Knowledge of Community Health Agents about prenatal care: Cross-sectional study

Conhecimento dos Agentes Comunitários de Saúde sobre o cuidado pré-natal: Estudo transversal

Conocimientos de los Agentes Comunitarios de Salud sobre la atención prenatal: Estudio transversal

Raquel Leite da Silva[1], Andressa Silva Azael Lima Araújo[2], Cátia Vanessa Rodrigues dos Santos[3], Cleuma Sueli Santos Suto[4], Tacila Nogueira Azevedo Rocha[5], Ariel Gustavo Letti[6], Chalana Duarte de Sena Fraga[7], Magna Santos Andrade[8]

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1. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0002-4043-5477

2. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0003-4627-9556

3. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0002-8693-647X

4. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0002-6427-5535

5. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0009-0009-8639-404X

6. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0003-4848-4019

7. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0002-0285-9412

8. University of the State of Bahia. Senhor do Bonfim, Bahia, Brazil. https://orcid.org/0000-0002-0557-2169

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RESUMO

Objetivo: analisar o nível de conhecimento sobre pré-natal e os fatores associados a esse entendimento entre os agentes comunitários de saúde que atuam em um município do interior baiano. **Método:** estudo quantitativo, descritivo-analítico, transversal, realizado com 153 profissionais. a coleta ocorreu entre dezembro/2019 e fevereiro/2020, a partir da aplicação de questionário auto aplicado. realizou-se análise descritiva das variáveis sociodemográficos/profissionais e referentes ao conhecimento sobre pré-natal. para verificar fatores associados a esse conhecimento, calculou-se: odds ratio, intervalo de confiança (95%), testes qui-quadrado/fisher e regressão logística múltipla. **Resultados:** 59,5% dos profissionais foram classificados como "conhecimento baixo" acerca do pré-natal. houve associação entre conhecimento elevado sobre pré-natal e conhecimento elevado das atribuições da profissão. **Conclusão:** o desconhecimento sobre aspectos importantes do cuidado à gestante pode comprometer a qualidade da assistência ofertada e impactar negativamente na saúde materno-fetal.

Descritores: conhecimento; cuidado pré-natal; agentes comunitários de saúde; enfermagem; saúde materno-infantil.

ABSTRACT

Objective: to analyze the level of knowledge about prenatal care and the factors associated with this understanding among community health agents working in a city in the interior of bahia. **Method:** quantitative, descriptive-analytical, cross-sectional study, carried out with 153 professionals. data collection took place between december/2019 and february/2020, based on the application of a self-administered questionnaire. a descriptive analysis of the sociodemographic/professional variables and those related to knowledge about prenatal care was carried out. to verify the factors associated with this knowledge, the following were calculated: odds ratio, confidence interval (95%), chi-square/fisher tests and multiple logistic regression. **Results:** 59.5% of the professionals were classified as having "low knowledge" about prenatal care. there was an association between high knowledge about prenatal care and high knowledge of the profession's attributions. **Conclusion:** lack of knowledge about important aspects of care for pregnant women can compromise the quality of care provided and impact maternal and fetal health.

Descriptors: knowledge; prenatal care; community health agents; nursing; maternal and child health.

RESUMEN

Objetivo: analizar el nivel de conocimientos sobre atención prenatal y los factores asociados a esa comprensión entre los agentes comunitarios de salud que actúan en un municipio del interior de bahía. **Método:** estudio cuantitativo, descriptivo-analítico, transversal, realizado con 153 profesionales. la recolección se realizó entre diciembre/2019 y febrero/2020, mediante cuestionario autoadministrado. se realizó un análisis descriptivo de variables sociodemográficas/profesionales y conocimientos sobre atención prenatal. para verificar los factores asociados a este conocimiento se calculan los siguientes: odds ratio, intervalo de confianza (95%), pruebas chi-cuadrado/fisher y regresión logística múltiple. **Resultados:** el 59,5% de los profesionales fueron clasificados como de "bajo conocimiento" sobre la atención prenatal. hubo asociación entre un alto conocimiento sobre la atención prenatal y un alto conocimiento de las responsabilidades de la profesión. **Conclusión:** la falta de conocimiento sobre aspectos importantes de la atención a las mujeres embarazadas puede comprometer la calidad de la atención ofrecida e impactar los niveles de salud materno-fetal.

