretariat and Professional responsible for SISVAN)	5	7,9
	Did not answer	5	7,9
Do you know EAAB?	Yes	3	4,8
	No	59	93,7
	Did not answer	1	1,6
Do you know SISVAN?	Yes	52	82,5
	No	10	15,9
	Did not answer	1	1,6

Source: Authors (2020)
In were: *Being 1 totally unstatisfied and 5 totally satisfied

Table 3 – Evaluation of actions to promote infant food and nutrition from the perspective of mothers registered in Strategy for Family Health (n=36). In the city located in the Zona da Mata of Minas Gerais, Brazil (2019)

Question	Answer	Number (N)	Frequency (%)
Did you receive guidance at unit of Strategy for Family Healthy regarding breastfeeding? (N = 36)	Did not receive	9	25
	Received only during prenatal care	8	22,2
	Received only after the birth of the baby	2	5,6
	Received during prenatal care and after birth	12	33,3
	During prenatal care and / or childcare at the unit of Strategy for Family Health	5	13,9

Continued...

...Continued			
Did you have difficulties breastfeeding? (N = 36)	Yes	16	44,4
	No	20	55,6
If so, which ones? (N = 16)	Nipple pain / sore nipples	10	62,5
	Flat or inverted nipples	1	6,3
	Difficulty in gripping	2	12,5
	Baby weight loss	1	6,3
	Feeding bottle introduction	1	6,3
	I could not sleep	1	6,3
Who helped you overcome these difficulties? (N = 16)	Professional of the Strategy for Family Health	2	12,5
	Professional from another public service network (Human Milk Bank, Polyclinic, second health)	6	37,5
	Family member (mother, mother-in-law, son)	3	18,8
	Solved it on her own	4	25
	Family member and professional of the Strategy for Family Health	1	6,3
Did you contact the team of the Strategy for Family Health to solve these issues? (N = 16)	Yes	4	25
	No	12	75
Did you receive guidance at unit regarding healthy complementary feeding for the child? (N = 36)	Yes	18	50
	No	18	50
Childcare Consultation at unit (N = 36)	Knows that it is offered in the unit care and participates	20	55,6
	Knows that it is offered by the unit care, but does not participate	2	16,7
	Does not know about the offer /did not check	10	27,8
Do you think it is important for children to participate in these activities? (N = 36)	Yes	35	97,2
	No	1	2,8
For what reasons do you take your child to participate in unit activities? (N = 35)	Routine monitoring (growth and development)	26	74,3
	Routine monitoring and vaccines	4	11,4
	Vaccinating and when there are complaints	1	2,9
	Professional referral / scheduling	2	5,7
	Routine monitoring, vaccination and requirement of *Bolsa Família* program	1	2,9
	Just registered as a precaution	1	2,9
How satisfied are you with the activities in which you participate? * (N = 36)	1	0	0
	2	0	0
	3	6	16,7
	4	7	19,4
	5	23	63,9

Source: Authors (2020)

In were: *Being 1 totally unstatisfied and 5 totally satisfied

Regarding the nutritional surveillance of children, 100% of nurses reported supplying SISVAN by sending data to the municipal health department, however, none of the professionals use the reports generated by the system. When the community health workers were asked about their knowledge of the system, 82.5% of them reported knowing it. It should be noted that 9 of these workers mentioned not understanding the purpose of the system, despite knowing the typing data base and forms. This fact corroborates with the data found that 20.6% of this group did not receive training on the topic. The training that reached the highest number of affirmative responses was on the topic of breastfeeding (98.4%). Training on healthy complementary food and anthropometry was mentioned by 61.9 and 60.3% of the agents, respectively. Regarding the degree of satisfaction in relation to the adherence of mothers under two years of age to actions promoting infant food and nutrition, 38.9% of nurses rated it as being positively while 5.6% rated it negatively. The positive evaluation of the community health workers is similar to those of the nurses, 36.5%, but the negative evaluation was higher, totaling 17.4%. To justify the mothers' low adherence to the actions, the community health agents mentioned the overlap of mothers working hours and the time of the activities in the unit. Some even commented that mothers' availability and adherence was greater when childcare was performed on Saturdays. In addition to this factor, the professionals also mentioned the mothers' lack of interest and/or concern in relation to the child's health and the lack of a good family structure.

