



Original Article

PRENATAL CARE: A LOOK AT THE QUALITY

ASSISTÊNCIA PRÉ-NATAL: UM OLHAR SOBRE A QUALIDADE

ATENCIÓN PRENATAL: UNA MIRADA ACERCA DE LA CALIDAD

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This study aimed to assess the quality of prenatal care according to the criteria established in the Prenatal and Birth Humanization Program. Cross-sectional, descriptive and exploratory study carried out with 75 pregnant women registered in Basic Health Units of a municipality in the metropolitan region of Fortaleza, Ceará, Brazil. Data were collected between March and May, 2011, through interviews during prenatal nursing consultations. One highlighted major obstacles to a good quality prenatal care: deficits in the request of second routine laboratory tests in prenatal care, significant number of pregnant women who were not tested for fetal presentation and a small number of pregnant women who did not have the updated vaccine schedule. However investment is necessary to encourage and qualify professionals to perform their practices with a better performance. These practices can be developed through educational and health actions in order to improve the quality of prenatal care.

Descriptors: Prenatal Care; Nursing; Evaluation.

Objetivou-se verificar a qualidade do pré-natal de acordo com os critérios estabelecidos no Programa de Humanização do Pré-Natal e Nascimento. Estudo transversal, descritivo-exploratório, realizado com 75 gestantes atendidas em Unidades Básicas de Saúde, de um município da região metropolitana de Fortaleza-Ceará. Os dados foram coletados no período de março à maio de 2011, por meio de entrevista durante a consulta de enfermagem ao pré-natal. Evidenciaram-se obstáculos importantes para uma boa qualidade do pré-natal, como: déficit na solicitação dos exames laboratoriais de segunda rotina no pré-natal, número significativo de gestantes em quem não foi verificada a apresentação fetal e um pequeno número de gestantes que não se encontrava com o esquema vacinal atualizado. É preciso investimentos para incentivar e capacitar os profissionais a exercerem suas práticas com melhor desempenho. Essas práticas podem ser desenvolvidas por meio de ações de educação em saúde na tentativa de melhorar a qualidade da consulta pré-natal.

Descritores: Cuidado Pré-natal; Enfermagem; Avaliação.

El objetivo fue evaluar la calidad de la atención prenatal según criterios establecidos en el Programa de Humanización en el Prenatal y Nacimiento. Estudio transversal, descriptivo y exploratorio, con 75 embarazadas en Unidades Básicas de Salud de la región metropolitana de Fortaleza-Ceará, Brasil. Los datos fueron recolectados de marzo a mayo de 2011 a través de entrevistas durante la visita de enfermería a la atención prenatal. Los principales obstáculos para la atención prenatal de calidad satisfactoria fueron los déficits en exámenes de laboratorio de segunda rutina en el prenatal, el número de embarazadas sin verificación de la presentación fetal y pequeño número de embarazadas con calendario de vacunas no actualizado. Son necesarios incentivos y capacitaciones de profesionales para ejercicio de prácticas con mejores rendimientos. Estas prácticas se pueden desarrollar mediante acciones de educación y salud para la calidad de la atención prenatal.

Descriptores: Atención Prenatal; Enfermería; Evaluación.

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INTRODUCTION

During pregnancy, changes occur in the body of the woman making this period require special care. It is nine months of preparation for the birth of the baby. It is important that during pregnancy the pregnant women receive a good prenatal care provided by trained nurses and doctors.

A good prenatal care assistance is fundamental to the health of both mother and child and this includes a set of procedures that aims to prevent, diagnose and treat adverse events in pregnancy, childbirth and newborn care. Its absence and / or disability is related to high rates of morbidity and maternal and perinatal mortality⁽¹⁾.

Worldwide, each year, 120 million pregnancies occur, including more than half a million women die from complications during pregnancy, childbirth or the postpartum period, and over 50 million suffer illnesses or disabilities related to pregnancy⁽²⁾. Given this reality, it is a role of the nurse and the doctor from the Family Health Strategy (ESF), co-responsible for antenatal care in the public health care facilities, to offer a good prenatal care.

Studies are unanimous in showing that perinatal health evaluated from the perspective of prenatal care, the number of consultations conducted and the gestational age of initiation of care, protects against prematurity, low birth weight and perinatal death⁽³⁻⁴⁾.