Descriptores: Conocimiento; atención prenatal; agentes comunitarios de salud; enfermería; salud maternoinfantil.

ORIGINAL

Introduction

The Community Health Agents Program (PACS) was created in 1991 and represented a major advance in the decentralization of the Unified Health System (SUS)[1]. In 1994, the Family Health Program (FHP) was created, which later came to be called the Family Health Strategy (FHS), as it was understood that the program has a more verticalized character, while the strategy aims to reorient the health care model in a horizontal way[2].

There are several areas of action involved in the context of the FHS, and among them prenatal care (PN)[3] stands out. Care for pregnant women is essential for maternal and fetal health, making it possible to detect complications early, which enables timely intervention and the consequent reduction of negative maternal and infant outcomes[3].

Improving the quality of prenatal care depends on numerous factors, among which the qualification of professionals and health units that provide care to women during pregnancy is highlighted[4-5]. In this sense, for the proper functioning of the ESF, the Community Health Agents (CHA) are fundamental figures because they are the bridge between the community and the Primary Care (PHC) health service[6-7].

In this context, it is important for the CHAs to have the knowledge and skills to provide qualified care to pregnant women, both in relation to the health education they offer from house to house, and in the identification of signs and symptoms of risk, which enables early and timely care by the health team[1].

Understanding the scientific knowledge that the CHAs have should be one of the points to be worked on when talking about the quality of obstetric care, as this survey allows permanent education strategies in service to be planned and implemented to improve the work of these professionals, which can directly impact the reduction of maternal morbidity and mortality indicators.

This understanding is still scarce in the literature, but extremely relevant because the process of professionalization of the ACS is one of the great challenges for Primary Care, since this professional has his work recognized in the territory, for contributing to the strengthening of the SUS through the capillarization of care. In this sense, the following question arises: What is the level of knowledge about prenatal care and what are the factors associated with this understanding among Community Health Agents who work in a municipality in the interior of Bahia?

Thus, the present study aims to analyze the level of knowledge about prenatal care and the factors associated with this understanding among Community Health Agents who work in a municipality in the interior of Bahia.

Method

This is a quantitative, descriptive-analytical, cross-sectional study, reported according to the recommendations of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE). The study is part of a larger research called "Analysis of the knowledge of Community Agents about Prenatal Care in the municipality of Senhor do Bonfim-BA". The research was carried out in all health units with FHS and PACS teams, located in the urban and rural areas of Senhor do Bonfim-BA. The city is located in the Center-North of the State of Bahia, with an estimated population in 2021 of 79,813 inhabitants and a Municipal Human Development Index of 0.666 (medium development)[8].

CHAs who work in the aforementioned municipality participated in the study. The inclusion criteria were: being CHA; work in the health units of Senhor do Bonfim; be active in their role during the period of data collection; have at least one year of experience in the profession of CHA. CHAs who were in the following situations during the data collection period were excluded from the study: vacation, sick leave, or deviation from function.

Initially, all CHAs who worked in health units in both rural and urban areas would be part of the study, totaling 175 professionals. However, due to losses during data collection, 153 CHAs participated in the study. Because it involved all professionals, the sample was not calculated. The reasons for the losses were: 8 leaves by the National Institute of Social Security (INSS), 1 maternity leave, 1 vacation, 1 refusal, 5 did not appear for the application of the questionnaire (even after three attempts to contact them), 1 had a medical certificate and 5 had less than one year of experience in the profession.

Data collection took place between November 2019 and February 2020, through the application of a self-administered questionnaire, built from a literature review on the subject and an instrument used in similar research carried out in Ribeirão Preto – São Paulo6. The questionnaire consisted of 97 questions, divided into 8 blocks: block 1 (sociodemographic and profession variables), block 2 (knowledge about the general attributions of the profession), block 3 (performance of the ACS in the group of pregnant women), block 4 (prenatal exams and vaccines), block 5 (work of the ACS about the guidance they should provide to pregnant women), block 6 (understanding of signs and symptoms of risk for pregnant women and signs of labor), block 7 (knowledge about postpartum aspects) and block 8 (breastfeeding).

