Artigo Original

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Prenatal care in the family health strategy: a cross-sectional study

Cuidado pré-natal na estratégia saúde da família: estudo transversal

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Resumo

Introdução*:* A qualidade da assistência pré-natal é essencial para a saúde materno-infantil, sendo sua avaliação uma potente fonte de informação para nortear gestores e profissionais de saúde. Para esses fins, a observação da consulta de pré-natal proposta para o atual estudo pode minimizar as limitações impostas pela obtenção dos dados a partir do usuário que é predominante nas pesquisas. ***Objetivo***: Avaliar a qualidade da assistência pré-natal nos serviços de saúde da Estratégia Saúde da Família em dois municípios do Estado da Paraíba, Brasil. ***Materiais e Métodos***: Estudo transversal realizado em 40 equipes de saúde, com observação das consultas de pré-natal realizadas por médicos e enfermeiros, e avaliação da satisfação do usuário. Os resultados foram comparados segundo o município de atuação do profissional. ***Resultados***: Dos 40 profissionais, 22 tinham vínculo por concurso público e 28 atuavam na equipe de saúde dois anos ou mais. No mínimo 1/3 das gestantes não recebeu a atenção esperada para a maioria dos procedimentos clínico-obstétricos, exames, tratamentos (suplementação) e aconselhamento preconizados, inclusive para práticas que dependem basicamente da atitude do profissional. Algumas práticas foram mais frequentes entre os profissionais do município com maior quantidade de médicos e enfermeiros concursados. A satisfação das gestantes foi de 61,7%, sem diferença entre os municípios. ***Conclusão***: A avaliação apontou a necessidade de melhorias nas práticas profissionais preconizadas para um pré-natal de qualidade, inclusive aquelas que não representam grandes custos ao sistema de saúde. Revelam-se graves deficiências na realização de procedimentos de cuidados clínicos, exames, suplementação e aconselhamento.

Palavras-chave: atenção primária à saúde; cuidado pré-natal; desempenho profissional

Abstract

Introduction*:* The quality of prenatal care is essential for maternal and child health, and its evaluation is a powerful source of information to guide managers and health professionals. For these purposes, the observation of the prenatal consultation proposed for the current study can minimize the limitations imposed by obtaining the data from the user that is predominant in the surveys. ***Objective***: To evaluate the quality of prenatal care in the health services of the Family Health Strategy in two municipalities in the State of Paraíba, Brazil. ***Materials and Methods***: Cross-sectional study conducted in 40 health teams, with observation of prenatal consultations performed by physicians and nurses, and evaluation of users' satisfaction. The results were compared according to the municipality where the professionals worked. ***Results***: Of the 40 professionals, 22 were linked by public tender and 28 worked in the health team for two years or more. At least 1/3 of the pregnant women did not receive the expected attention for most of the recommended clinical-obstetric procedures, exams, treatments (supplementation) and counseling, including for practices that basically depend on the attitude

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of the professionals. Some practices were more frequent among professionals in the municipality with the highest number of physicians and nurses. The satisfaction of pregnant women was 61.7%, with no difference between municipalities. ***Conclusion***: The evaluation pointed out the need for improvements in the professional practices recommended for quality prenatal care, including those that do not represent great costs to the health system. Serious deficiencies are revealed in the performance of clinical care procedures, examinations, supplementation and counseling.
Keywords: primary health care; prenatal care; work performance

Introduction

The quality of prenatal care is fundamental for maternal and child health[1,2]. Thus, the Ministry of Health instituted the Prenatal and Birth Humanization Program (PBHP) in order to standardize care for pregnant women in Brazil. The PBHP establishes important quality parameters related to the beginning and number of consultations, as well as in relation to a set of laboratory tests and necessary health education actions[3]. While the early start of prenatal care allows access to diagnostic-therapeutic methods and the adequate number of consultations allows adequate monitoring and timely interventions, clinical and laboratory examinations are important to identify risk situations that need timely actions[4,5]. At this juncture, the Stork Network was suggested as a strategy to structure and organize maternal and child health care in the country through a care network that guarantees, among others, humanized care for pregnancy, delivery and the puerperium. In the Network, Brazilian municipalities are responsible for the operationalization and coordination of actions[6].

The evaluation of prenatal care is a powerful source of information to guide health managers and professionals, especially in countries such as Brazil that have wide regional, economic, and social inequalities and access to health services[1,2,4,7]. In this sense, it is suggested that the access of pregnant women to prenatal care can be influenced by individual characteristics related to socioeconomic situation and care models[1,2,5]. This situation is not only characteristic of Brazil, but of middle and low-income countries in general[8]. The quality of prenatal care largely determines the differences in maternal mortality between developed and developing countries[9].

