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Research Article

Knowledge and Attitudes of Brazilian Nurses about Oral Health During Pregnancy

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Abstract

Aim: To assess the attitudes and knowledge of nurses about oral health during pregnancy to perform prenatal the patients they assisted.

Methods: The questionnaires were applied to nurses of UBS in Parnaíba-PI, totaling 39 participants. They were divided in group 1 (G1) with 20 professionals who were oriented about oral health during the graduation and in group 2 (G2) with 19 nurses who had received no information about it. To compare the results was chosen the Fisher's exact test, with significance level of $p < 0.05$.

Results: There was no statistically significant difference between G1 and G2 ($p = 0.27$). It was found that 24 nurses said guide pregnant women on oral health and 15 only occasionally. Regarding the submission to the dental appointment, 26 said yes; 2 do not forward and 11 forward only when necessary. It was observed that 38 answered that may occur during pregnancy oral changes and 32 believed that the pregnant woman is more susceptible to gingivitis and 20 of these professionals highlighted that the caries may be present in this period.

Conclusions: The most participants in this research showed their knowledge and attitudes with moderate level. The group who received the instructions during the graduation had best results however no significant difference statistics. It is high the number of professionals who are unaware of the benefit of dental care during the prenatal period.

Keywords: Oral Health; Pregnancy; Nurses

Introduction

Pregnancy is the stage of physiological, physical and emotional changes, in which maternal health will concomitant effect on the health of the child before and after birth. During this period, the woman shown psychologically receptive to instructions that will benefit the health and development of the baby. They may act as a multiplier of preventive information and oral health promotion, is well conscious of the importance of their role in maintaining positive health habits in the middle familiar [1].

Although some women have high number of caries lesions during pregnancy, their condition does not contribute directly in the caries process. The hormonal changes that are inevitable during pregnancy, added to other factors such as nausea and changes in eating habits, predispose to caries lesions that, if not properly treated, can cause serious health problems of infant [2]. Redness, swelling and bleeding gums are related to factors such as nutritional deficiencies, presence of biofilm, high hormone levels and the transitional state of immunodepressing [3].

Periodontal infection predisposes to systemic changes during pregnancy. This is because the inflammation mediators produced, possibly reach the placenta through the bloodstream and in some cases break the barrier chorioamniotic induced to premature uterine contractions, and this is a risk factor for the premature birth infants with low peso [4,5].

Medical care for dental needs during pregnancy promotes the maintenance of the health of the patient and therefore your baby, minimizing the risk of transmission of microorganisms [6]. The treatment plan should include preventive activities, repairing and maintenance of oral health, cause oral health problems can lead to pain, infection, nutritional deficiency and unnecessary exposure to drugs, all of which are harmful to the development of fetus [7,8].

Nurses can play a significant role in the oral health of pregnant women, expanding access to prevention services, especially for vulnerable populations. The promotion of oral health and preventive services such as risk assessments, counseling, referral to centers of Dental Specialties and early guidance on healthy eating

habits and oral hygiene, are within the scope of nursing practice. Knowing the importance of oral health on overall well-being of the patient, especially the mother, the nurse can empower communities, families and individuals with information and resources to obtain more health habits [9].

During graduation, nursing staff receive basic notions about oral health, aiming to serve as support in the education process in health and awareness of the patient, never to perform diagnosis and/or treatments. However, oral health has not been a priority in nursing practice and education and training of nurses on this subject has been inappropriate [10].

It is essential to have the transfer of basic knowledge of oral health for the entire team responsible for prenatal care, in order to provide uniform concepts about the care of the oral health during pregnancy. It is also important to share this information with pregnant women, who are responsible for their physiological buccal balance [4,11,12].

Based on this context, a study covering the information and attitudes of nurses on oral health during pregnancy to evaluate if the information obtained during graduation are being implemented as part of the Family Health Strategy was conducted during the monitoring of pregnant women in prenatal.

The objective of this work was to evaluate the attitudes and knowledge of nurses on oral health during pregnancy to perform prenatal the patients they assisted.

Material and Method

The researcher obtained the Consent allowing the development of research, which was approved by the Research Ethics Committee at the State University of Piauí - CEP/UESPI, under number CAAE Protocol (16594113.3.0000.5209). The study model consisted in a descriptive, non-probabilistic and transversal research, with all Basic Health Units (UBS) of the Parnaíba city have been visited them counting 39.

According to data given by COREN-PI, 372 nurses are with active subscription in the city of Parnaíba, but the research was conducted only with those who worked in UBS. Participation of 39 professionals, after signing the Free Consent and Informed Term, one from each Unit due only be one active nurse, according to information provided by the General Coordinator of Primary Care. All units were visited and among the participants, 37 were women and two were men. The study was conducted in Parnaíba, PI, Brazil, to present in 2013 a significant amount of 477 pregnant women registered in UBS (data provided by Parnaiba) and are nurses one of the first professionals to have contact with these patients for the realization of prenatal care.

First, a pilot plan was conducted with an objective questionnaire that was applied to 5 randomly selected nurses active in 5 BHU. In two weeks apart questionnaires were applied again to the same nurses to assess whether there has been discrepancy between the responses, which was not observed.