Regarding mothers, when asked about receiving guidance at the unit about breastfeeding, 71% reported receiving guidance at some point (during prenatal care or after the baby was born) and 38.7% received guidance during both times (prenatal and after the child's birth). As for receiving guidance on healthy complementary food, half answered that they did not receive any guidance at the unit. When asked if they had difficulties in breastfeeding, 44.4% answered positively mentioning pain in the nipples / injured nipples being the greatest reported difficulty (62.5%). Among the mothers who encountered difficulties, only 25% sought the unit to solve issues and half of them was

solved by a professional from that unit. It is noteworthy that 37.5% had help from a professional from another public service while 18% had help from a family member. Regarding childcare consultation, 55.6% of mothers know that consultation is offered at the unit and participate, 16.7% know that it is offered, but do not participate while 27.8% are unaware of the offer. When asked why they took their child to participate in activities at the health center, 74.3% would refer to routine monitoring. When asked about the degree of satisfaction in relation to the activities in which they participate, 83.3% made a positive assessment mentioning good service as well as good assistance and highlighting the solution of problems faced by them. Mentioned as negative factors were the absence of an exclusive nutritionist for the unit, the slowness in scheduling the appointment, the short duration of the appointment in addition to restricted days for vaccination.

As shown in Table 4, no significant associations were found ($p < 0.05$) for the participation of mothers in childcare consultations and the variables maternal education, maternal age and having an only child. There was also no difference in participation in childcare consultations between adult mothers and adolescent mothers.

Table 4 – Factors associated with participation in child care consultations for children aged zero to 24 months. In the city located in the Zona da Mata of Minas Gerais. Brazil, 2019

	Total	Childcare		Value-p
		Yes	No	
Maternal Schooling				
≤ 8 years	9	4 (44,4%)	5 (55,6%)	0,462*
> 8 years	25	15 (60%)	10 (40%)	
Maternal age	36	24,67 (±5,25)	27,24 (±4,20)	0,121**
Only child				
Yes	15	9 (60%)	6 (40%)	0,741***
No	21	11 (52,4%)	10 (47,6%)	
Adolescent Mother				
Yes	7	5 (71,4%)	2 (28,6%)	0,426*
No	29	15 (51,7%)	14 (48,3%)	

Source: Authors (2020)
In were: * Fisher's Exact Test; ** Simple Student T test; *** Chi-Square test

3.2 Profile of health professionals and mothers of children under two years of age

Tables 5, 6 and 7 show the profile of professionals from the Strategy for Family Health and the mothers of children under two years of age, respectively.

Table 5 – Profile of the nurses coordinating the team of the Strategy for Family Health in the city located in the Zona da Mata of Minas Gerais, Brazil (2019)

Caracteristics of interviewed nurses		
	Number (N)	**Frequency (%)**
Gender (N=18)		
Female	16	88,9
Male	2	11,11
Education (N=17)		
Undergraduate degree	8	47,1
Pos graduate studies	7	41,2
Master`s degree	2	11,8
Number of years working in the position (N=17)		
≤ 1 year	8	47,1
6 – 15 years	9	52,9
Type of contract with the city hall (N= 17)		
Public employee	0	0
Hired employee	17	100%
Contracted on a steady basis	0	0

Source: Authors (2020)

Table 6 – Profile of community health workers in the teams of the Strategy for Family Health in the city located in the Zona da Mata of Minas Gerais, Brazil (2019)

Caracteristics of interviewed community health workers		
	Number (N)	**Frequency (%)**
Gender (N=63)		
Female	61	96,83
Male	2	3,17
Education (N=63)		
Complete primary education	2	3,2
Incomplete high school	1	1,6
Complete high school	40	63,5
Incomplete higher education	3	4,8
Complete higher education	16	25,4
Incomplete graduate studies	1	1,6
Number of years working in the position (N=62)		
4 – 10 years	32	51,6
11 – 18 years	30	48,4
Type of contract with the City Hall (N=60)		
Public employee	0	0
Hired employee	53	88,3
Other: contracted on a steady basis	7	11,7

Source: Author (2020)

Table 7 – Profile of mothers of children under two years of age registered in Strategy for Family Health. In the city located in the Zona da Mata of Minas Gerais, Brazil (2019)