The questions that assessed the professionals' "knowledge" were presented in the instrument based on assertions that the CHA should analyze and mark whether it was "True", "False" or "Does not know". For the analysis of the CHAs' knowledge about prenatal care, carried out in this excerpt, the questions of blocks 3, 5 and 6 were used, totaling 34 questions.

The data collection team was composed of 3 undergraduate researchers from the Bachelor of Nursing course at the State University of Bahia (UNEB), previously trained to participate in the research.

A pre-test was carried out with 8 CHAs in the city and it was observed that there was a need for small adjustments to the instrument, which allowed these professionals to remain in the final study.

For data collection, initially, contact was made with the FHS and PACS teams, with the objective of explaining to the CHAs and the nurse coordinators of each team about the objectives and details of the study. Soon after, a time

was agreed for the application of the questionnaire, which was carried out at the health unit itself, on the days and times made available by each team, so as not to disturb the flow of care.

Before starting the application of the questionnaire, the CHAs were informed about the content of the project, their rights, the activities to which they would be submitted, and the reading and signing of the Informed Consent Form (ICF) in two copies.

Once this was done, the questionnaire was given to the ACS to be filled out, always with the supervision of the researchers to clarify doubts and so that there was no type of external consultation, such as cell phones and electronic means, nor consultation with the other respondents present in the room.

The database was prepared using the Statistical Package for the Social Sciences (SPSS) software, version 22. The data were entered twice, and then the inconsistencies in filling in were verified from the comparison of the simple frequencies between the variables of the two databases. After correcting the typing errors, a descriptive analysis was performed based on the simple and relative frequencies of the variables researched.

For the analysis of the comparison between groups, the dependent variable was "CHAs' knowledge about prenatal care", categorized as: "Low knowledge" and "High knowledge". These categories were constructed from the median of the total number of correct answers of the 34 questions on prenatal care, and the median found was 31 questions answered correctly. That said, "Low Knowledge" was considered to be the one who got up to 31 questions right and "High Knowledge" was the one who got 32 or more right.

The independent variables were sociodemographic (gender, age, race/color, children, education, social class - Brazil Criterion9), length of time working as a CHA, work team (PACS or ESF), course in the health area, training on PN and "Knowledge of the general attributions of the CHA".

The independent variable "Knowledge of the general attributions of the CHA" was divided into two categories, elaborated from the median of the total number of correct answers (minimum of 0 and maximum of 9 correct answers), whose median was 8 questions. "Low knowledge" about these attributions was the one who got up to 8 statements right and "High knowledge" was considered to be the right answer to all 9 alternatives.

To ascertain possible associations between the outcome variable (CHAs' knowledge of prenatal care) and the independent variables, bivariate analysis was performed (Odds Ratio, 95% Confidence Interval, and Chi-square/Fisher's Exact Tests - p-value less than 0.05). Then, an adjusted analysis was developed using Multiple Logistic Regression (Stepwise).

The research project was approved by the Research Ethics Committee (CEP) in March 2019, under opinion number: 3.206.049 and CAAE: 08094819.8.0000.5631. It is noteworthy that data collection only occurred after approval by the CEP.

Results

The 153 CHAs surveyed were female (75.2%), 45 years of age or older (57.5%), black/brown (88.2%), had children (83.7%), had 12 or more years of schooling (62.1%), belonged to social class C, D or E (68.0%), had less than 15 years of experience as CHAs (54.2%), worked in the FHS (71.9%), did not have a

technical course in the health area (64.1%), had already participated in training on prenatal care (73.2%) and had high knowledge about the general attributions of the profession (56.9%) (Table 1).

Among all the CHAs in the study, only 40.5% had high knowledge about prenatal care, which corresponds to a correct answer of 32 questions or more. Regarding the factors associated with "High knowledge of the CHAs in relation to the aspects of prenatal care", there was an association with "High knowledge about the general attributions of the profession" (Table 1).

Table 1 – Sociodemographic/professional characteristics and knowledge about the attributions of Community Health Agents in the municipality of Senhor do Bonfim-BA, 2019-2020.