In Brazil, prenatal care shows increasing coverage, with important reductions in social and regional inequalities[1]. However, studies focusing on quality have shown marked deficiencies and social inequalities that include less access by women living in the North and Northeast regions, as well as more compromised adequacy due to socioeconomic vulnerability[2,3,10]. Ethnic-racial inequalities are also present, like the indigenous population. In the First National Survey of Health and Nutrition of Indigenous Peoples, it was evidenced that only 16% of pregnant women had seven or more prenatal consultations and 53% had recommended laboratory tests[11]. Nevertheless, data from the state of Pernambuco showed a positive time trend between 2006 and 2016 regarding prenatal consultations and laboratory tests. In the state, 50.4% of pregnant women had adequate prenatal care in 2016, while in 2006 there were 37.7%[12].

Despite the existing knowledge on the subject, there are also limitations of research regarding the predominant use of secondary information or information provided by the participants, which are susceptible to memory bias and impair the reliability of the results as a consequence of compromised accuracy[5]. In addition, evidence on the attitudes and behaviors of health professionals is still needed[8]. To

minimize such limitations, observation was used as a procedure to obtain data[13].

The objective was to evaluate the quality of prenatal care in the health services of the Family Health Strategy (FHS) in two municipalities in the State of Paraíba, Brazil.

Materials and Methods

Study design

This is a cross-sectional study focused on the evaluation of prenatal care in the FHS based on the professional characteristics of service providers, their practices during pregnant women's consultations and the satisfaction of users.

Context

The two municipalities of the State of Paraíba of 150,000 inhabitants or more that received funding incentives for the structuring and implementation of food and nutrition actions[14] and actions aimed at the prevention of childhood obesity in the context of the School Health Program[15] were selected. These two municipalities are the largest in the state, one consisting of five health districts with 191 family health teams and the other of 10 health districts with 107 family health teams. In the first municipality, two conventional health teams and two from the More Doctors *Mais Médicos* Program were selected to participate in the study, per health district, totaling 20 teams; in the other municipality, one team from each model per district was selected, which also totaled 20 teams. The 40 teams included in the study were randomly selected when necessary.

Participants

The study was carried out in the health units of the teams selected for the research, between July 2018 and July 2019. In each drawn health team, all 40 professionals in charge of prenatal consultations and pregnant women consulted by them during the consultation held on the day of data collection, on a typical working day, were included.

Data sources

A standardized questionnaire with closed questions was applied to the service provider who underwent the prenatal consultation in order to outline their professional profile. Information on professional practices was obtained by observing prenatal consultations. In addition, the pregnant women answered questions related to their satisfaction with the prenatal care received.

The characteristics of the health professionals considered were the profession, the type of bond, the time working in the health team, the completion of graduation or residency in collective health/health family/medicine of family and participation in training on nutrition in pregnancy (short and medium-term courses, in-service training and events with participation in some course).

The observation of the prenatal consultation took place by a pair of interviewers who explained in advance the purpose of the activity and remained at the end of the consultation room without expressing any type of opinion or behavior. A specific form was used to verify and note the procedures adopted, with answer alternatives "yes", "no" and "not applicable" (for practices not considered indispensable based on the consultation number, gestational age and previous performance). The checklist was divided into five areas: obstetric history, clinical-obstetric procedures, routine examinations, treatment (supplementation) and counseling (Box 1)[16].

Box 1. Aspects of the evaluation of professional practices during prenatal care taken into account in the study.

Areas and criteria used to measure consultation quality
Area I- Assessment of obstetric history
Ask about previous prenatal appointments in the current pregnancy
Ask about the time of pregnancy
Ask about the date of your last period
Ask about the probable date of birth
Ask about the last pregnancy/childbirth
Ask about a history of illness
Ask about the history of medication use
Area II - Clinical and obstetric procedures
Weigh and record weight
Measure and record height
Feel the pulse
Check blood pressure
Area III - Routine examinations
Examine for signs of anemia
Examine for the presence of jaundice
Examine for edema
Examine the abdomen
Examine the fetus (position, movement and heart rate)
Request a blood test
Request a urine test
Request ultrasound
Area IV - Treatment (supplementation)
Prescribe iron and/or folic acid supplements
Prescribe calcium supplements
Prescribe vitamin supplements
Area V - Counseling
Recommend eating more
Recommend a balanced diet
Recommend the need to eat seasonal fruit
Recommend the need to eat green/colored vegetables
Recommend drinking plenty of water
Recommend the need to consume iodized salt
Recommend the need to rest for at least 2 hours throughout the day
Recommend the need to maintain personal hygiene
Recommend avoiding heavy work
Recommend avoiding intercourse at the beginning and end of pregnancy
Talking about danger signs in pregnancy i. Vaginal bleeding ii. Seizure iii. Severe headache iv. Severe anemia v. Blurred vision vi. Swelling of the hands-feet-face vii. Hypertension viii. Excessive fever ix. Decreased fetal movement x. Vaginal flow failure
Talk about the importance of going to the health unit for complications
Talk about the importance of securing some transportation before giving birth

