



# The expectations and satisfaction of pregnant women with prenatal care at a basic health unit in Natal, Brazil: a cross-sectional study

*Expectativas e satisfação das gestantes com o pré-natal de uma unidade básica de saúde de Natal, Brasil: estudo transversal*

*Expectativas y satisfacción de mujeres embarazadas con el cuidado prenatal en una unidad básica de salud en Natal, Brasil: estudio transversal*

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## ABSTRACT

**Objective:** To identify the level of expectations and satisfaction of pregnant women with prenatal care. **Method:** This is a descriptive, cross-sectional study conducted with 86 pregnant women undergoing prenatal care at a Family Health Strategy Unit in the city of Natal, Rio Grande do Norte. Data collection took place from November 2022 to February 2023, through a questionnaire to characterize sociodemographic and obstetric data and the Patient Expectations and Satisfaction with Prenatal Care instrument. The analysis was performed using simple descriptive statistics. **Results:** A total of 86 pregnant women participated in the survey. High expectations (34.93) and high satisfaction (72.93) predominated. In the expectation domain, the subscales "comprehensive care" and "follow-up with the same professional" had low expectations, while "personalized care" and "other services" had high expectations. In the satisfaction domain, all the subscales indicated that pregnant women were satisfied. **Conclusions and implications for practice:** Pregnant women's expectations and satisfaction with prenatal care were evaluated positively. However, some aspects received low satisfaction, especially the characteristics of the system, such as waiting time and waiting room conditions. The results of this study contribute to the improvement of health care for pregnant women.

**Keywords:** Primary Health Care; Prenatal Care; Patient Expectation; Pregnant Women; Health Services Survey; Patient Satisfaction.

## RESUMO

**Objetivo:** Identificar o nível de expectativas e satisfação das gestantes com o cuidado de pré-natal. **Método:** Estudo descritivo, transversal, conduzido com 86 gestantes que realizam o acompanhamento de pré-natal em uma Unidade de Estratégia de Saúde da Família da cidade de Natal, Rio Grande do Norte. A coleta de dados ocorreu de novembro de 2022 a fevereiro de 2023, através de um questionário de caracterização de dados sociodemográficos, obstétricos e o instrumento *Patient Expectations and Satisfaction with Prenatal Care*. A análise foi realizada a partir de estatística descritiva simples. **Resultados:** Participaram da pesquisa 86 gestantes. Foi identificado o predomínio de alta expectativa (34,93) e alta satisfação (72,93). No domínio expectativa, as subescalas "cuidado integral" e "seguimento com o mesmo profissional" tiveram baixa expectativa, enquanto "cuidado personalizado" e "outros serviços" apresentaram alta expectativa. No domínio satisfação, todas as subescalas indicaram satisfação das gestantes. **Conclusões e implicações para a prática:** As expectativas e satisfação das gestantes com relação ao cuidado de pré-natal foram avaliadas positivamente. Contudo, alguns aspectos receberam baixa satisfação, especialmente as características do sistema, como o tempo de espera e as condições da sala de espera. Os resultados deste estudo contribuem para o aperfeiçoamento da assistência em saúde destinada às gestantes.

**Palavras-chave:** Atenção Primária à Saúde; Cuidado Pré-Natal; Expectativa do Paciente; Gestantes; Pesquisa sobre Serviços de Saúde; Satisfação do Paciente.