Caracteristics of interviewed mothers		
	Number (N)	**Frequency (%)**
Mother's age group (N=36)		
≤ 19 years	7	19,4
20-36 years	29	80,6
Education (N=34)		
Incomplete elementary school	2	5,9
Complete elementary education	7	20,6
Incomplete high school	6	17,6
Complete high school	16	47,1
Incomplete higher education	1	2,9
Complete higher education	1	2,9
Incomplete graduate studies	1	2,9
Number of children (N=36)		
1 child	15	41,7
2 children	16	44,4
3 children	4	11,1
4 children	1	2,8
Age group of children under two years of age (N=36)		
≤ 6months	17	47,2
7 – 12 months	9	25
13 - 24 months	10	27,8

Source: Authors (2020)

As for the education of nurses, only one mentioned having specialization in family health. Among community health workers, 25.4% have completed higher education. As for working time in the position, a median of 6,0 years (0,75 – 10,00) was observed among nurses and one of 10,0 years (8,0 – 14,0) among community health workers. Almost half of the nurses coordinating the units had been in the job for less than one year. There is a weak employment relationship experienced by both nurses and community health workers, with only 11.7% of the agents showing stability while in the first group there were no permanent employees. The mothers were on average 25 years old (17-36), seven of whom were adolescents. As for education, 47.1% had completed high school. The children had a median of 8,2136 months of age (2,0370 – 14,9158), 9 months of age (0.39 - 26.45), the majority being less than 6 months of age (47.2%).

4 DISCUSSION

4.1 Health professionals from the Strategy for Family Health

In the present study, it was verified by the interviewed secretariat and health managers, that EAAB was not implemented by the city. From the nurses' perspective, the Strategy was mentioned as part of the unit by only two professionals. In the two units where both were mentioned, they reported that there was a responsible tutor, but they denied the existence of an action plan. Although, one of them mentioned the existence of a monitoring plan, the professional did not describe it. Tavares et al. (2018) carried out a study in Recife with EAAB tutors and managers identifying the lack of management support and inadequate infrastructure in the health units as the main factors that compromised the development of the activities planned by the health teams and, consequently, the implementation of EAAB in the city. Mariot (2015) evaluated the implementation of EAAB in Porto Alegre from the perspective of the tutors of the strategy. The study identified some points which are considered essential for the success of the implementation and evaluation of the strategy among which it is the need for greater management support to perform the role of the tutor, the need for permanent education in maternal breastfeeding and healthy complementary feeding. The tutors also said that the turnover of the professionals that make up the team of the basic health unit also hinder the process of the implementation. One of the aspects that contributed towards the implementation of the strategy was the creation of a municipal breastfeeding committee. The group of tutors emphasized that the priority given to strategy by the city was essential to the success of EAAB. The absence of the implementation of the strategy in the analyzed city must be seen carefully in order to think about alternatives for its effective implementation, aiming to optimize the promotion of breastfeeding and healthy complementary feeding.

Bonini's dissertation (2019) evaluating Family Health units in Piracicaba - SP showed that all units adhered to EAAB and that there was a commitment to comply with the actions proposed in the implementation workshop. The strategy's actions had a positive impact

on the indicators, causing an increase in the average of exclusive breastfeeding indicators in children under six, complementary breastfeeding, introduction of food and a reduction in the average of instant noodle consumption indicators. The study of Relvas et al. (2019) showed that the combination of higher level of maternal education and the better performance of urban primary care units health in Embu das Artes, a metropolitan region of São Paulo, reduces the consumption of ultra-processed foods among children under one year old.

In addition to the EAAB, specific actions are provided by the Ministry of Health to monitor the child's health. According to the National Primary Care Policy, it is recommended as one of the duties of nurses and doctors in the Family Health Strategy to carry out childcare consultations. The Ministry of Health recommends seven routine consultations in the first year of life (in the 1st week, in the 1st month, 2nd month, 4th month, 6th month, 9th month and 12th month), in addition to two consultations in the 2nd year of life (in the 18th and 24th month) and, from the 2nd year of life onwards, annual consultations, close to the month of the anniversary. In all routine consultations, the health professional must assess and advise on: the child's diet, weight, length or height and head circumference (the latter up to 2 years old), vaccines, development, accident prevention, identification of problems or health risks and additional care for good health (BRASIL, 2012). It is observed that although almost all the units performed childcare (94.4%), not all of them did it completely, which can be evidenced by the frequency of each item present in the consultation, described by the nurses (Table 1). Anthropometric measurements were present more frequently. A similar data was found in a work by Einloft (2014) in which the actions developed during the routine monitoring of children under two years old, from the perspective of the community health agents, were mainly restricted to gauging of anthropometric measurements. Guidelines on accident prevention and other child health care appear less frequently in the nurses' responses. Food guidelines appear in half of the responses. In addition, in some units the childcare consultation was carried out only by the doctor. A review by Góes et al. (2018) highlights the importance of the nurse's performance in comprehensive child health care, given the greater proximity of

