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Original article

Knowledge of pregnant women about oral health care during pregnancy

Conhecimento de gestantes sobre cuidados com a saúde bucal durante a gravidez

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Abstract

Objective: to evaluate the knowledge of pregnant women in prenatal care in two units of the Family Health Strategy (FHS) of Montes Claros (MG) about oral health care during pregnancy. **Materials and Methods:** This is a descriptive, quantitative, transversal and exploratory research. The sample was composed of 28 pregnant women assisted by two FHSs in the city. Data collection started remotely, via whatsapp, through the contact list of pregnant women provided by the FHSs. Due to the low adherence, phone calls were made to the participants, and the answers obtained orally were entered into Google Forms by the researchers. **Results:** it was observed that 57.1% (n=16) were in their first pregnancy and that 50% (n=14) noticed gingival changes; the changes were gingival bleeding during brushing or flossing, increased gingiva size, and spontaneous gingival bleeding. It was found that 78.6% (n=26) recognized the relationship between oral changes and pregnancy. **Conclusion:** most pregnant women presented little knowledge regarding oral health care during pregnancy.
Keywords: Periodontal diseases. Pregnant Women. Prenatal.

Resumo

Objetivo: avaliar o conhecimento das gestantes em acompanhamento de pré-natal de duas unidades de Estratégia de Saúde da Família (ESF) de Montes Claros (MG) sobre os cuidados com a saúde bucal durante a gestação. **Materiais e Métodos:** trata-se de uma pesquisa descritiva, caráter quantitativo, transversal e exploratório. A amostra foi composta por 28 gestantes atendidas por duas ESFs do município. A coleta de dados iniciou-se de forma remota, via *whatsapp*, através da lista dos contatos das gestantes fornecida pelas ESFs. Devido à baixa adesão, foram realizadas ligações telefônicas para as participantes, e as respostas obtidas de forma oral foram inseridas no *Google* Formulários pelas pesquisadoras. **Resultados:** observou-se que 57,1% (n=16) estavam na primeira gestação e que 50% (n=14) perceberam alterações na gengiva; as alterações eram de sangramento gengival durante a escovação ou uso do fio dental, aumento do tamanho da gengiva e sangramento gengival espontâneo. Constatou-se que 78,6% (n=26) reconheceram a relação entre alterações bucais e a gestação. **Conclusão:** a maioria das gestantes apresentaram pouco conhecimento em relação aos cuidados com a saúde bucal durante a gestação.
Palavras-chave: Doenças Periodontais. Gestantes. Pré-Natal.

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Introduction

Pregnancy is a physiological event with abrupt changes in the woman's body. In this sense, a differentiated conduct of health professionals is required through more specific knowledge acquired. The oral health and general health of pregnant women can affect the baby's health directly and indirectly[1]. Therefore, oral health care is necessary throughout pregnancy in order to reduce possible untimely perinatal complications, and to provide comfort and satisfaction to the woman and the child[2].

Periodontal diseases are inflammatory processes that, if not treated properly, can lead to the destruction of the gums and the bone supporting the teeth. It is caused by bacteria, mostly anaerobic gram negative bacteria[3].

Dietary changes may occur during pregnancy, such as increased carbohydrate intake. This behavior contributes significantly to plaque formation, leading to increased occurrence of dental caries, gingival inflammation and other periodontal changes[4,5]. In addition to diet, the etiological factors of periodontal disease may be local and environmental, such as poor oral hygiene, predisposing factors such as heredity, and modifying factors such as systemic diseases[6].

Due to high levels of sex hormones during pregnancy, the inflammatory reaction in periodontal tissues is accentuated in the presence of dental biofilm. Even though the presence of bacterial plaque in the oral cavity is small, the inflammatory response is exacerbated. Among the gingival alterations, the most common ones to be observed during pregnancy are bleeding gums when brushing, gums that are red and sensitive to touch, and swelling[7,8].

Deficient oral cleaning and the bacteria that cause periodontal problems are capable of provoking several responses in the body. In pregnant women, because they are fragile during pregnancy, there is the risk of pathogens and endotoxins moving to the placenta, which may cause preterm birth and low birth weight in newborns[9].