## RESUMEN

**Objetivo:** Identificar el nivel de expectativas y satisfacción de mujeres embarazadas con la atención prenatal. **Método:** Estudio descriptivo, transversal, realizado con 86 gestantes en control prenatal en una Unidad Estratégica de Salud de la Familia de la ciudad de Natal, Rio Grande do Norte. La recolección de datos se realizó entre noviembre de 2022 y febrero de 2023, a través de un cuestionario que caracteriza datos sociodemográficos y obstétricos y el instrumento *Patient Expectations and Satisfaction with Prenatal Care*. El análisis se realizó mediante estadística descriptiva simple. **Resultados:** Participaron de la investigación 86 mujeres embarazadas. Se identificó el predomínio de altas expectativas (34,93) y alta satisfacción (72,93). En el dominio de expectativas, las subescalas "atención integral" y "seguimiento con el mismo profesional" tuvieron expectativas bajas, mientras que "atención personalizada" y "otros servicios" tuvieron expectativas altas. En el dominio de satisfacción, todas las subescalas indicaron la satisfacción de las mujeres embarazadas. **Conclusiones e implicaciones para la práctica:** Se evaluaron positivamente las expectativas y satisfacción de las gestantes con respecto al cuidado prenatal. Sin embargo, algunos aspectos recibieron baja satisfacción, especialmente las características del sistema, como el tiempo de espera y las condiciones de la sala de espera. Los resultados de este estudio contribuyen a la mejora de la atención de salud de las mujeres embarazadas.

**Palabras clave:** Atención Primaria de Salud; Atención Prenatal; Mujeres Embarazadas; Investigación sobre Servicios de Salud; Satisfacción del Paciente.

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## INTRODUCTION

Prenatal care involves preventive, health-promoting, diagnostic, and therapeutic measures to ensure a favorable outcome throughout pregnancy for both mother and child.<sup>1</sup>

At the national level, the Ministry of Health recommends a minimum of six prenatal consultations, starting from the moment the pregnancy is detected, one consultation in the first trimester, two in the second, and three in the third.<sup>2</sup>

From this perspective, the importance of prenatal care stands out, considering that improving the quality of care for pregnant women has a potential impact on prematurity rates and reducing the rate of infant and maternal morbidity and mortality in the country.<sup>1</sup>

In the Brazilian scenario, a survey conducted between 2003 and 2017 revealed a progressive increase in the coverage of prenatal care over these years.<sup>3</sup> On the other hand, a study carried out in the state of Espírito Santo found that high coverage of prenatal care does not necessarily go hand in hand with improved quality of care<sup>4</sup>.

In the international context, the prenatal care service is also in need of improvement. A study carried out in India found that only 23.5% of women received appropriate prenatal care. Socio-economic conditions play a vital role in determining the quality of care that pregnant women receive.<sup>5</sup>

In the meantime, most of Brazil's municipalities have poor prenatal care in terms of both structural and operational aspects, and, therefore, periodic evaluations are recommended to monitor and adopt measures to improve the quality of care.<sup>6</sup> In this sense, among the indicators that should make up the prenatal care evaluation, the expectations and satisfaction of pregnant women with prenatal care stand out.

From this perspective, "expectations" can be defined as a set of predictions about the outcome of care and professional conduct, based on the user's experience, interpretation of these experiences, and care needs.<sup>7</sup>

"Satisfaction", in turn, can be understood as the degree to which the patient's desired expectations are met by the health professional and/or service. Patient satisfaction has been extensively studied by researchers and health institutions for various reasons, especially to gauge the degree to which demands are met and to discern existing gaps that require improvement.<sup>8</sup>

The correlation between patient satisfaction and adherence to the service must be reported.<sup>9</sup> This highlights the importance of surveys on health services that can measure the expectations and satisfaction of pregnant women, to increase the use of the service and improve the results related to pregnancy, labor, and birth.

It should be noted that studies carried out in this area have a significant impact on the United Nations (UN) Global Agenda 2030, helping to meet the targets set by the third Sustainable Development Goal (SDG).<sup>10</sup>

Thus, the guiding question of this study is: What is the level of expectations and satisfaction of pregnant women with prenatal care? The aim is to identify the level of expectations and satisfaction of pregnant women with prenatal care.