Areas and criteria used to measure consultation quality
Talk about the importance of saving money in case of emergency
Talk about the need for blood typing tests
Talk about the need to identify potential blood donors
Indicate the need for the DTP vaccine
Indicate the need for regular prenatal visits and examinations
Indicate the need for iron and/or folic acid supplementation
Indicate the need for calcium supplementation
Indicate the need for vitamin supplements
Talk about the importance of the Pregnant Women's Health Booklet
Talk about the importance of breastfeeding
Talk about essential newborn care i. Dry and roll up at birth ii. Early initiation of breastfeeding iii. Late bath iv. Umbilical cord care v. Attention to low birth weight vi. Immunization
Talk about the newborn's danger signs
Advising on the return date for the next appointment

After the consultation, the pregnant women were asked to answer three questions related to their satisfaction with the prenatal services received, adapted from the loyalty items of the Portuguese version of the European Task Force on Patient Evaluation of General Practice Care (EUROPEP)[17]. The users answered if the health unit offers adequate conditions for prenatal care, if they would recommend the health unit to their family or friends in case of pregnancy and if they would move for some reason to another health unit to perform prenatal care. The interviewer gave the following answer alternatives: "0 = strongly disagree", "1 = partially disagree", "2 = neither agree nor disagree", "3 = partially agree", "4 = strongly agree". For analysis, the two alternatives of positive responses were grouped and the question considered adequate. A user was described as satisfied when the three items obtained the appropriate rating.

Measures adopted to avoid bias

The team was composed by health professionals and students with previous experience in field work and supervised by a trained professional. The quality control of the study included training and standardization of the interviewers, construction of an Instruction Manual and conducting a pilot study. Data were organized in spreadsheets and entered in double entry into a custom database with consistency checks and range restrictions. The Validate application of Epi Info software version 3.3.2 was used to analyze the consistency of the data. Cases of divergences were verified and rectified through a new consultation of the respective questionnaires.

Study variables

Variables related to the professional profile, the profession (physician, nurse), the type of employment relationship (public tender employee, hired), the time of employment in the health team (two years or more, less than two years), the completion of graduate studies or residency in collective health/family health/family medicine (yes, no) and participation in training on nutrition in pregnancy, puerperium and lactation (yes, no) were considered.

In the context of the health professionals' practices during the pregnant woman's consultation, the performance or not of the procedures recommended to measure the quality of the prenatal consultation in relation to obstetric history, clinical-obstetric procedures, routine exams, treatment (supplementation) and counseling were considered as variables (Box 1). According to the prenatal services received pregnant women were classified as satisfied or dissatisfied.

Statistical methods

Differences for the variables related to the professional profile and user satisfaction according to the municipality were analyzed using Fisher's Exact test. The association between the professionals' practices and the municipality where the health professional works was verified using the chi-square or Fisher's Exact test. O nível de significância admitido foi de 5%. Stata software version 12.0 was used.

Ethical considerations

The research project was approved by the Research Ethics Committee of the State University of Paraíba (Opinion 2,219,604). All research participants signed the Informed Consent Form as a necessary condition for participation in the study.

Results

Of the 40 professionals who participated in the study, seven were physicians and 33 were nurses. There was a predominance of professionals linked by public tender (n = 22), working in their health team for two years or more (n = 28), with graduate or residency in collective health/family health/family medicine (n = 34) and without having participated in training on nutrition during pregnancy (n = 28). Only the type of bond showed a difference when comparing the professionals from the two municipalities, with a higher frequency of public tender professionals in the city of Campina Grande (Table 1).

Table 1. Characteristics of Family Health Strategy health professionals involved in prenatal care according to the municipality where the professional works. Campina Grande and João Pessoa, Paraíba, 2018-2019.

Features	Total (N=40)	Campina Grande (N=20)	João Pessoa (N=20)	p-value[a]
	n	n	n	
Profession				0.212
Medical	7	5	2	
Nurse	33	15	18	
Type of link				0.011
Competitive	22	15	7	
Contractor	18	5	13	
Length of time in current position				0.168
2 years or more	28	16	12	
Less than 2 years	12	4	8	
Postgraduate degree or residency in public health/family health/family medicine				0.077
Yes	34	15	19	
No	6	5	1	
Training on nutrition during pregnancy, puerperium and lactation				0.168
Yes	12	4	8	
No	28	16	12	

a) Fisher's Exact Test.