this professional with families, which favors the appreciation of the context of life in the interactions established between nurses, children and families, not being restricted to merely technical and curative care.

Review by Almeida et al. (2016) including studies carried out in public health services and home visits identified inadequacy in filling out child health monitoring records. The growth charts were rarely filled out, and so was the chart for monitoring the child's developmental milestones. Such results, according to the authors, suggest a weak link between professionals with basic health actions and discontinuity between the actions initiated in the maternity hospital and the proposals for primary care. Studies included in the review carried out by Góes et al. (2018) pointed out the limitations of nurses to work in this practice, such as work overload and the lack of space, supplies and equipment as well as the fragmentation of the health team practices. In the present study, mothers`slack of adherence and nurses's work overload were also mentioned as the main reasons that prevent the promotion of the activities. Among the activities proposed, 33.3% of nurses reported the desire to organize educational groups with themes related to child health. In addition to carrying out regular childcare by nurses, home visits to the newborn were mentioned by a professional. Carrying out home visits and participating in educational and health promotion groups, as a way of complementing clinical activities for the care of schoolchildren, especially for groups more vulnerable to certain situations prioritized by the team, is a common assignment for all primary care professionals (BRASIL, 2012).

Another necessity pointed out by nurses in this study was the presence of a nutritionist to provide guidance on the child's diet. The period of introduction of complementary feeding is a critical step and when the diet received by the child is not adequate, it can cause malnutrition, impaired growth and development in addition to illnesses. Furthermore, the proper guidance of caregivers during the child's first year of life is of supreme importance, given that during this period it occurs the foundation of eating habits that will perpetuate into adulthood (SIMON; SOUZA; SOUZA, 2003).

In a review by Carvalho et al. (2015) it was found that the food consumption of Brazilian children is marked by high prevalence of inadequacy in the consumption of micronutrients, mainly iron, vitamin A and zinc in addition to high energy consumption. Possibly, the inadequacies observed consist of a reflection of incorrect eating practices in childhood, mainly represented by the early interruption of breastfeeding, inadequate introduction of complementary food and excessive consumption of industrialized products rich in sugars, fat and salt. Data from the National Demography and Health Survey (PNDS), carried out in 2006, showed anemia prevalence of 20.9% and inadequate vitamin A levels of 17.4% in children under five years old. Thus, the importance of continuity of guidance from health professionals is highlighted. It is noteworthy in the present study that 22.2% of community health workers reported not having received training on healthy complementary feeding and while half of the mothers reported not having received guidance in the unit on the topic. The home environment, the parents' lifestyle and inter-family relationships can have a major influence on food preferences and affect the energy balance of food by the availability and composition of food. (OLIVEIRA; RIGOTTI; BOCOLINI, 2017).

Given the proximity of the community health workers with the mothers and other caregivers of the child, which is an important link of communication and exchange of information, it is essential to provide permanent education on this topic for all professionals involved in child care so that they can guide the family properly. Until the age of two, the goal is to carefully monitor the child's growth and development by the health team, including the search of absentees (BRASIL, 2012). In the present study, 97.7% of the interviewed community health workers affirmed the active search of children.

The computerized system of SISVAN allows the registration of food and nutrition data of the population served in Primary Care through forms for assessing nutritional status and survey of dietary practices in different life cycles (BRASIL, 2015). When asked if they knew SISVAN, most community health agents, (82.5%) answered positively, but many reported knowing only typing, that is, they were unaware of its purpose and application as a surveillance tool. These professionals were mentioned in the participation in activities to

promote infant food and nutrition offered by the unit, and as people to be used, among the group, to clarify doubts about anthropometry and SISVAN, however 27% and 20.6% of the group were not trained on the respective themes. Despite the information being recorded and collected for the surveillance system, 100% of nurses reported not using the reports generated by the system. Such findings require special attention given the importance of adequate anthropometric measurements for monitoring the nutritional status of children in the community. The knowledge of this information supports professionals working in Primary Health Care and managers in different spheres of government in the implementation and implementation of strategies to promote improvements in health conditions related to food and nutrition (BRASIL, 2015).