## METHOD

This is a descriptive, cross-sectional study conducted with pregnant women attending prenatal care at a Family Health Strategy Unit (FHS) in the city of Natal, Rio Grande do Norte. The unit chosen for the survey has the characteristic of being a school unit, with a partnership with the Federal University of Rio Grande do Norte (UFRN) in undergraduate, postgraduate, multi-professional residency, and technical courses.

The sample was calculated considering that on October 18, 2022, 110 pregnant women were being monitored. Thus, the sample was statistically calculated via *OpenEpi*, based on the sample size for percentage frequency in a population (random samples), considering the estimated frequency of 58%.<sup>11</sup> The sample size was therefore 86 pregnant women. The sampling model was based on convenience. The sample included pregnant women over the age of 18. Non-attending pregnant women, that is, those who didn't show up for their appointments during the study, were excluded.

The pregnant women were invited to take part in the survey while they were waiting for their prenatal appointment at the Health Unit. The questionnaire and the instrument were filled in by two previously trained researchers in a reserved room provided by the Unit's team, to guarantee privacy and spontaneity.

Data collection took place from November 2022 to February 2023, by filling in a questionnaire to characterize sociodemographic and obstetric data, followed by application of the *Patient Expectations and Satisfaction with Prenatal Care* (PESPC) instrument. The participants who accepted the invitation to participate were briefed about the survey and asked to sign the Free and Informed Consent Form (FICF).

The sociodemographic variables collected were: age (in years), marital status, color, level of education, occupation, family income (in minimum wages), professional status, and religion.

Regarding obstetric variables, the following data was collected: whether they have health insurance, whether they receive prenatal care through health insurance (in addition to the public service), current gestational age (in weeks), obstetric history, parity, type of delivery, whether they received prenatal care in previous pregnancies and how many, whether previous prenatal care was provided at the same service and whether, in general, they were satisfied with the prenatal care they received; number of appointments during the current pregnancy, in which trimester they had their first appointment and whether they had any complications during the current pregnancy.

The PESPC instrument was designed in 2001 with the aim of measuring pregnant women's satisfaction with prenatal care. Therefore, the version adapted and validated in the Brazilian context was used, with due authorization from the authors<sup>12</sup>.

The PESPC has 41 items divided into two domains: expectation and satisfaction, and eight sub-scales, four for each domain. The "expectation" domain comprises: comprehensive care, follow-up with the same professional, personalized care, and other services. Regarding the "satisfaction" domain, the four

sub-scales are: professional information, professional care, team interest, and system characteristics.<sup>13</sup>

The response scale used was the *Likert* type, in which the participants had to mark the degree of agreement with the statements, ranging from one (totally agree) to six (totally disagree). The scores for each domain are obtained by averaging the weighted items in each domain and range from 12 to 72 for the “expectation” domain, where 12 to 36 indicates high expectation and 36 to 72 low expectation; and from 29 to 174 for the satisfaction domain, where 29 to 87 indicates very satisfied and 87 to 174 very dissatisfied. The lower the score, the greater the expectation and satisfaction of pregnant women with prenatal care.<sup>13</sup>

The survey data was organized in *Microsoft Excel 2010* and analyzed descriptively using *Statistical Package for Social Science (SPSS)* version 20.0. The descriptive analysis involved frequency, means, and Standard Deviation (SD).

Regarding ethical issues, the survey was approved by the UFRN Research Ethics Committee (REC), under Certificate of Presentation for Ethical Appreciation (CPEA) 58038522.4.0000.5292 and Opinion No. 5.444.194, with approval on June 1, 2022. Ethical precepts were followed according to Resolution No. 466/2012 of the National Health Council (NHC), preserving the voluntary nature of the participants and their anonymity

## RESULTS

A total of 86 pregnant women receiving prenatal care at the study unit took part in the survey. Regarding sociodemographic data, the average age of the pregnant women was 26.8 years (SD= 6.3), ranging from 18 to 43 years. As for marital status, the majority were in a stable union (45; 52.3%), followed by single women (21; 24.4%) and married women (20; 23.3%). As for color, 47 pregnant women were brown (54.7%), 22 were white (25.6%), and 17 black (19.8%).