Despite the increase in coverage of antenatal care a study reports failure in the quality of assistance, when evaluated through performance indicators, in which were found high incidence rates of congenital syphilis, the permanence of Pregnancy Induced Hypertension (HIG) as the leading cause of maternal death and small proportion of pregnant women enrolled in the Tracking System Program for Humanization of Prenatal (SISPRENATAL) conduct the minimum cast of actions

recommended by the Program for the Humanization of Prenatal and Birth (PHPN)⁽⁵⁻⁶⁾.

The PHPN was created by the federal government in 2000 through Executive Order no. 569 of the Ministry of Health (MS). This establishes the following criteria for recognizing a good prenatal care: hold the first prenatal appointment until the fourth month of gestation; perform at least six visits for prenatal care, and preferably one in the first quarter, two in the second and three in the third trimester of pregnancy, and postpartum consultation until 42 days after birth; laboratory tests: ABO-Rh and Hemoglobin/Hematocrit, in the first appointment; VDRL, Urine Summary and fasting glycemia, an examination at the first visit and another near the thirtieth week of gestation; offer HIV testing, with an exam at the first visit; application of tetanus vaccine until the recommended immunizing dose or a booster dose in women already immunized⁽⁵⁾.

Due to the quality of prenatal care recommended by the MS, the realization of this research sought to answer the following question: How is the quality of prenatal care according to the criteria of PHPN in a municipality of the metropolitan region of Fortaleza-CE-Brazil? To answer this question, one aimed to verify the quality of prenatal care according to the criteria established in PHPN.

METHODS

Cross-sectional, descriptive and exploratory study, developed in 20 Basic Health Units (UBS) of a municipality in the metropolitan region of Fortaleza, capital of Ceará State, Northeast Brazil.

75 pregnant women accompanied by ESF teams of the respective municipality participated, from March to May, 2011. The sample size was calculated by adopting a confidence coefficient of 95% ($Z_{\alpha} = 1.96$), population (N=347) corresponding to the total number of women enrolled in the Information System of Primary

Care (SIAB); random error of 10% and $P = 50.0$, totaling an "n" sample of 75.

The women were randomly selected and stratified. We excluded pregnant women belonging to an indigenous ESF, because it is a group that needed special permission for the study.

Data were collected by the first author, through interviews conducted based on pre-established form containing questions about demographic, socioeconomic and obstetric variables, in order to present the general profile of the participants, and about the criteria of quality of prenatal care defined in PHPN. One also checked basic procedures of antenatal consultations such as: measurement of weight, blood pressure, fetal presentation and Cardio-Fetal Beats (BCF). Data were organized in *Excel*, 2007 version, analyzed in the

software Statistical Package for the Social Sciences (SPSS) version 16.0. One calculated absolute and relative frequencies of nominal variables and numeric variables, the average (\bar{X}) And the Standard Deviation (SD) were also shown.

One followed the recommendations of Resolution no. 196/96 of the National Health Council, from the Ministry of Health⁽⁷⁾. The research project was approved by the Ethics Committee of the Universidade de Fortaleza according to Protocol number 11-006. Each participant aged 16 years old or older signed the Instrument of Consent and those younger than age 16 had this signed by a responsible person.

RESULTS

The age of respondents ranged from 14 to 45, with an average of 23.83 years and SD of 6.42 years. Despite the prevalence of pregnant women in young adulthood and adulthood (20-35 years), age group that does not represent reproductive risk, one emphasizes the percentage of pregnant teenagers, corresponding to 22 (29.3%) and of pregnant women in the late reproductive phase (over 36 years), adding 3 (4%).

The educational level ranged from no schooling to complete high school, predominating incomplete elementary school among 25 (33.3%) of the pregnant women. Family income ranged from zero to R\$

1,710.00, with an average of R\$ 796.34 and a SD of 384.91, and the minimum wage during the study period was R\$ 545.00. The number of people in the family ranged from one to 11, with an average of 3.63 persons and a standard deviation of 1.92. There is therefore an average per capita income of R\$ 219.37. The occupation of 51 (68.0%) women was housewives, while 19 (25.3%) worked outside their homes. As to marital status, 61 (81.3%) were married or lived in a consensual union. The average parity was 0.99, being the predominant percentage of nulliparous women, which accounted for 35 (46.7%).