4.2 Mothers of children under two years of age

Special attention should be given to the promotion of breastfeeding given the incidence of mothers who had difficulties in breastfeeding. A study carried out in Viçosa by Fonseca et al. (2017), revealed that the children of mothers who mentioned difficulties in breastfeeding had a slower growth rate until the second month. Among the difficulties with breastfeeding reported by mothers, were nipple injuries, sore breasts, breast engorgement, incorrect grip, reduced milk, waking up at dawn, among others.

Although no association was found between maternal schooling, having an only child, mother's age and participation in childcare consultations in this study, which could be due to the small number of mothers interviewed, two studies founded significant associations among these variables. In the study conducted by Vitolo, Gama and Campagnolo (2010), the authors suggest that the factors associated with the lack of regular use of the childcare service were maternal schooling ≤ 8, non-nuclear family structure and not being an only child, in addition to the belief that monitoring in the childcare service is unnecessary if there is no child’s illness. In a comparative study between the South and Northeast regions, Santos et al. (2017) found factors associated with the mother’s

participation in child care: the economic characteristics, education and use of the health service had the greatest influence on the results of follow-up for child care for both regions.

5 CONCLUSION

It can be concluded that there is a deficiency in the regular and complete offer of activities to promote infant food and nutrition in the city, such as child care consultations and educational groups. The *Estrategia Amamenta e Alimenta Brasil*, an important mechanism to promote child health, was not implemented by the city, being even unknown to the nurses and community health workers of the Strategy for Family Health. Anthropometric and food consumption data are released in the food and nutrition surveillance system, however, reports of nutritional diagnosis for planning actions for the community are not used. It is noted from the nurses' point of view the recognition of the limitations for carrying out activities to promote infant food and nutrition due to the low adherence of mothers and the workload of nurses. From the perspective of this group, the development of educational groups with the mothers and the regular offer of childcare is being highlighted as a potential and a necessity being carried out jointly by the doctor and nurse of the unit. The community health workers were dissatisfied with the mothers' adherence, justified in some cases by the incompatibility of the hours of care offered at the unit and the mother's working hours. There is a need for training for everyone involved in child health care, including the entire Strategy for Family Health team. Mothers, as well as the family environment, should also be instructed on the importance of approaching the units in order to carry out the routine monitoring of the child's growth and development, preventing health problems.

REFERENCES

ALMEIDA AC, MENDES LD, SADI RO, RAMOS EG, FONSECA VM, PEIXOTO MVM. Uso de instrumento de acompanhamento do crescimento e desenvolvimento da criança no Brasil – Revisão sistemática

de literatura. **Rev Paul Pediatr**. 2016; 34 (1) : 122-131. Avaible from: https://doi.org/10.1016/j.rpped.2015.06.012

BONINI TPLM. **Avaliação do grau de implantação e os efeitos observados na Estratégia Amamenta Alimenta Brasil nas Unidades de Saúde da Família de Piracicaba/S**P [dissertation]. Piracicaba: Faculdade de Odontologia de Piracicaba/UNICAMP; 2019. 45p.

BRASIL, Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. Departamento de Ciência e Tecnologia. PNDS 2006 **Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher Relatório**. Brasília: Ministério da Saúde, 2008.

BRASIL, Ministério da Saúde. Secretaria de Atenção à Saúde. **Política Nacional de Alimentação e Nutrição, 2012**.

BRASIL, Ministério da Saúde. Secretaria de Atenção à Saúde. **Estratégia Nacional para Promoção do Aleitamento Materno e Alimentação Complementar Saudável no Sistema Único de Saúde**: manual de implementação. Brasília: Ministério da Saúde, 2015.152p.

BRASIL, Ministério da Saúde. **Portaria de Consolidação N. 2**, de 28 de setembro de 2017. Consolidação das normas sobre as políticas nacionais de saúde do Sistema Único de Saúde. Brasil: Ministério da Saúde. 2017.