The Family Health Strategy (FHS) should assist women throughout pregnancy, postpartum and puerperium. During prenatal visits, the health professional must have a holistic view of the pregnant woman and must not neglect dental follow-up in order to identify and prevent possible diseases that may affect the oral cavity[10]. In the presence of the probable implications of oral changes on the health of pregnant women and their greater vulnerability to oral diseases, there is the need to convey to this public knowledge about oral health, in order to prevent unfavorable results during and after pregnancy[11].

Given the above, this study aimed to evaluate the knowledge of pregnant women undergoing prenatal care in two FHS units in Montes Claros (MG) about oral health care during pregnancy.

Materials and Methods

This is an observational, cross-sectional, quantitative study.

It was conducted between September 3 and October 23, 2021 in two FHSs in the municipality of Montes Claros (MG) that performed general and dental prenatal care of pregnant women. The FHSs were selected by convenience, since they were places of training of the researchers of this study. The population consisted of 58 pregnant women in prenatal care during the research period, and the contacts of these pregnant women were made available to the researchers by the health team of the FHSs. The sample consisted of 28 pregnant women aged 18 years or older.

Due to the social isolation imposed during the Covid-19 pandemic, the questionnaires were initially applied remotely via Google Forms, sent to Whatsapp. However, there was no adherence from the participants. Given the low adherence through the online form, telephone calls were made to the pregnant women. Thus, 28 questionnaires were answered.

A structured questionnaire used in an end-of-course study at the Paraíba State University was used. It consists of 29 questions, 12 of which refer to sociodemographic conditions and 17 to the perception of pregnant women regarding periodontal changes[12].

The data were analyzed descriptively using Excel software, from the information entered into the Google Forms system.

Ethical care éticos

The research followed all the ethical precepts determined by resolution 466/12 and was approved by the Research Ethics Committee (CEP) of the Faculdades Unidas do Norte de Minas (FUNORTE), under number 4,907,738 of the consubstantiated opinion of the CEP on August 16, 2021.

Results

Of the 58 contacts, only 32 pregnant women answered the call; however, four of them were not included in the study because they were younger than 18 years old. Thus, 28 pregnant women assisted in the selected FHSs participated in the study.

Most of the pregnant women were between 18 and 28 years old (67.9%; n=19), were married (57.1%; n=16) and had jobs (78.6%; n=22). About the clinical evaluation of the pregnant women, a little more than half were in their first pregnancy (57.1%; n=16). Most of them had never had an abortion (92.9%; n=26), had no diabetes mellitus (96.4%; n=27), never smoked (92.9%; n=26), and did not use drugs or alcohol (89.3%; n=25). Among the participants, 78.6% (n=22) said that so far they had not presented any health problem during pregnancy; and those who had, gestational diabetes was reported (Table 1).

Table 1 - Demographic characteristics and information on the assessment of pregnant women followed-up by the Family Health Strategy, Montes Claros (MG), Brazil (n=28). 2021.

Variables	n	%
Age		
Between 18 and 28 years old	19	67,9
Between 29 and 38 years old	7	25
Between 39 and 48 years old	2	7,1
Marital Status		
Married	16	57,1
Single	8	28,6
Stable Union	4	14,3
Employment		
Employed	22	78,6
Unemployed	6	21,4
Months of gestation		
Between 1 and 3 months	5	17,9
Between 4 and 6 months	12	42,9
Between 7 and 9 months	11	39,3
Gestations		
1	16	59,3
2 a 3	8	29,6
4 or more	3	11,1
Number of children		
1	6	21,4
2 a 3	4	14,3
4 or more	2	7,1
None	16	57,1
Abortions		
Yes	2	7,1
No	26	92,9
Diabetes mellitus		
Yes	1	3.6
No	27	96.4
Smoker		
Yes	0	0
No	28	100

Ex-smoker		
Yes	2	7.1
No	26	92.9
Alcohol or drugs		
Yes	3	10.7
No	25	89.3
Health problems during pregnancy		
Yes	6	21.4
No	22	78.6

The pregnant women noticed gingival changes (50%; n=14) such as bleeding gums during brushing or flossing, increase in size or "swollen gums", spontaneous bleeding gums, pain and change in color of the gums. These changes were noticed during pregnancy (87.5%; n=14) and there was no presence of soft teeth (92.9%; n=26) (Table 2).