In terms of level of education, pregnant women with completed high school (31; 36.0%) prevailed, followed by pregnant women with incomplete high school (19; 22.1%), incomplete elementary school (19; 22.1%), incomplete higher education (8; 9.3%), completed elementary school (5; 5.8%) and completed higher education (4; 4.7%).

As for occupation, the majority of pregnant women were housewives (54; 62.8%), followed by self-employed women (10; 11.6%) (Table 1).

Regarding monthly family income in minimum wages, there was a predominance of pregnant women with an income of one wage (61; 70.9%), followed by pregnant women who reported an income of one to two wages (16; 18.6%) and two to three wages (7; 8.1%). Only one pregnant woman had an income of three to four salaries (1; 1.2%) and one reported an income of more than four minimum salaries (1; 1.2%). In terms of employment status, 65 pregnant women were unpaid (65; 75.6%) and 21 were paid (24.4%).

As for religion, 39 were evangelical (45.3%), 33 were Catholic (38.4%), 13 had no religion (15.1%) and one was Jewish (1.2%). Of all the pregnant women, 81 had no health insurance (94.2%)

and only five did (5.8%). Five had prenatal care through health insurance in addition to the public service (5.8%).

In terms of obstetric data, the current mean gestational age in weeks was 22.86 (SD=11.2), ranging from pregnant women who did not know their precise gestational age to those who were 40 weeks pregnant. The average gestational age serves as a central measure to summarize the average stage of pregnancy, where the minimum and maximum show the variation present in the data.

Out of 86 pregnant women, 58 were multigravidas (67.4%) and 28 were primigravidas (32.6%). The average obstetric history of pregnancies was 2.49 (SD = 1.5), ranging from one to seven. About deliveries, the average number of vaginal deliveries was 0.85 (SD = 1.2), ranging from zero to five. For cesarean sections, the average was 0.34 (SD = 0.6), ranging from zero to three. For forceps deliveries, the average was 0.03 (SD = 0.1), ranging from zero to one. The variations refer to the minimum and maximum number of deliveries recorded by pregnant women.

In addition, of the pregnant women who had another pregnancy, 55 had prenatal care in previous pregnancies (64.0%), three had not (8.1%) and 28 were in their first pregnancy (27.9%). In continuity, of the pregnant women who had prenatal care in other pregnancies, 43 had it in the same health service (50.0%) and 15 had it in another service (18.6%).

**Table 1.** Occupation of pregnant women assisted in a family health strategy in the city of Natal, Rio Grande do Norte, Brazil. November 2022 - February 2023.

Occupation	n	%
House chores	54	62.8
Self-employed	10	11.6
Attendant	3	3.5
Student	3	3.5
Babysitter	3	3.5
Administrative assistant	2	2.3
Caregiver	2	2.3
Administrator	1	1.2
Community Health Agent (CHA)	1	1.2
General Services Assistant (GSA)	1	1.2
Maid	1	1.2
Diarist	1	1.2
Sales manager	1	1.2
Cashier	1	1.2
Pedagogue	1	1.2
Secretary	1	1.2
<b>Total</b>	<b>86</b>	<b>100</b>

Source: Prepared by the authors according to survey data, 2023.

Pregnant women with previous pregnancies were asked about their satisfaction with the care they received during prenatal care in their last pregnancy. Among them, 52 said they were satisfied (60.5%) and six reported dissatisfaction (8.1%). The average number of prenatal appointments during the current pregnancy was 4.28 (SD= 3.0), with the maximum number of appointments being 13.