BRASIL, Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. **Marco de referência da vigilância alimentar e nutricional na atenção básica** / Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. – Brasília: Ministério da Saúde, 2015. 56 p.

BRASIL, Ministério da Saúde. **Portaria Nº1920**, 05 de setembro de 2013. Institui a Estratégia Nacional para promoção do aleitamento materno e alimentação complementar saudável no Sistema Único de Saúde (SUS) – Estratégia Amamenta e Alimenta Brasil. Brasília, DF: 2013.

BRASIL, Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Caderno 33. **Saúde da criança: crescimento e desenvolvimento**. Brasília, DF: 2012.

BRASIL, Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Caderno 23. **Saúde da criança**: aleitamento materno e alimentação complementar. Brasília, DF: 2015.

CARVALHO CA et al. Consumo alimentar e adequação nutricional em crianças brasileiras: revisão sistemática. **Rev Paul Pediatr.** 2015;33(2):211-221. Avaible from: https://doi.org/10.1016/j.rpped.2015.03.002

DEVINCENZI M, FRUTUOSO MFP. Sistema de Vigilância Alimentar e Nutricional (SISVAN): Conquistas e desafios em relação ao monitoramento do estado nutricional das crianças brasileiras. In: FRANCESCHINI SCC, RIBEIRO SAV, PRIORE S E, NOVAES JF, editors. **Nutrição e saúde da criança**. Rio de Janeiro: Rubio; 2018. p.547-556.

EINLOFT ABN. **Implementação da estratégia nacional para alimentação complementar saudável (ENPACS)**: proposta de um modelo de avaliação em nível municipal [dissertation]. Viçosa: Departamento de Nutrição e Saúde/UFV; 2014. 126 p.

FONSECA PCA, CARVALHO C A, RIBEIRO SAV, NOBRE LN, PESSOA MC, RIBEIRO AQ, PRIORE SE, FRANSCESCHINI SCC. Determinantes da velocidade média de crescimento de crianças até seis meses de vida: um estudo de coorte. **Ciência & Saúde Coletiva**. 2017;22(8):2713-2726, 2017. Avaible from: https://doi.org/10.1590/1413-81232017228.18182015

GOES FGB, SILVA MA, PAULA GK, OLIVEIRA PM, MELLO NC, SILVEIRA SSD. Contribuições do enfermeiro para boas práticas na puericultura: revisão integrativa da literatura. **Rev Bras Enferm** [Internet]. 2018;71Suppl 6:S2974-83. Avaible from: https://doi.org/10.1590/0034-7167-2018-0416

LIKERT RA. Technique for the measurement of attitudes. Archives of Psychology. 1932;22(140):44-53.

MARIOT MDM. **Implementação da Estratégia Amamenta e Alimenta Brasil no município de Porto Alegre: percepções do tutor** [dissertation]. Porto Alegre: Escola de Enfermagem/UFRG; 2015. 70 p.

OLIVEIRA MIC, RIGOTTI RR, BOCCOLINI CS. Fatores associados à falta de diversidade alimentar no segundo semestre de vida. **Cad. saúde colet**. 2017;25(1):65-72. Avaible from: https://doi.org/10.1590/1414-462x201700010204.

RELVAS GR B, BUCCINI GS, VENANCIO SI. Ultra-precossed food consumption among infants in primary health care in a city of metropolitan region of São Paulo, Brazil. **J Pediatr**. 2019;95(5):584-92. Avaible from: https://doi.org/10.1590/1414-462x201700010204.

SANTOS AS, DURO SMS, CADE NV, FACHINI LA, TOMASI E. Acesso ao atendimento de puericultura nas Regiões Nordeste e Sul do Brasil. **Rev. Bras. Saúde Matern. Infant**., Recife. 2017;17(3):461-474. Avaible from: https://doi.org/10.1590/1806-93042017000300003

SCHINCAGLIA RM, OLIVEIRA AC, SOUZA LM, MARTINS KA. Práticas alimentares e fatores associados à introdução precoce da alimentação complementar entre crianças menores de seis meses na região noroeste de Goiânia. **Epidemiol. Serv. Saúde**. 2015;24(3):465-474. Avaible from: https://doi.org/10.5123/S1679-49742015000300012