The prevalence of professionals' practices during prenatal consultations is available in Tables 2 and 3. Frequencies lower than 66.8% were observed for questioning about the last pregnancy/delivery; in the area of evaluation of obstetric history; measurement and recording of height and pulse taking; in the area of clinical-obstetric procedures; examination of signs of anemia, the presence of jaundice and edema and the request for blood, urine and ultrasound tests, in the routine area of examinations; the prescription of ferrous sulfate supplements and/or folic acid, calcium and vitamins; in the treatment area (Table 2); as well as for all counseling actions, except guidance on the need to take ferrous sulfate supplement and/or folic acid and the date of return for a next appointment (Table 3).

When comparing the actions developed according to the municipality, it was possible to observe higher frequencies among health professionals who worked in Campina Grande for some practices related to obstetric history (asking about the duration of pregnancy and probable date of delivery), procedures (measuring the pulse rate) and examinations (examining signs of anemia, the presence of jaundice, the presence of edema, the abdomen and the fetus) (Table 2). In the counseling area, similar results were recorded for the advice provided on personal hygiene, vaginal flow failure, need for regular prenatal visits and examinations, supplementation with iron/folic acid, supplementation with calcium, immunization of the newborn and danger signs of the newborn (Table 3).

Table 2. Obstetric history assessment actions, procedures, tests and treatment (supplementation) developed by Family Health Strategy health professionals during prenatal consultations according to the municipality where the professional works. Campina Grande and João Pessoa, Paraíba, 2018-2019.

Actions taken	Total (N=94)		Campina Grande (N=52)		João Pessoa (N=42)		p-value[a]
	n	%	n	%	n	%	
Assessment of obstetric history							
Ask about previous prenatal appointments in the current pregnancy							0.469
Yes	63	71,6	35	68,6	28	75,7	
No	25	28,4	16	31,4	9	24,3	
Ask about the time of pregnancy							0.017
Yes	84	89,4	50	96,2	34	80,9	
No	10	10,6	2	3,8	8	19,1	
Ask about the date of your last period							0.719
Yes	64	79,0	37	80,4	27	77,1	
No	17	21,0	9	19,6	8	22,9	
Ask about the probable date of delivery							0.029
Yes	56	71,8	38	80,8	18	58,1	
No	22	28,2	9	19,2	13	41,9	
Ask about the last pregnancy/childbirth							0.949
Yes	56	65,1	34	65,4	22	64,7	
No	30	34,9	18	34,6	12	35,3	
Ask about a history of illness							0.137
Yes	74	78,7	38	73,1	36	85,7	
No	20	21,3	14	26,9	6	14,3	
Ask about the history of medication use							0.526
Yes	78	83,0	42	80,8	36	85,7	
No	16	17,0	10	19,2	6	14,3	
Clinical-obstetric procedures							
Weigh and record weight							0.254

Actions taken	Total (N=94)		Campina Grande (N=52)		João Pessoa (N=42)		p-value[a]
	n	%	n	%	n	%	
Yes	89	94,7	48	92,3	41	97,6	
No	5	5,3	4	7,7	1	2,4	
Measure and record height							0.419
Yes	42	56,0	28	59,6	14	50,0	
No	33	44,0	19	40,4	14	50,0	
Feel the pulse							0.000
Yes	18	19,2	17	32,7	1	2,4	
No	76	80,8	35	67,3	41	97,6	
Check blood pressure							0.254
Yes	89	94,7	48	92,3	41	97,6	
No	5	5,3	4	7,7	1	2,4	
Exam routine							
Examine for signs of anemia							0.048
Yes	17	18,1	13	25,0	4	9,5	
No	77	81,9	39	75,0	38	90,5	
Examine for the presence of jaundice							0.036
Yes	15	16,0	12	23,1	3	7,1	
No	79	84,0	40	76,9	39	92,9	
Examine for edema							0.006
Yes	55	58,5	37	71,2	18	42,9	
No	39	41,5	15	28,8	24	57,1	
Examine the abdomen							0.004
Yes	82	87,2	50	96,2	32	76,2	
No	12	12,8	2	3,8	10	23,8	
Examine the fetus (position, movement and heart rate)							0.000
Yes	79	84,9	50	96,2	29	69,1	
No	15	15,1	2	3,8	13	30,9	
Request a blood test							0.320
Yes	41	50,6	24	55,8	17	44,7	
No	40	49,4	19	44,2	21	55,3	
Request a urine test							0.491
Yes	44	52,4	22	48,9	22	56,4	
No	40	47,6	23	51,1	17	43,6	
Request an ultrasound							0.386
Yes	42	51,2	25	55,6	17	45,9	
No	40	48,8	20	44,4	20	54,1	
Treatment (supplementation)							
Prescribe iron and/or folic acid supplements							0.311
Yes	35	37,2	17	32,7	18	42,9	
No	59	62,8	35	67,3	24	57,1	
Prescribe calcium supplements							0.366
Yes	1	1,1	1	1,9	0	0,0	
No	93	98,9	51	98,1	42	100,0	
Prescribe vitamin supplements							0.878
Yes	2	2,1	1	1,9	1	2,4	
No	92	97,9	51	98,1	41	97,6	

a) Chi-square or Fischer's exact test (for cases with a frequency of less than five).