As for the date of the first prenatal appointment, the majority of pregnant women had their appointment in the first trimester (72; 83.7%), followed by the second trimester (13; 15.1%) and the third trimester (1; 1.2%). Of all the pregnant women, 28 had complications during their current pregnancy (32.6%) and 58 did not (67.4%). The most frequently mentioned complications were urinary infection (3; 10.7%), bleeding (3; 10.7%), high blood pressure (2; 7%), toxoplasmosis (2; 7%), and gestational diabetes (2; 7%).

The general descriptive analysis of the two domains (expectations and satisfaction) of the data collected using the PESPC instrument showed a predominance of “high expectations” (34.93) and “very satisfied” (72.93) (Table 2).

In addition, the subscales of the “expectations” and “satisfaction” domains were analyzed to clarify the scores and significant issues within each subscale. It was found that the majority of the subscales received positive evaluations, totaling six of the eight analyzed. This indicates that, in general, pregnant women had a favorable perception of expectations and satisfaction within the domains (Figure 1).

Regarding the “expectation” domain, the “comprehensive care” and “follow-up with the same professional” subscales had “low expectation” scores; while the “personalized care” and “other services” subscales had “high expectation” scores.

In the “comprehensive care” subscale, there are four questions, one of which is worth highlighting. The third question focuses on the expectation that prenatal consultations would be more comprehensive, going beyond simply checking the baby’s weight and listening to its heartbeat. In this sense, 35 pregnant women (40.7%) totally agreed with this statement and 17 agreed (19.8%). Thus, the response to this statement is negative about the evaluation of prenatal care.

The “professional follow-up” subscale consists of two questions, one of which is highlighted. The first question addresses pregnant women’s expectations of having a single professional responsible for all prenatal consultations. In this respect, 41 pregnant women (47.7%) totally agreed with this statement. Thus, this statement is negative in terms of evaluating prenatal care.

The “personalized care” subscale consists of four questions. The first question stands out because it concerns pregnant women’s expectation that the professional responsible for their prenatal care will show the same concern for their mental state as they do for their physical state. Notably, 39 pregnant women (45.3%) totally agreed with this statement, while another 29 (33.7%) agreed. Thus, this statement was shown to be negative about prenatal evaluation.

Regarding the “satisfaction” domain, all the subscales showed a score demonstrating the pregnant women’s satisfaction. On the other hand, the “system characteristics” subscale stands out in particular. The first question of this subscale addresses satisfaction with the waiting time to be seen, and 33 pregnant women (38.4%) totally disagreed with this statement. The second question deals with satisfaction with the waiting time to be seen, and 26 pregnant women (30.2%) totally disagreed with this statement. This shows that the questions above were evaluated as negative in terms of prenatal care, reflecting, from the pregnant women’s perspective, a long waiting time to receive care.

The fourth question concerned the satisfaction of pregnant women with the conditions of the health service waiting room. Surprisingly, 36 pregnant women (41.9%) totally disagreed with this statement, while 16 pregnant women (18.6%) disagreed. These results indicate that some pregnant women expressed specific dissatisfaction with the waiting time and the conditions of the health service waiting room, evaluating the statement as negative about the evaluation of prenatal care.