SIMON VGN, SOUZA JPM, SOUZA SB. Introdução de alimentos complementares e sua relação com variáveis demográficas e socioeconômicas, em crianças no primeiro ano de vida, nascidas em Hospital Universitário no município de São Paulo. **Rev. Bras. Epidemiol**. 2003;6(1):29-38. Avaible from: https://www.scielosp.org/article/rbepid/2003.v6n1/29-38/

VITOLO MR, GAMA CM, CAMPAGNOLO PDB. Frequency of public child care service use and associated factors. **Jornal de Pediatria**. 2010;86(1):80-84. Avaible from: doi:10.2223/JPED.1966

CONTRIBUIÇÕES DE AUTORIA

1 – Tatiane Cristina Serafim

Nutricionista do Departamento de Nutrição e Saúde da Universidade Federal de Viçosa. Possui graduação em Nutrição e Mestrado em Ciências da Saúde por meio do Programa de Pós-Graduação em Ciências da Saúde, ambos pela Universidade Federal de Viçosa.
https://orcid.org/0000-0003-1377-6214 – tatiane.serafim@ufv.br
Contribuição: Conceptualização, curadoria de dados, análise formal, investigação, metodologia, escrita – rascunho original, escrita – revisão e edição

2 – Bruno David Henriques

Departamento de Enfermagem e Medicina, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Doutor em Ciências da Saúde. Professor da Universidade Federal de Viçosa.
https://orcid.org/0000-0002-6844-6661 – bruno.david@ufv.br
Contribuição: Conceptualização, metodologia, supervisão, escrita – revisão e edição

3 – Raquel Maria Amaral Araújo

Departamento de Nutrição e Saúde, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Doutora em Saúde da Criança e da Mulher. Professora da Universidade Federal de Viçosa.
https://orcid.org/0000-0003-1323-8707 – raraujo@ufv.br
Contribuição: Conceptualização, metodologia, supervisão, escrita- revisão e edição

4 – Carolina Araujo dos Santos

Departamento de Nutrição e Saúde, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Doutora em Ciência da Nutrição. Nutricionista do Departamento de Nutrição e Saúde na Universidade Federal de Viçosa.
https://orcid.org/0000-0001-5947-8744 – carolina.a.santos@ufv.br
Contribuição: Curadoria de dados, análise formal, metodologia

5 – Emanuelle Emília Ferreira Parreiras

Departamento de Nutrição e Saúde, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Mestre em Ciências da Saúde pela Universidade Federal de Viçosa.
https://orcid.org/0000-0003-3216-2955 – manuparreiras89@gmail.com
Contribuição: Conceptualização, escrita- rascunho original

6 – Mikelen de Oliveira

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduanda em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0003-2147-5331 – mikelen.oliveira@ufv.br
Contribuição: Investigação

7 – Marina Alves Vechi

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduanda em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0002-2240-7077 – marinavecchi098@gmail.com
Contribuição: Investigação

8 – Abel Mendonça Alves

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduando em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0001-6723-1485 – abel_guirra99@yahoo.com.br
Contribuição: Investigação

9 – Mateus Capobiango Bicalho

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduando em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0001-9013-806X – capobiangomateus@gmail.com
Contribuição: Investigação

10 – Victor Emanuel Ribeiro

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduando em Medicina pela Universidade Federal de Viçosa.

https://orcid.org/0000-0001-8075-925X – victoremanuelribeiro@outlook.com
Contribuição: Investigação

11 – Felipe Oliveira Martins

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduando em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0002-4580-7313 – fepaomartins@gmail.com
Contribuição: Investigação

12 – Bernardo Melo Gaspar

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduando em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0003-3353-4087 – bernardo_m16@hotmail.com
Contribuição: Investigação

13 – Sara Fassarella Donato

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Graduanda em Medicina pela Universidade Federal de Viçosa.
https://orcid.org/0000-0003-2279-7551 – sarafassarella2014@gmail.com
Contribuição: Investigação

14 – Brunnella Alcantara de Chagas Freitas

Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa, Viçosa, MG, Brasil. Doutora em Ciência da Nutrição. Professora da Universidade Federal de Viçosa, Departamento de Enfermagem e Medicina.
https://orcid.org/0000-0002-7863-0681 – brupediatria@gmail.com
Contribuição: Conceptualização, metodologia, administração de projeto, supervisão, escrita- revisão e edição