Table 3. Counseling actions developed by Family Health Strategy health professionals during prenatal consultations according to the municipality where the professional works. Campina Grande and João Pessoa, Paraíba, 2018-2019.

Actions taken	Total (N=94)		Campina Grande (N=52)		João Pessoa (N=42)		p-value[a]
	N	%	n	%	n	%	
Recommend eating more							0.390
Yes	17	18,1	11	21,2	6	14,3	
No	77	81,9	41	78,8	36	85,7	
Recommend a balanced diet							0.507
Yes	55	58,5	32	61,5	23	54,8	
No	39	41,5	20	38,5	19	45,2	
Recommend the need to eat seasonal fruit							0.887
Yes	44	46,8	24	46,2	20	47,6	
No	50	53,2	28	53,8	22	52,4	
Recommend the need to consume green/colored vegetables							0.581
Yes	41	43,6	24	46,2	17	40,5	
No	53	56,4	28	53,8	25	59,5	
Recommend drinking plenty of water							0.784
Yes	35	37,2	20	38,5	15	35,7	
No	59	62,8	32	61,5	27	64,3	
Recommend the need to consume iodized salt							0.669
Yes	8	8,5	5	9,6	3	7,1	
No	86	91,5	47	90,4	39	92,9	
Recommend the need to rest for at least 2 hours throughout the day							0.397
Yes	12	12,8	8	15,4	4	9,5	
No	82	87,2	44	84,6	38	90,5	
Recommend the need to maintain personal hygiene							0.033
Yes	18	19,2	14	26,9	4	9,5	
No	76	80,8	38	73,1	38	90,5	
Recommend avoiding heavy work							0.555
Yes	11	11,7	7	13,5	4	9,5	
No	83	88,3	45	86,5	38	90,5	
Recommend avoiding intercourse at the beginning and end of pregnancy							0.827
Yes	4	4,3	2	3,8	2	4,8	
No	90	95,7	50	96,2	40	95,2	
Talking about danger signs in pregnancy: vaginal bleeding							0.707
Yes	31	33,0	18	34,6	13	30,9	
No	63	67,0	34	65,4	29	69,1	
Talking about danger signs in pregnancy: seizures							0.112
Yes	2	2,1	0	0,0	2	4,8	
No	92	97,9	52	100,0	40	95,2	
Talking about danger signs in pregnancy: severe headache							0.748
Yes	17	18,1	10	19,2	7	16,7	
No	77	81,9	42	80,8	35	83,3	
Talking about danger signs in pregnancy: severe anemia							0.829
Yes	5	5,3	3	5,8	2	4,8	
No	89	94,7	49	94,2	40	95,2	
Talking about danger signs in pregnancy: blurred vision							0.878
Yes	2	2,1	1	1,9	1	2,4	
No	92	97,9	51	98,1	41	97,6	
Talking about danger signs in pregnancy: swelling of the hands-feet-face							0.142
Yes	12	12,8	9	17,3	3	7,1	
No	82	87,2	43	82,7	39	92,9	
Talking about danger signs in pregnancy: high blood pressure							0.109