Table 1 – Distribution of the number of pregnant women, according to demographic and socioeconomic variables. Metropolitan Region of Fortaleza-CE-Brazil, 2011

Variables (n=75)	n	%	Average (SD)
Age (in years)			23,83(6,42)
14-19	22	29,3	
20-35	50	66,7	
36-45	3	4,0	
Schooling			-
No schooling	1	1,3	
Literate	3	4,0	
Elementary School	40	53,4	
High School	31	41,3	
Family income (in minimum wages)			796,34 (384,91)
≤ 1/2	5	6,7	
> 1/2 - 1	25	33,3	
> 1 - 2	30	40,0	
> 2-3	13	17,3	
> 3-4	2	2,7	
Number of persons in the family			3,63 (1,92)
1-3	44	58,7	
4-6	24	32,0	
7-11	7	9,3	
Occupation			-
Activities of Home	51	68,0	
Student	5	6,7	
Working outside the home	19	25,3	
Marital Status			-
Married or consensual union	61	81,3	
Unmarried or without a partner	14	18,7	
Parity $\bar{X} = 0,99$, SD = 1.42			0,99 (1,42)
None (Nulliparous)	35	46,7	
1 (Primipara)	23	30,7	
2 (Secundipara)	11	14,7	
3-4 (Multipara)	2	2,7	
5-8 (Grand Multipara)	4	5,3	

Table 2 – Number of prenatal visits per gestational trimester. Metropolitan Region of Fortaleza-CE-Brazil, 2011

Gestational Trimester	Number of consultations			Total
	1-3	4-6	7 or more	
First Trimester	4	-	-	4
Second Trimester	18	5	-	23
Third Trimester	6	26	16	48
Total	28	31	16	75

By relating gestational trimester with the number of consultations (Table 2) one observed that 28 performed one to three visits, 31 from four to six and 10 seven or more. There was a predominance of pregnant women in the 3rd trimester, with 48 (62.6%) between 24th and 39th gestational weeks. Out of the pregnant

women who were in the third trimester, 6 (12.5%) had up to three consultations.

The average onset of prenatal care was 1.20 with a SD of 0.40. There was a significant predominance of women who began prenatal care in the first trimester, accounting for 60 (80%) of the pregnant women.

Table 3 – Distribution of the number of pregnant women, according to the request of routine prenatal care examinations. Metropolitan Region of Fortaleza-CE-Brazil, 2011

Exams	1 st consultation (N=75)		30 th weeks (N=42*)	
	N	%	N	%
Blood group and Rh factor				
Yes	74	98.7	-	-
No	1	1.3	-	-
Hemoglobin / hematocrit				
Yes	74	98.7	-	-
No	1	1.3	-	-
Anti-HIV				
Yes	75	100.0	-	-
No	-	-	-	-
Fasting glycemia				
Yes	74	98.7	11	14.7
No	1	1.3	31	85.3
Urinalysis				
Yes	72	96.0	13	17.3
No	3	4.0	29	82.7
VDRL				
Yes	75	100.0	11	14.7
No	-	-	31	85.3

* We excluded 33 women who were at childbearing age who do not apply the request of the second examination.

According to Table 3, the tests to be requested in the first consultation, that is, blood group, Rh factor, Hemoglobin and hematocrit were requested for 74 (98.7%) of pregnant women. Pregnant women who did not have the exams in the first consultation, had the procedure performed on a subsequent visit. All the

women had HIV exam requested. However when the exams are analyzed around the 30th week of pregnancy, one found that 42 (56%) women who were appropriate for gestational age at examination, for 31 (85.5%) fasting glucose and VDRL were not requested, and for 29 (82.7%) there was no request for urinalysis.

Table 4 – Distribution of pregnant women according to trimester, according to standard procedures of verification of prenatal care. Metropolitan Region of Fortaleza-CE-Brazil, 2011

Procedures	Gestational Trimester					
	1 st Quarter (n=4)				1 st Quarter (n=4)	
	N	%	n	%	N	%
Uterine Height						
Yes	4	100	20	87.0	45	93.8
No	0	-	3	13.0	3	6.3
Cardio-fetal heartbeats						
Yes	4	100.0	22	95.7	40	83.3
No	0	-	1	4.3	8	16.7
Fetal Presentation						
Yes	4	100.0	19	82.6	33	68.8
No	0	-	4	17.4	15	31.3
Blood pressure						
Yes	4	100.0	23	100.0	48	100.0
No	-	-	-	-	-	-
Weight						
Yes	4	100.0	23	100.0	48	100.0
No	-	-	-	-	-	-

In Table 4, one identified that in all pregnant women who were in the first trimester procedures were performed standard procedures of prenatal care, even those who did not apply for gestational age, as fetal presentation and cardio-fetal beats (BCF). However,

fetal presentation was not observed in 15 (31.3%) of the pregnant women who were in the third trimester, as well as the BCF in 8 (16.7) pregnant women was not heard. Measures such as blood pressure and weight were observed in all pregnant women.