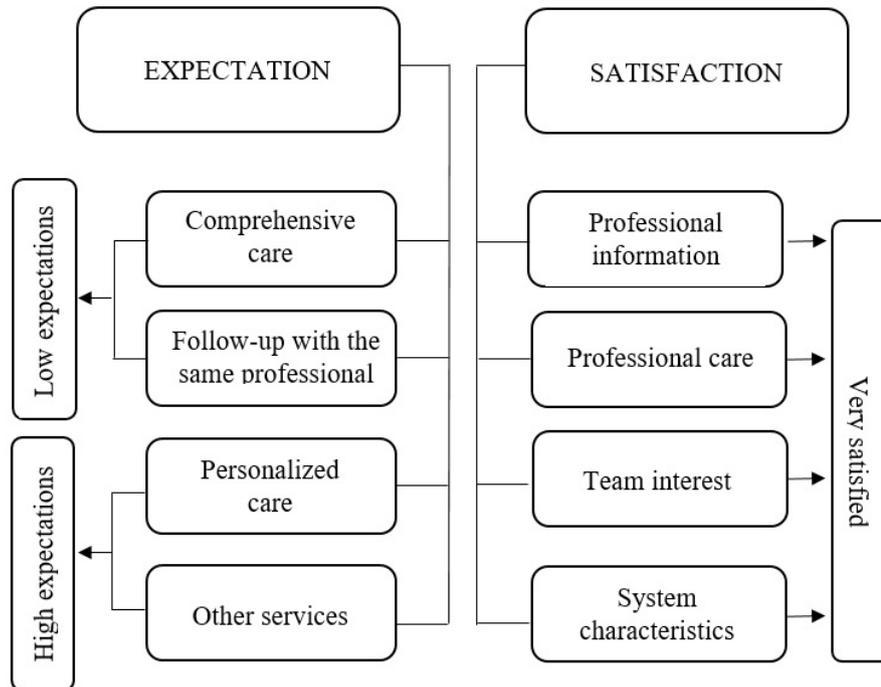
**DISCUSSION**

Comparing the results of this study with those of a survey carried out in the municipality of Uberlândia, it was found that the population profiles had similar characteristics, namely: average age of pregnant women, level of schooling, and prevalence of multigravidas.<sup>14</sup>

**Table 2.** Expectations and satisfaction of pregnant women assisted in a family health strategy in the city of Natal, Rio Grande do Norte, Brazil. November 2022 - February 2023.

<b>Domains/Subscales Patient Expectations and Satisfaction with Prenatal Care (PESPC)</b>	<b>Possible interval</b>	<b>Obtained interval</b>	<b>Mean</b>
<b>Expectation</b>	<b>12-72</b>	<b>14-71</b>	<b>34.93</b>
Comprehensive care	4-24	4-24	12.65
Follow-up with the same professional	2-12	2-12	6.31
Personalized care	4-24	4-24	10.77
Other services	2-12	2-12	5.20
<b>Satisfaction</b>	<b>29-174</b>	<b>29-141</b>	<b>72.93</b>
Professional information	7-42	7-37	16.98
Professional care	6-36	6-24	11.30
Team interest	6-26	6-24	16.45
System characteristics	10-60	10-60	28.20

Source: Prepared by the authors according to survey data, 2023.



**Figure 1.** Domains and subscales of expectation and satisfaction of pregnant women assisted in a family health strategy in the city of Natal, Rio Grande do Norte, Brazil. November 2022 - February 2023.

Source: Prepared by the authors according to survey data, 2023.

In addition, the findings of a study carried out in the state of Maranhão are similar to those of this study in terms of the sociodemographic variables of pregnant women undergoing prenatal care: family income of between one and two minimum wages and occupation in the household.<sup>15</sup>

In general, high expectations and good satisfaction were confirmed. Analyzing the domains and their subscales in isolation, in the “expectation” domain, two had low expectations and two had high expectations. About the “satisfaction” domain, all four subscales showed good satisfaction. In this way, the data is similar to that found in the literature: as expectation decreases, satisfaction increases, and vice versa.<sup>11</sup>

As for expectations, the “comprehensive care” subscale showed that pregnant women expected appointments to be more than just checking the baby’s weight and listening to its heartbeat. From this perspective, it should be noted that among the elements that comprise pregnant women’s satisfaction with prenatal care are: attention, dialog, and trust.<sup>16</sup>

From this perspective, it is clear that a professional who focuses only on technical procedures will not provide the patient with a good experience of the care offered. The need for a holistic approach to the patient stands out, especially as the pregnant woman is experiencing a cycle marked by significant physical and emotional changes.<sup>16</sup>

In addition, one of the main roles of health professionals who treat pregnant women is to attentively listen therapeutically, giving them support and confidence in this life cycle.<sup>17</sup>