Table 2 - Perception of gingival alterations among pregnant women followed-up by the Family Health Strategy, Montes Claros (MG), Brazil (n=28). 2021.

Variables	n	%
Gum alteration		
Yes	14	50
No	14	50
Types of changes		
Change in the color of the gums	1	3.6
Spontaneous bleeding of the gums	4	14.3
Bleeding of the gums while brushing and/or flossing	14	50
Increase in the size of the gums or "swelling of the gums	5	17.9
Pain in the gums	2	7.1
Not noticed	14	50
Period of the changes		
Before gestation	2	12.5
During gestation	14	87.5
Soft Teeth		
Before gestation	1	3.6
During gestation	1	3.6
I did not notice	26	92.9

Regarding hygiene habits, pregnant women brush their teeth, on average, three times a day (50%; n=14), floss (89.3%; n=25) and do not use mouthwash (82.1%; n=23). Less than half visited the dentist four or more times a year (42.9%; n=12) (Table 3).

Table 3 - Hygiene habits among pregnant women followed-up by the Family Health Strategy, Montes Claros (MG), Brazil (n=28). 2021.

Variables	n	%
Brushing		
Once a day	3	10.7
2 times daily	6	21.4
3 times a day	14	50
More than 3 times	5	17.9
Flossing		
Yes	25	89.3
No	3	10.7
Mouthwash		
Yes	5	17.9
No	23	82.1
Frequency of visits to the dentist		
Once a year	5	17.9
Twice a year	1	3.6
Three times a year	1	3.6
Four or more times a year	12	42.9
Only when I have pain	3	10.7
Don't remember	6	21.4
Complaints during the dental visit		
Toothache	4	20
Tooth decay	9	45
Gum problems	2	10
Problems in other areas of the mouth	12	60

As for visits to the dentist, 75% (n=21) visited the dentist during pregnancy, guided mainly by nurses (71.4%; n=20) (Table 4).

Table 4 - Dental visits during pregnancy. Family Health Strategy, Montes Claros (MG), Brazil (n=28). 2021.

Variables	n	%
Dental visits during pregnancy		
Yes	21	75
No	7	25
Who advised you to see a dentist during pregnancy		
Health Agent	2	7.1
Nurse	20	71.4
Doctor	6	21.4
Dentist	5	17.9

Most pregnant women consider that oral problems can appear due to pregnancy (78.6%; n=22). Among the problems that can occur, the participants stated change of color in the gums (35.7%; n=10), change of position of the gums (10.7%; n=3), increased volume/ swelling and pain

in the gums (50%; n=14). They also consider that gum problems during pregnancy can cause other health problems (55.6%; n=15), such as premature labor, birth of low-birth-weight babies, pneumonia in Intensive Care Unit, heart diseases and diabetes mellitus (Table 5).

Table 5 - Knowledge of pregnant women regarding oral changes and pregnancy. Family Health Strategy, Montes Claros (MG), Brazil (n=28). 2021.

Variables	n	%
Do you consider that problems in the mouth can appear due to pregnancy?		
Yes	22	78.6
No	6	21.4
Do you think that gum problems are related to pregnancy?		
Yes	22	78.6
No	6	21.4
Which problem(s) do you think can occur in the gums during pregnancy?		
Change in the color of the gums	10	35.7
Change in the position of the gums	3	10.7
Increase in the volume or "swelling" of the gums	14	50
Pain in the gums	14	50
No problem	5	17.9
Other	4	14.3
Can pregnant women who have gum problems develop other types of problems?		
Pneumonia in the ICU	5	18.5
Diabetes mellitus	6	22.2
Heart disease	7	25.9
Premature birth	10	37
Low birth weight babies	10	37
No	12	44.4

Discussion

Most pregnant women were in their first pregnancy and were between 18 and 38 years old. A similar result was found in a study[13] that interviewed 80 pregnant women from private medical offices and Basic Health Units in the city of Maringa, Paraná. In this sense, it is possible to observe that this is an important characteristic of the sample, since mothers in their first pregnancy are eager for all kinds of information regarding her health and that of the child.