Actions taken	Total (N=94)		Campina Grande (N=52)		João Pessoa (N=42)		p-value[a]
	N	%	n	%	n	%	
Yes	18	19,2	13	25,0	5	11,9	
No	76	80,8	39	75,0	37	88,1	
Talking about danger signs in pregnancy: excessive fever							0.213
Yes	4	4,3	1	1,9	3	7,1	
No	90	95,7	51	98,1	39	92,9	
Talking about danger signs in pregnancy: decreased fetal movements							0.878
Yes	2	2,1	1	1,9	1	2,4	
No	92	97,9	51	98,1	41	97,6	
Talking about danger signs in pregnancy: vaginal flow failure							0.032
Yes	31	33,0	22	42,3	9	21,4	
No	63	67,0	30	57,7	33	78,6	
Talking about the importance of going to the health unit for complications							0.414
Yes	31	33,0	19	36,5	12	28,6	
No	63	67,0	33	63,5	30	71,4	
Talking about the importance of securing some transportation before giving birth							0.323
Yes	5	6,4	4	8,7	1	3,1	
No	73	93,6	42	91,3	31	96,9	
Talking about the importance of saving money in case of emergency							0.372
Yes	2	2,2	1	1,9	1	2,4	
No	92	97,8	51	98,1	41	97,6	
Talking about the need for blood typing tests							0.743
Yes	24	27,9	13	26,5	11	29,7	
No	62	72,1	36	73,5	26	70,3	
Talking about the need to identify potential blood donors							0.808
Yes	4	4,3	2	3,9	2	4,8	
No	90	95,7	50	96,1	40	95,2	
Indicate the need for the DTP vaccine							0.240
Yes	37	41,1	17	35,4	20	47,6	
No	53	58,9	31	64,6	22	52,4	
Indicate the need for regular prenatal visits and examinations							0.011
Yes	56	59,6	37	71,1	19	45,2	
No	38	40,4	15	28,9	23	54,8	
Indicate the need for iron and/or folic acid supplementation							0.001
Yes	66	70,2	44	84,6	22	52,4	
No	28	29,8	8	15,4	20	47,6	
Indicate the need for calcium supplementation							0.039
Yes	5	5,3	5	9,6	0	0,0	
No	89	94,7	47	90,4	42	100,0	
Indicate the need for vitamin supplements							0.664
Yes	14	14,9	7	13,5	7	16,7	
No	80	85,1	45	86,5	35	83,3	
Talking about the importance of the Pregnant Women's Health Booklet							0.678
Yes	47	50,0	27	51,9	20	47,6	
No	47	50,0	25	48,1	22	52,4	
Talking about the importance of breastfeeding							0.759
Yes	21	22,3	11	21,1	10	23,8	
No	73	77,7	41	78,9	32	76,2	
Talking about essential newborn care: drying and wrapping at birth							0.399
Yes	1	1,2	1	2,1	0	0,0	
No	79	98,8	46	97,9	33	100,0	
Talking about essential newborn care: starting breastfeeding early							0.230
Yes	2	2,5	2	4,3	0	0,0	
No	78	97,5	45	95,7	33	100,0	

Actions taken	Total (N=94)		Campina Grande (N=52)		João Pessoa (N=42)		p-value[a]
	N	%	n	%	n	%	
Talking about essential newborn care: delayed bathing							0.399
Yes	1	1,2	1	2,1	0	0,0	
No	79	98,8	46	97,9	33	100,0	
Talking about essential newborn care: umbilical cord care							-
Yes	0	0,0	0	0,0	0	0,0	
No	80	100,0	47	100,0	33	100,0	
Talking about essential newborn care: attention to low birth weight							0.230
Yes	1	1,3	0	0,0	1	3,0	
No	79	98,7	47	100,0	32	97,0	
Talking about essential newborn care: immunization							0.049
Yes	25	31,3	19	38,0	6	18,2	
No	55	68,7	31	62,0	27	81,8	
Talking about the newborn's danger signs							0.004
Yes	18	22,5	16	33,3	2	6,2	
No	62	77,5	32	66,7	30	93,8	
Advising on the return date for the next appointment							0.242
Yes	86	91,5	46	88,5	40	95,2	
No	8	8,5	6	11,5	2	4,8	

a) Chi-square or Fischer's exact test (for cases with a frequency of less than five).

User satisfaction with the prenatal services received by the health team was 61.7%, with no difference when comparing users from the city of Campina Grande (65.4%) and João Pessoa (57.1%).

Discussion

This study aimed to evaluate and compare the quality of prenatal care offered in FHS in two municipalities in the state of Paraíba. For these purposes, qualitative indicators were used to more effectively assess the quality of prenatal care [5].

The main findings point to a worrying situation, since in four of the five areas of analysis, for most of the evaluation parameters, at least 1/3 of the pregnant women did not receive the expected attention. These problems referred to several spheres of prenatal care with a focus on recommended clinical-obstetric procedures, examinations, supplementation and counseling. Similar results were found in a review of the Brazilian literature published between 2005 and 2015, highlighting a decrease in the adequacy of prenatal care when considering other components of care besides the time of beginning of prenatal care and the number of consultations[5]. More recent national studies confirm that the basic health network in Brazil still has flaws in the quality of care for pregnant women during prenatal services[10,18,19], related to both structural barriers and management and care processes[20]. Similar findings have been reported according to the experience of women who were questioned about the right to prenatal care[2] and in research in other underdeveloped countries[8,9]. In addition, studies based on the evaluation of the completion of the pregnant woman's booklet have shown neglect, suggesting problems in the quality of prenatal care and, therefore, the need for improvements[21,22].

However, the available literature also shows that the existing knowledge is based on information obtained through the application of questionnaires to users of health services[5,10,18,19]. Thus, the importance of the results of the current study is linked to its methodological advancement, since the observation of

prenatal consultations enables the evaluation with greater accuracy[13]. In the same vein, another limitation of the studies on the theme circumvented through this research refers to the analysis of the reality of only one specific municipality or locality[5], not allowing us to understand possible differences in the performance of care[7]. This perspective allowed another important result to be obtained by verifying different frequencies in some of the practices of health professionals according to the municipality of operation.