Regarding the “follow-up with the same professional” subscale, it was noted that the pregnant women in the study were expected to always have their prenatal care monitored by the same health professional. This perspective may be based on the possibility that many pregnant women are unaware of what the Ministry of Health recommends for prenatal care.<sup>17</sup>

In the “personalized care” subscale, the responses to one statement stood out as negative. The statement said that the professional responsible for prenatal care was expected to show the same concern for the mental state as for the physical state. Some studies have pointed out the weaknesses in prenatal care, as many health professionals focus on the biologist model of care.<sup>18</sup>

Regarding the “other services” subscale, it is noteworthy that the pregnant women had positive expectations for the participation of nutritionist and social worker services during prenatal care. This patient expectation is reflected in the evidence that prenatal care carried out by a multi-professional team in Primary Health Care (PHC) is a way of improving care.<sup>19</sup>

As for satisfaction, the “professional information” subscale was rated positively by pregnant women. The findings identified reflect public health policies and programs aimed at improving prenatal care in the country, not only from an epidemiological perspective, but above all geared towards the individual needs of pregnant women.<sup>20</sup>

Furthermore, in the same subscale mentioned above, the evaluation of the professional’s preparation of the pregnant woman for labor and the postpartum period stands out. Negative evaluations predominated in this area.

Within this context, childbirth is an important event in a woman's life, and negative experiences can cause psychological distress and weaken the bond with the baby. Providing care that is aligned with the mother's needs is essential to improving satisfaction with care.<sup>21</sup> It is therefore the role of health professionals to adequately prepare pregnant women to face childbirth and the postpartum period with awareness and peace of mind, regardless of whether it is their first pregnancy or not.

From the perspective of "professional care" and "team interest", the pregnant women gave a positive evaluation, which is in line with studies that show good user satisfaction with the professionals working in PHC, this being the item with the highest rating.<sup>22</sup>

In continuity, although the system characteristics subscale was rated positively by pregnant women, this is at odds with the literature. A study carried out in the state of Rio de Janeiro found that waiting times had a negative influence on pregnant women's satisfaction with prenatal care services.<sup>16</sup>

It should be emphasized that this perspective is common at the national level and is one of the biggest problems in the Unified Health System (*Sistema Único de Saúde*, SUS): waiting times for appointments.<sup>23</sup> Furthermore, in summary, the patients' expectations showed a high level of anticipation on the part of the pregnant women regarding their care. As for "satisfaction", in which all domains were evaluated positively, this represents a favorable and promising outcome, highlighting that the care practices exceeded initial predictions. Furthermore, future prospects related to this study are the implementation of an educational intervention to improve the quality of prenatal care, reflecting the expectations and satisfaction of pregnant women.

## CONCLUSIONS AND IMPLICATIONS FOR THE PRACTICE

It was found that pregnant women's expectations and satisfaction with prenatal care were rated positively. On the other hand, despite the high level of satisfaction identified, some aspects were evaluated with low satisfaction, in particular, the characteristics of the system which are related to waiting times and the conditions of the health service waiting room.

The findings show that, despite the favorable evaluation of prenatal care by pregnant women, aspects such as waiting times and waiting room conditions result in dissatisfaction. Therefore, to improve prenatal care, health management must adopt strategies aimed at promoting a more positive experience, to consequently favor adherence to prenatal care.

Regarding the limitations of the survey, the results presented reflect the reality of a specific health unit and, therefore, may not represent reality in general.

Through this survey, it is hoped to contribute to the discussion on the subject. In addition, it is suggested that further surveys be carried out on health services with the aim of promoting improvements in prenatal care, comparing the results obtained with new ones, and contributing to the compliance with the UN's third SDG.

The results obtained can contribute to care practice and health management, to guide health institution managers in formulating more effective improvement strategies. Positively assessed points will provide recognition for professionals, while aspects to be improved will serve as a basis for developing strategies to raise the quality of care.

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