The cohort study[14] conducted with 119 pregnant women in two municipalities located in the northwest of the state of São Paulo, in which oral examinations and semi-structured interviews were carried out, showed that during pregnancy periodontal disease is associated with the pregnant woman's age (mean of 24.7 years) and smoking habit. This cannot be confirmed in the present study, since most pregnant women were not smokers.

Regarding the perception of pregnant women in relation to periodontal alterations, it can be observed that half of them noticed some type of alteration, the main one being gingival bleeding during flossing. These data are in agreement with the study mentioned in the literature[14], in which most (67.74%) of the pregnant women had gingival bleeding.

The study[11] conducted with 32 pregnant women assisted in a Basic Family Health Unit in a city of Ceará found that flossing was mentioned as being used by only 34.4% of the women surveyed. The present study shows that most participants have the habit of using dental floss. This is a positive point to avoid the onset and worsening of periodontal diseases.

The shortage of visits to the dentist is still a present factor among pregnant women. In a literature review[15], through data obtained from the Ministry of Health (MH) and a survey of scientific articles and defense theses, the real importance of monitoring dental prenatal care was verified and it was certified that the lack of visits to the dentist occurs due to lack of information about the need to maintain good oral health during pregnancy and the fear of adhering to dental prenatal care because it may cause some harm to the child. One can also take into consideration the fact that not all FHSs make dental care available to the population. It would be necessary to inform pregnant women about the risks of not having dental prenatal care, since not adhering to this service would make it difficult to identify changes in the dental biofilm constitution and consequently periodontal changes that can pose risks to pregnant women and their children[16].

Among the research participants, the minority brushes their teeth only once a day, showing that there is still a need for guidance, since it is attested that the act of encouraging the practice of oral hygiene, proper diet, and the action of going to the dentist contribute to avoid unexpected consequences for the health of the pregnant woman and the child[9].

Among the health professionals who advised pregnant women to seek the dentist during pregnancy, nurses are the ones who most refer them to the dental consultation. These professionals have the role of transmitting confidence to pregnant women during general prenatal care[16]. Research that evaluated the current knowledge and practice of health professionals regarding the oral health of pregnant women found that, in some cases, the pregnant woman has contact only with the nurse or doctor at the unit, confirming the importance of these professionals in the first approach[6].

The relationship between gum diseases and other health problems is not known by the pregnant women surveyed. A study[11] confirms that many pregnant women are unaware of the changes that can affect the oral cavity during pregnancy; therefore, these changes should be

informed to them during their periodic prenatal visits, either by the physician or dentist, so that they have the knowledge to facilitate the control and treatment of these changes.

In this sense, the FHS has an important role in the instruction, monitoring, prevention, and promotion of the oral health of pregnant women. For all this to occur effectively, it is necessary to perform health actions, team planning, evaluation, and periodic monitoring of these pregnant women[17].

This study had a limiting factor in terms of sample size, since, although the number of pregnant women assisted in the FHSs was higher, the number of participants who adhered to the research was reduced by half.

Conclusion

Most pregnant women have little knowledge about oral health care during pregnancy. Therefore, the importance of prenatal dental care should be emphasized, which becomes more effective when performed by a multidisciplinary team, in order to avoid possible complications for the health of the pregnant woman and the child.

The FHSs teams have a key role in the guidance and development of actions aimed at this audience, since it is through them that pregnant women receive information and care during prenatal care. It is necessary to implement more public policy actions related to the importance of dental prenatal care.

Author´s contributions

All authors have approved the final version of the manuscript and declare themselves responsible for all aspects of the work, including ensuring its accuracy and completeness.

Conflict of interest

The authors declare that there are no conflicts of interest.

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