Sociodemographic variables/ Professionals	Total	Knowledge Prenatal		OR (CI95%)	p	OR (CI 95%) adjusted*	P adjusted*
	N(%)	Low N(%)	High N(%)				
Gender					0,26		
Male	38(24,8)	26(28,6)	12(19,4)	1			
Female	115(75,2)	65(71,4)	50(80,6)	1,6 (0,7-3,9)			
Age (years)					0,96		
< 45	65(42,5)	38(41,8)	27(43,5)	1			
≥ 45	88(57,5)	53(58,2)	35(56,5)	0,9 (0,5-1,9)			
Race/color					0,92		
Black/brown	135(88,2)	81(89,0)	54(87,1)	1			
Not black/brown	18(11,8)	10(11,0)	8(12,9)	1,2 (0,4-3,6)			
Children					1,00		
Yes	128(83,7)	76(83,5)	52(83,9)	1,0 (0,4-2,8)			
No	25(16,3)	15(16,5)	10(16,1)	1			
Education (years)					0,50		0,13
< 12	58(37,9)	32(35,2)	26(43,3)	1		1	
≥ 12	95(62,1)	59(64,8)	36(58.1)	0,7 (0,4-1,5)		0,6 (0,3-1,2)	
Social class[a]					0,10		0,08
A ou B	49(32,0)	24(26,4)	25(40,3)	1,9 (0,9-4.0)		1.9 (0,9-4,1)	
C, D ou E	104(68,0)	67(73,6)	37(59,7)	1		1	
Time working as a CHA					1,00		
<15	83(54,2)	49(53,8)	34(54,8)	1			
≥ 15	70(45,8)	42(46,2)	28(45,2)	1,0 (0,5-1,9)			
Team you work for					0,15		0,06
PACS	43(28,1)	30(33,0)	13(21,0)	1		1	
ESF	110(71,9)	61(67,0)	49(79,0)	1,8 (0,8-4,3)		2,2 (1,0-5,0)	
Course in the health area					0,27		0,08

Yes	55(35,9)	29(31,9)	26(41,9)	1,5 (0,7-3,1)	1,9 (0,9-4,1)	
No	98(64,1)	62(68,1)	36(58,1)	1	1	
Prenatal training					0,25	
Yes	112(73,2)	63(69,2)	49(79,0)	1,7 (0,7-3,9)		
No	41(26,8)	28(30,8)	13(21,0)	1		
Knowledge of **the assignments**					**0,02**	**0,02**
Low	66(43,1)	47(51,6)	19(31,0)	1	1	
High	87(56,9)	44(48,4)	43(69,0)	2,4 (1,2-5,1)	2,4 (1,2-4,8)	

A-Average monthly income of classes A (>20 minimum wages), B (>5 and <10 minimum wages), C (> 1 and <3), D and E (< 1 minimum wage. The minimum wage in reais in Brazil at the time of the survey was R$ 1,045.00. ACS – Community Health Agent; PACS – Community Health Agents Program; ESF – Family Health Strategy; OR – Odds Ratio. *Multiple Logistic Regression (Stepwise).

Table 2 shows the knowledge of the CHAs about the performance during visits to pregnant women and about the routine of prenatal care, and it is possible to observe that in most of the alternatives the CHAs obtained a high number of correct answers. However, the significant percentage of errors in some relevant questions stands out: 37.3% informed that pregnant women with gingival bleeding should not use dental floss and 13.7% stated that the CHA does not need to accompany pregnant women who do not undergo prenatal care in the health unit of the area covered (Table 2).

Table 2 - Knowledge of Community Health Agents about the performance of the ACS during visits to pregnant women and aspects of prenatal care, Senhor do Bonfim-BA, 2019-2020.

The following information is:	Right N (%)	Wrong N (%)	NS N (%)
When there is bleeding gums, the pregnant woman should not use dental floss. (F)	69 (45,1)	57 (37,3)	27 (17,6)
If the pregnant woman lives in her work area and does prenatal care in another service, it is not necessary for the ACS to monitor her. (F)	132 (86,3)	21 (13,7)	0
The use of ferrous sulfate results in an increase in the woman's weight during pregnancy. (F)	120 (78,4)	20 (13,1)	13 (8,5)
Ideally, the woman should start prenatal care until the 12th week (first trimester) of pregnancy. (V)	136 (88,9)	16 (10,5)	1 (0,7)
The use of folic acid by the pregnant woman is important for the formation of the fetus. The woman should take 1 pill every day until the 12th week of pregnancy. (V)	126 (82,4)	11 (7,2)	16 (10,5)
It is recommended that the pregnant woman carry out at least 6 consultations during prenatal care. (V)	142 (92,8)	10 (6,5)	1 (0,7)
It is not necessary for the community agent to check the vaccination card of the pregnant woman, this is the work of	144 (94,1)	9 (5,9)	0
The pregnant woman may have problems with her teeth and gums due to the hormonal changes that occur during	133 (86,9)	8 (5,2)	12 (7,8)
The pregnant woman must eat for two, fewer times a day, in large quantities and she can skip meals. (F)	147 (96,1)	5 (3,3)	1 (0,7)