Regarding the characteristics of health professionals, which was the first aspect evaluated in the current study, it was observed that more than 1/3 of them had a contract and had worked in the health team for less than 2 years. This profile reinforces the professional turnover and temporary contracts that characterize the FHS workforce, which may have a negative impact on the quality of care[23]. In addition, the frequency of professionals linked by public tender was higher among those based in the city of Campina Grande, which may be related to the specificities of each municipality in this regard.

The findings of this study are similar to those recorded among nurses and physicians in the northwest region of Goiânia, showing high proportions of professionals with graduate degrees related to public health/primary health care[24]. A survey carried out in Porto Alegre pointed out that health professionals working in cities with greater urban and economic development had greater access to health training programs and courses that can generate disparities in professional qualification and service provision[25]. This study included the two municipalities of the State of Paraíba of greater economic and educational importance, possibly providing the training of FHS professionals in collective health/family health/family medicine. Despite this, prenatal care showed ample shortcomings.

In the current study, there was a high frequency of professionals without training on nutrition during pregnancy, puerperium and lactation. This result may be related to the lack of qualification opportunities in the area of food and nutrition for health professionals[26]. These circumstances can contribute negatively to nutritional care practices in primary care and comprehensive care[27-29]. Specifically for the care of pregnant women, care practices in the area of nutrition are relevant considering that eating habits during pregnancy have repercussions on the health of the mother and child, both in the gestational and postpartum phases and in the first years of life[30,31]. In the Brazilian context, deviations in eating habits characteristic of pregnancy strengthen the need for trained professionals to implement food and nutrition education actions for this population group[31]. Thus, investing in nutrition training for physicians and nurses becomes essential[27-29]. For this, it is important that health professionals have access to continuing education actions that meet the characteristics and needs of the assisted population[2].

Studies focused on the evaluation of prenatal care in Brazil showed the provision of inadequate services related to the performance of clinical-obstetric procedures[10,32,33] and physical and laboratory exams[10,32,34], which was confirmed by the present study. Concern about such procedures was greater in a study conducted in Bangladesh, where, for example, 77.4% of women had their iron levels evaluated for anemia[35]. In Sub-Saharan African countries, higher proportions were also recorded, with mean values of 66.7% for urinalysis, 82.7% for blood test and 93.9% for pressure measurement[36]. Inadequate conducts in relation to such care are worrying, since they can hide complications and problems during pregnancy with possible negative repercussions for the mother and the baby[5,23]. In addition, they are valuable tools for monitoring fetal growth and well-being. These procedures include evaluations that do not require sophisticated technologies,

which reinforce the discussion pertinent to the quality of care by the professionals[32].

Regarding the prescription of supplements, the results showed that in only 1.1% and 2.1% of the consultations observed, physicians and nurses indicated supplementation with calcium and vitamins, respectively. The practice was more noticed for supplementation with iron and/or folic acid, but only for 37.2% of pregnant women. With regard specifically to calcium supplementation, similar results were recorded with pregnant women using nine basic health units located in four of the regions of Brazil, and the medical prescription of the supplement was reported by 5.1% of the interviewees[37]. In Pakistan, the orientation of the use of iron supplements (69%) and folic acid (64%) reached more acceptable levels, according to the results of a research that also used the observation of the service as a procedure in data collection[16]. The findings are even more divergent when information was reported by the women themselves, indicating proportions of supplementation with ferrous sulfate and/or folic acid in Brazilian pregnant women of 96.5%, according to nationwide data[10], 78.7%, in the municipality of João Pessoa (PB)[34], and 96.3%, in the city of Aracaju (SE)[38]. In sub-Saharan African countries, the frequency of pregnant women supplemented with iron (79.6%) was also high[36]. In Bangladesh, the majority of women received folic acid (86.9%) and calcium (79.8%) supplements[35].

Although the adoption of different methodological procedures may have influenced the differences in the percentages of supplementation during prenatal care, it is appropriate to highlight the importance of the results of this study considering that the encouragement of the professionals and the appropriate prescription by them greatly determine the adherence to effective supplementation during pregnancy[39]. In this context, a study conducted in Bangladesh indicated that health professionals had unfounded concerns about iron and folic acid supplementation in early pregnancy that could influence their prescription[40], revealing the profile of professionals as another possible explanation for the devaluation of supplementation. In addition, the supplementation of pregnant women should be valued for its benefits for maternal and child health, which include not only improvements in the nutritional status of micronutrients and prevention of their deficiencies, but also a reduction in the risk of preeclampsia, gestational diabetes, low birth weight, congenital anomalies such as neural tube defects and maternal and perinatal death[37,41,42]. The importance of supplementation can be perceived by pregnant women themselves, as observed in Bangladesh where most women who used iron and folic acid tablets during pregnancy reported increased blood volume with benefits to fetal nutrition, compensation for blood loss during delivery, greater physical strength and improvement in overall health[40].