Table 5 - Distribution of the number of pregnant women according to immunization against tetanus. Metropolitan Region of Fortaleza-CE-Brazil, 2011

Immunization status	Gestational Trimester					
	First Trimester		Second trimester		Third trimester	
	n	%	N	%	n	%
Complete	-	-	11	52.2	36	75.0
Incomplete	4	100.0	12	47.8	12	25.0

Regarding the vaccination status of the pregnant women one observed that women who were in the third trimester 12 (25%) had incomplete immunization, 3 (6.3%) with only one dose, and 9 (18.8%) with two

doses. One found in 4 (100%) of the women who were in the first trimester incomplete immunization, but all had taken a dose of the vaccine, possibly indicating that the scheme will concluded until the end of pregnancy.

DISCUSSION

Studies were found consistent with the average age of the women in this study ($\chi = 23.83$, $SD = 6.42$). In a cohort study, conducted with 152 pregnant women attended a UBS in São Paulo-SP-Brazil, one found that 52 (34%) of the women were aged from 21 to 25 years⁽⁸⁾. Another cohort, prospective, conducted with 141 pregnant women attended in an antenatal low risk service of São Paulo-SP-Brazil, which population with low socioeconomic status, found a prevalence of pregnant women aged between 20 and 30 years⁽⁹⁾. In a cohort of 115 pregnant women attended in the ESF of Campina Grande-PB-Brazil, the average age was 24 years old⁽¹⁰⁾. This means that women in this research and in the studies are getting pregnant predominantly in an age that does not represent reproductive risk. On the other hand, disturbingly, the study found 22 (29.3) pregnant teenagers, reaffirming teenage pregnancy as an important public health problem.

About education, most pregnant women had incomplete elementary school, that is, 25 (33.3%), a similar result was found in a study of 152 pregnant women in a UBS in São Paulo-SP-Brazil, in which 45 % had incomplete primary education⁽⁸⁾. High school accounted for 31 (41.3%) of the women, below the results found in a study with 219 pregnant women attended in antenatal consultations in a charity institution in São Paulo-SP-Brazil, which detected 62.1% of pregnant with the referred schooling⁽¹¹⁾. These findings confirm the discrepancy between women's education in the Northeast and Southeast regions.

The average income per capita found was R\$ 219.37. A similar result was found in a study conducted in Fortaleza, Ceará, Brazil where 62.1% of the pregnant women had a family income until one minimum wage⁽¹²⁾. Study conducted with pregnant adolescents showed that their low socioeconomic status women had resulted in

the delay of seeking early prenatal care damaging the quality of care⁽¹³⁾. This study favors these results because 19% of the women began prenatal care in the second trimester of pregnancy. The occupation of 51 (68.0%) women was housewife, while 19 (25.3%) worked outside their homes.

The average number of people per household in the survey was 3.63, $SD = 1.92$, a finding that confirms the continuous drop in fertility in the country in recent years and which is responsible, in part, for decreasing the number of components in households⁽¹⁴⁾. In 1970, Brazilian women had on average 5.8 children. Thirty years later, this average was 2.3 children. In 2000, with the exception of the North region, the other regions had fertility rates close to the national average rate (2.3 children per woman). The Southeast region had the lowest fertility rate: 2.2 children per woman. However, the rate of teenage pregnancy remains high (23.0%)⁽¹⁵⁾.

About the occupation of pregnant women, 51 (68%) were housewives and 19 (25.3%) worked outside their homes. In a national survey, 50.7% of 15,575 women in childbearing age did not work, among the reasons the fact that they took care of children was reported by 11% of them⁽¹⁴⁾. This shows how motherhood changes a woman's life in physical, emotional and social aspects, because many of these women have to give up their professional training to care for their children.

As to marital status, 61 (81.3%) of the women were married or in a consensual union. Cohort conducted with 141 pregnant women in a philanthropic institution in São Paulo revealed that 106 (75.7%) were married or in a consensual union⁽⁹⁾. This contributes to a better quality of prenatal care, since health professionals should develop strategies to encourage participation of partners during consultations.

As for parity of pregnant women in this research, nulliparity predominated, accounting for 35 (46.7%). This result was similar to that found in a study conducted in five UBS with 392 pregnant women in the city of Pelotas, in which 149 (38%) of the women were nulliparous⁽⁶⁾. These results are converging to low fertility rate in the country.