Walking 3 to 5 times a week is a good physical activity suggestion for pregnant women who do not have complications. (V)	142 (92,8)	5 (3,3)	6 (3,9)
Examples of healthy habits are: be careful with your diet, exercise regularly, do not smoke, and do not drink alcohol or use other drugs. (V)	149 (97,4)	4 (2,6)	0
If a pregnant woman in my micro-area does not want to do prenatal care, it is a right she has, so I do not need to pass the information to the nurse of the unit. (F)	149 (97,4)	4 (2,6)	0
Some of the signs of pregnancy are lack of menstruation, sore and enlarged breasts, nausea, dizziness, and drowsiness. (V)	149 (97,4)	4 (2,6)	0
The results of the exams should be noted on the pregnant woman's card, as they are very important. (V)	145 (94,8)	4 (2,6)	4 (2,6)
The pregnant woman should not wash her head every day, as it harms the baby. (F)	148 (96,7)	3 (2,0)	2 (1,3)
The pregnant woman should eat very fatty foods to help the fetus gain weight. (F)	151 (98,7)	2 (1,3)	0
The community agent should check if the pregnant woman has the pregnant woman's card and reinforce the importance of going to all prenatal consultations. (V)	152 (99,3)	1 (0,7)	0
The community agent actively searches for pregnant women who miss prenatal consultations. (V)	152 (99,3)	1 (0,7)	0
The community agent should always ask the pregnant woman about the tests. (V)	152 (99,3)	1 (0,7)	0
During the home visit, the community agent should ask if there is a pregnant woman in the house. (V)	153 (100)	0	0
If there is a pregnant woman in the house, the community agent should ask if she has any complaints, how she is feeling and if she is undergoing prenatal care. If she is not doing prenatal care, advise her to go to the health unit. (V)	153 (100)	0	0
The community agent must guide the pregnant woman about hygiene, comfort, breastfeeding and the most common	153 (100)	0	0
Prenatal care is the first step to take care of the health of the pregnant woman and the baby. (V)	153 (100)	0	0
It is important that the pregnant woman has a follow-up with a dentist. (V)	153 (100)	0	0

V – True; F – False; PN – Prenatal care; ACS – Community Health Agent; NS – I don't know.

Table 3 addresses the CHAs' knowledge about the signs and symptoms of risk during pregnancy. In this group of questions, although the professionals demonstrated satisfactory knowledge on the subject, some mistakes were highlighted, such as the fact that 26.8% indicated as false that when the pregnant woman's belly does not grow or grows too much in relation to the time of pregnancy, it is a sign of risk and needs to be passed on to the team (Table 3).

Table 3 - Knowledge of Community Health Agents about signs and symptoms of risk during pregnancy, Senhor do Bonfim-BA, 2019-2020.

The following information is:	Right N (%)	Wrong N (%)	NS N (%)
When the pregnant woman's belly does not grow or grows too much in relation to the time of pregnancy, it is a sign of risk and needs to be passed on to the team. (V)	99 (64,7)	41 (26,8)	13 (8,5)
Severe pain in the stomach area that radiates to the right side is normal due to the enlargement of the uterus during pregnancy. (F)	72 (47,1)	34 (22,2)	47 (30,7)
It is normal for pregnant women to have changes in vision such as: double vision, seeing bright spots or blurred vision. (F)	94 (61,4)	18 (11,8)	41 (26,8)
Waking up with swollen legs, hands, arms and eyes is common during pregnancy and is not a sign of risk. (F)	137 (89,5)	13 (8,5)	3 (2,0)
If the pregnant woman says that she has stopped feeling the baby move for more than 24 hours, you should reassure her that this is normal. (F)	132 (86,3)	12 (7,8)	9 (5,9)
It is normal for pregnant women to feel severe headaches and vomit frequently during pregnancy, so the community agent does not have to worry about these cases. (F)	146 (95,4)	7 (4,6)	0
If the pregnant woman reports that she has strong contractions in the belly even before the time for delivery, this is a sign of risk and the community agent should advise her to seek help at the health unit. (V)	149 (97,4)	3 (2,0)	1 (0,7)
In any situation where any sign of risk has appeared, you should refer the pregnant woman to the unit for care as soon as possible. (V)	150 (98,0)	2 (1,3)	1 (0,7)
The pregnant woman's report of fluid or blood loss through the vagina deserves attention from the community agent and needs to be referred to the Health Unit. (V)	153 (100)	0	0
In addition to not being a sign of risk, high fever is normal in pregnancy. (F)	152 (99,3)	0	1 (0,7)