Low prevalence of educational strategies and guidelines such as those observed in the present study were also shown in other national[7,10,34,38] and international[16,35,43] studies. Qualitative studies have also allowed findings in this regard, according to the user's perception, signaling the lack of guidance as a driver of dissatisfaction[2,44,45]. Thus, a literature review focusing on middle- and low-income countries emphasizes the need for training of health professionals in communication skills[8].

The low level of delivery of educational messages is worrying given its importance in helping pregnant women to recognize signs of pregnancy danger and the relevance of appropriate care such as healthy eating, contributing to better obstetric outcomes[34,43]. In addition, it prepares women for the mental and physical challenges that pregnancy and delivery can pose[16]. These deficiencies further

emphasize the importance of valuing quality indicators in the evaluation of prenatal care[43] and the responsibilities of professionals in the qualification of care, including actions that do not imply additional costs such as the guidelines[7,10]. It is worth mentioning, in this last conjuncture, the necessary care with the duration of consultations that, when reduced, probably implies prioritization of clinical concern and undervaluation of counseling[35,43].

Prenatal care is one of the most capillary programmatic actions within PHC with a wide range of determinants of its quality that include parameters of accessibility, infrastructure, human resources and attention in terms of standardization, organization and management[8,20,46]. There is a substantial amount of studies focused on the evaluation of prenatal care in national/regional coverage[3,10,18,20] and local[1,2,4,32-34,38] that have shown inadequacies in relation to the recommendations and important regional and social inequalities. Thus, there is a need to advance in the aspects of responsibility of municipal management[46].

The current study compared the practices of health professionals in the two largest and most important municipalities in the State of Paraíba. Despite being beyond the scope of the proposed objectives of this study, analysis of performance according to the characteristics of the municipalities highlights that the choice of these municipalities also followed similarities in aspects such as the Municipal Human Development Index (0.720 vs. 0.763), the mean monthly wage (2.2 minimum wages vs. 2.7 minimum wages), the proportion of mothers who are heads of a family without primary education and with a minor child in relation to the total number of mothers who are heads of a family (15.95 vs. 13.00) and FHS coverage (88.06% vs. 86.22%). On the other hand, the results showed differences in the development of some actions according to the municipality where the health professional worked, predominantly for those that basically depended on the attitude of the professionals.

Based on these assumptions, it is possible to consider the influence of factors related to the profile of professionals and the organization and management of services in the associations found. Considering that for the available data, the public tender professional presented a better situation in the municipality in which some practices, such as asking questions about the clinical history, exams that do not require high technologies and counseling, were more frequent, probably, the stability generated by the public tender professional has weighed in such differences. This hypothesis is supported by the influence of stable bonds on the regularity of professional practices, continuity of care and job satisfaction[47].

Regarding user's satisfaction, the proportion recorded (61.7%) is similar to that found among pregnant women in a city in São Paulo (58.4%)[48]. Studies carried out in other countries showed greater satisfaction with prenatal consultations[35,49,50]. It is possible to consider that these differences are related to factors such as the time of the consultation, the concern of the health professionals and the transmission of guidance during care, characteristics highlighted in these same studies for their influence on the level of satisfaction with prenatal care[44,45,50]. Although such analyses were out of reach of the study in question, it should be noted that it highlighted marked deficiencies in counseling actions. In this context, the way in which information is transmitted is highlighted for influencing the quality of communication, requiring investments in the training of health professionals if there are failures in this sense[48].

Direct observation of service delivery can encourage health care providers to offer a more comprehensive service. Even so, the prevalences found for the development of the actions were generally low; if there was overestimation, the findings become more worrying.

Another possible limitation may be related to the inclusion of two municipalities with 150,000 inhabitants or more and a high Municipal Human Development Index that does not represent other realities. Nevertheless, the lack of Brazilian studies with similar approaches is relevant to the findings from the point of view of knowledge and its usefulness in redirecting health services.

It is suggested that the theme of quality of prenatal care in the basic health network in our country and its performance in different realities continue to be studied in new research, notably through studies that make it possible to understand the influence of factors related to the characteristics of teams and work organization, including in terms of effectiveness. Likewise, it is recommended the need for periodic evaluations that make it possible to adopt adjustment measures in a timely manner that effectively contribute to the quality of this care.

Conclusion

The evaluation of prenatal care provided by FHS physicians and nurses pointed out deficiencies in clinical-obstetric procedures, examinations, supplementation and counseling. Thus, improvements in the recommended practices are necessary through strategies that can mitigate the barriers that professionals face, such as training on the subject, the development of communication skills and training for the use of protocols for better prenatal care.

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