The average number of consultations in this study was 4.65 with a SD of 2.29. MS recommends that at least six visits during the prenatal should happen, preferably one in the first trimester, two in the second and three in the last trimester⁽⁵⁾. It is also recommended that prenatal starts early (in the first trimester), and it should be regular and comprehensive ensuring that all proposed evaluations are made. Concerning the start of the monitoring of prenatal care one observed that 60 (80%) of the women began prenatal care in the 1st trimester, showing that there was an early captivation. This is an extremely important factor for the health of women and their fetuses, it allows early identification of high-risk pregnancies, as well as the necessary interventions.

Regarding the routine laboratory prenatal exams recommended by the MS, it was observed that the blood type, Rh factor, Hb and Ht, syphilis serology (VDRL) and HIV I and II were required for 100% of the pregnant women. For these tests, there was a good coverage, since these reached almost 100% of the requests. It is a positive aspect for prenatal care in the city researched, because it can capture health problems in early pregnancy and treat them correctly and in the correct time when they happen.

Concerning the laboratory tests that should be requested next to the 30th week of pregnancy (syphilis serology (VDRL), fasting glucose, urinalysis (type 1), we observed a low request by comparing the request in the first appointment, that is, the tests are available, missing therefore initiative by professionals who attend the antenatal care (nurses and doctors).

Some of the complications in pregnancy such as hypertension, eclampsia, gestational diabetes, bad formation are often in women with a predisposing factor, and the professionals should identify and address during pregnancy. However, in many women with such complications there are no previous signs or history that such diseases will arise. Therefore, it is up to the professional to explore early these events by checking blood pressure, weight, gestational age, uterine height and auscultation of BCF.

One observed inequalities among findings in different regions of the country. Study conducted in a UBS from São Bernardino-SC-Brazil with 82 pregnant women, revealed the following findings for laboratory tests: only 26 (31.7%) of pregnant women had blood test, 25 (30.4%) had fasting glucose, 20 (24.3%) of the pregnant women had syphilis serology, 21 (25.6%) underwent urinalysis and serology for toxoplasmosis, 10 (12.1%) had serologic tests for hepatitis and 22 (26.8%) of women had Anti-HIV⁽¹⁶⁾.

A positive aspect found in the study was that in 75 (100%) of the pregnant women was measured weight and blood pressure. In other standard procedures of prenatal care such as calculation of gestational age, uterine height measurement, auscultation of BCF presentation and verification of the fetus obtained satisfactory findings. A study conducted in a charity institution in São Paulo that evaluated medical records of 635 pregnant women in prenatal noted that the adequacy of prenatal care, as the record of the procedures performed in consultations ranged from 92.6% to 97.8%. The procedure with lowest percentage of appropriateness was weight (92.6%) and with greater suitability, the calculation of gestational age (97.8%)⁽¹²⁾. Another study conducted in 16 health centers with 61 patients in Rio Branco AC-Brazil found out that in all auscultations, nurses reported values of fetal heart rate. However, one noted that many of them did not perform palpation of the uterus in all pregnant

women, when auscultated. The procedure of verification fetal presentation was observed in only 20 (32.7%) of pregnant women. Verification of uterine height was a skill developed by nurses in 55 (90.16%) of the women and the calculation of gestational age was performed in 41 (93.18%) (2).

During the study it was observed that 47 (62.6%) of the pregnant women were immunized against tetanus (three prior doses for less than five years). A study conducted in a basic health unit in Sao Bernardino-SC showed up in agreement with the findings revealing that

CONCLUSION

The quality prenatal care is one of the health indicators of the municipalities and action is crucial in reducing morbidity and maternal and perinatal mortality. It is observed an interaction between early onset of prenatal care with education level, whereas investments to improve the quality of care is not restricted only to health, but also to education.

Health professionals during prenatal consultations should not miss the opportunity to interact with these pregnant women emphasizing the importance of completing the prenatal, making them active members of this process.

However the present study is limited by the period of the survey, not allowing the monitoring throughout the prenatal period. Further studies are suggested to follow these practices advocated by PHPN during prenatal consultations.

But it takes more investment to encourage and empower the primary care team to perform their best performing practices. These practices can be developed through education and health actions in an attempt to improve the quality of antenatal care.

60.9% of pregnant women were immunized for tetanus⁽¹⁶⁾. The importance of prenatal care regarding immunization of pregnant women with tetanus toxoid is to identify those who were vaccinated and just guide them, as well as to identify those who have already received one or two doses and complement the scheme with two and one dose, respectively, or identify those without previous vaccination history or with doubtful vaccination and administer all three doses, thus ensuring the protection of mother and child.

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