V – True; F – False; PN – Prenatal care; ACS – Community Health Agent; NS – I don't know.

Discussion

In the present analysis, more than half of the professionals had knowledge about prenatal care considered low (59.5%), a result that demands attention, as misunderstandings on the subject can compromise the quality of the CHAs' follow-up of pregnant women, negatively impacting maternal and neonatal health.

In a study carried out with 192 CHAs from Ribeirão Preto-SP, the knowledge of professionals in relation to prenatal care was considered high. But, like the professionals of Senhor do Bonfim, important deficiencies were also observed in some specific aspects of prenatal care[6].

A study carried out in Kenya, Africa, with the objective of investigating the level of knowledge of CHAs about obstetric and neonatal danger signs, showed that professionals who participated in a training program on the subject carried out by an organization called Lwala Community Alliance (LWALA) were more likely to recognize danger signs during pregnancy10. However, the higher level of knowledge was not only linked to training, but also to the frequent updates and supervisions carried out by LWALA, in addition to extra bonuses received for improving their performance[10].

The trained CHAs who are aware of their duties contribute to the improvement of care. When well trained, these professionals play a crucial role in promoting maternal and fetal health, ensuring that pregnant women receive the necessary follow-up from the beginning of pregnancy to the postpartum period. For this, the importance of the nurse's role is highlighted, as they are responsible for the supervision, management and training of these professionals[5].

It was also observed among the professionals of Senhor do Bonfim, an association between the high knowledge of the CHA about prenatal care and the high knowledge of these professionals about the general attributions of the profession. A study carried out in the interior of São Paulo also showed an association between greater knowledge about prenatal care and the previous local training received by the CHAs on topics related to PHC and the attributions of the profession, given prior to the beginning of their activities as agents[6].

Thus, the importance of the role of municipal management is highlighted, because, as soon as the ACS is summoned to work in the municipality, the local management must offer a quality introductory course for these professionals, with a minimum workload of 40 hours, which addresses the SUS and the role of the ACS in Primary Care[11].

The mistaken understanding of the CHAs surveyed regarding aspects of the oral health of pregnant women is an important point to be discussed, as poor oral hygiene can contribute to the occurrence or worsening of periodontal diseases in pregnant women. Gingivitis, when not monitored and treated, can lead to complications during pregnancy and childbirth, such as membrane rupture and prematurity[12].

A cross-sectional study conducted with pregnant women in Saudi Arabia showed that pregnant women do not know the ideal time to undergo oral treatment or stop seeking the service because they think that access will be difficult, based on some bad experience previously lived in the health unit[13]. Brazilian pregnant women have the right to have at least 1 appointment with a

dentist during prenatal care. The team needs to minimally guarantee this appointment for dental evaluation, which should be prioritized at the beginning of prenatal care, to identify and treat early changes and problems observed[12].

It is also noteworthy that some professionals do not understand the responsibility of the health team, including the CHA, in monitoring all pregnant women, even those who perform prenatal care in other units, such as public reference services in high-risk prenatal care or in supplemental/private health[3].

Some middle-income countries use responsibility-sharing to enable early maternal interventions. To this end, the ACS's performance is central because it facilitates contact between the community and health providers, reducing delays, even if the pregnant woman is a user of the private network[14].

Regarding the CHAs' knowledge about the routine of prenatal care, some important errors were observed and, if they are part of professional practice, they can compromise the quality of care. It was also observed that a significant percentage of the CHAs stated that ferrous sulfate can lead to weight gain, an understanding that is also disseminated in the community and that can contribute to the non-use of supplementation, even when prescribed.

However, this information is incorrect and the use of sulfate in pregnancy is important for the health of the pregnant woman and the fetus, since it prevents and treats cases of iron deficiency anemia. Anemic pregnant women have a higher risk of premature birth and low birth weight[12].

Regarding the beginning of prenatal care, it should begin by the 12th week of pregnancy, and the quality of this follow-up depends on this early recruitment of pregnant women[3], and the ACS is essential to achieve this goal, as it is often this professional from the health team who first knows about a possible pregnancy of women who live in the respective micro-area of activity.

The correct use of folic acid is also an important supplementation in the first trimester of pregnancy, as it contributes to the formation of the neural tube of the fetus[3]. However, some CHAs surveyed were unaware of the importance of such supplementation during prenatal care. Important misconceptions were also observed in relation to the understanding of the signs and symptoms of risk during pregnancy. The dissemination of adequate information about warning signs during pregnancy is essential for women and family members to seek health services early in case of appearance, preventing illness and death.[15-16]

In this sense, the ACS needs to be able to identify pregnant women in the community early during home visits, as well as regularly monitor these women throughout the pregnancy-puerperal period. This makes it possible to monitor the development of the pregnancy, identify risk factors and ensure that pregnant women are receiving essential prenatal care, even those who do not have FHS consultations.

The health education that the ACS must carry out house to house permeates themes such as: the importance of attending medical and prenatal nursing appointments, performing routine exams, vitamin supplementation such as ferrous sulfate and folic acid, adopting healthy lifestyle habits (balanced diet and regular exercise), not using licit and illicit drugs, among other guidelines that are known to contribute to the reduction of complications during pregnancy.[7,17]

In addition, the ACS is also a vital link between pregnant women and formal health services. It facilitates access to consultations, helps in scheduling exams and provides guidance on the rights of pregnant women in the health system, contributing to a more humanized and comprehensive care. Finally, the trained CHA also plays a prominent role in the identification of risk signs and symptoms and contributes to the feasibility of referrals to specialized services, which is essential for the implementation of early, timely interventions that reduce the severity of obstetric complications[12,17].

In this regard, the care model adopted by the Brazilian Ministry of Health proposes changes in the health care of women and children, bringing as a guideline the guarantee of good practices and safety in the care of the pregnancy-puerperal cycle. One of the actions for this is the incentive for professional training and continuing education in the context of assistance to pregnant women and puerperal care, so permanent education practices for the ACS are essential[18].

In the present analysis, the scarcity of studies with a similar proposal in other Brazilian cities made it difficult to make a broader comparison between the knowledge of the professionals in the municipality surveyed and the reality of the CHAs allocated in different regions of the country. However, this lack of references shows the importance of replicating the present research in other locations.

It is important to highlight some limitations of this study. As this is a cross-sectional study, it does not allow the establishment of causal relationships. In addition, the difficulty in contacting some CHAs, even after several attempts by telephone and through the UBS nurse, resulted in the loss of part of the group that would initially be formed by all the CHAs in the municipality. However, the study offers the advantage of being able to be replicated in different Brazilian contexts, enabling comparisons and diagnoses on the knowledge of these professionals. This understanding can serve as a basis for training that actually positively impacts the work of the CHAs directed to maternal health.

Conclusion

Among the CHAs in the municipality, less than half were classified as having high knowledge about prenatal care. Some misunderstandings were observed that, if they are passed on to pregnant women or put into practice in their care, can compromise maternal and fetal well-being.

The fact that having knowledge about the general attributions of the profession is associated with a higher level of knowledge about prenatal care evidences the importance that municipalities should give to introductory courses for the preparation of CHAs, in addition to the relevance of continuing and continuing education

The information collected here can be used for the elaboration and implementation of training aimed at the greatest weaknesses in the knowledge of the CHAs, thus improving the care offered by these professionals to pregnant women, which can directly impact the improvement of maternal and child health.

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Correspondent Author
Chalana Duarte de Sena Fraga
State University of Bahia
Campus VII, Rodovia Lomanto Júnior, Br. 407, km 127, s/n.
ZIP: 48970-000. Senhor do Bonfim, Bahia, Brazil.
cdsena@uneb.br