The target audience was divided into two groups: group 1 (G1) consisted of 20 professionals who were educated about oral health during graduation and group 2 (G2) with 19 nurses who have not received any information about it. We prepared the rating criteria of the results, assigning nomenclature: unsatisfactory (I), 1 to 3 right questions, a little satisfactory (PS), from 4 to 6 moderate (M) of 7 to 9 and satisfactory (S) 10 to 12. Then classes were grouped I/PS and M/S in order to facilitate comparison between groups.

The questionnaires were tabulated in an Excel 2007 Microsoft® Windows database and subjected to statistical analysis. To test the choice took into account the type of data, the number of variables, sample type and sample size. We chose to use the Fisher's test. So that the differences were considered statistically significant, it was considered $p < 0.05$. Data analysis was performed with GraphPrism 5.0 software (GraphPad Software, Inc.).

Results

The answers for the ideal trimester to dental appointment were described in figure 1. For the G1, 3 nurses not fit into the category I/PS and 17 in category M/S. For G2, 6 were classified in category I/PS and 13 on the M/S. When compared the Fisher exact test revealed no statistically significant difference between the two groups ($p = 0.2733$).

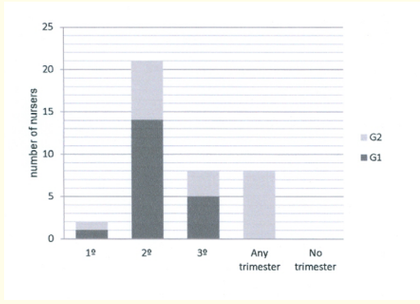

Figure 1: Pregnancy trimester to dental care.
Note: G1: Professionals receiving instructions during graduation, G2: Professionals who did not receive instructions during graduation.

It was found that 24 nurses said guide pregnant women on oral health and 15 only occasionally (Table 1). Regarding the professionals who refer the pregnant woman to dental appointment, 26 said yes; 2 do not forward and 11 only when necessary. It was observed that 38 responded that during pregnancy may experience oral changes, and 32 believed that the pregnant woman is more susceptible to gingivitis and 20 of these professionals highlighted that the decay may be present in this period (Table 2).

A number of 37 professionals said to be safe dental treatment during pregnancy. However 36 of them considered that the radiography and 16 anesthesia, as contraindicated procedures during this period. For 21 nurses, the safest period for dental treatment is the second trimester, but 8 considered the third one, and 8 any trimester of pregnancy.

Questions		G1	G2	Total	
		N	N	N	%
Did they advise the pregnant about oral health and its importance?	Yes	14	10	24	61.54
	No	0	0	0	0.00
	Eventually	06	09	15	38.46
Did they advise the pregnant to schedule a dental appointment?	Yes	15	11	26	66.67
	No	0	02	02	5.13
	If Necessary	5	06	11	28.21
Did they advise the pregnant about the sucrose consumption?	Yes	14	11	25	64.10
	No	06	08	14	35.90

Table 1: Questions relating to attitudes of professionals. G1: Professionals who received instructions during graduation; G2: Professionals who did not received

Questions		G1	G2	Total	
		N	N	N	%
May arise oral changes during pregnancy?	Yes	19	19	38	97.44
	No	01	0	01	2.56
Is there an increased risk of gingivitis during pregnancy?	Yes	18	14	32	82.05
	No	02	05	07	17.95
Is there an increased risk of caries during pregnancy?	Yes	07	13	20	51.28
	No	13	06	19	48.72
Consider safe dental treatment during pregnancy?	Yes	19	18	37	94.87
	No	01	01	02	5.13
Did they consider dental treatment safe during pregnancy?	Yes	09	07	16	41.03
	No	11	12	23	58.97
Did they considers radiography no-indicated procedure during pregnancy?	Yes	18	18	36	92.31
	No	02	01	03	7.69
Is periodontal disease related to premature birth and low birth weight?	Yes	14	10	24	61.54
	No	06	09	15	38.46
Did they think if was necessary to prescribe fluoride supplements during pregnancy?	Yes	05	09	14	35.90
	No	07	08	15	38.46
	Sometimes	08	02	10	25.64

Table 2: Questions concerning the knowledge of professionals. G1: Professionals receiving instructions during graduation; G2: Professionals who did not receive instructions during graduation

It was observed that 24 professionals believed that periodontal disease is related to the birth of premature babies and underweight. Regarding the need for prescription fluoride supplements to pregnant women. It was found that 14 considered necessary, 15 disagreed and 10 only when necessary. Among the participants, 25 said guide patients on sucrose consumption

Discussion

Nurses and obstetricians should be the first to give guidance to pregnant about the care of the oral health during prenatal care. However, there is a deficiency in the analysis of this issue in the curriculum of these profissionais10. Moreover, few have shown interest in receiving additional training to maintain or improve the behavior of patients in caring for their own health buccal [11].

The present data showed that 61.54% provide guidance to pregnant about oral health. The results were not similar to Suri, Aggarwal and Rao [12] (2014), who established that few practitioners do this advice. On the demand for dental care during pregnancy, 94.87% of nurses considered dental treatment as safe, which is consistent by Zanata, Fernandes and Navarro [13] (2008), who emphasized that the majority of professionals indicates dental treatment during pregnancy.

However 66.67% referral the pregnant to the dental appointment and 28.21% only when necessary. These data are consistent with the Rock., *et al.* [14] (2011), who concluded that the professionals used to recommend his patients always or occasionally to a dental appointment. But they disagreed with the research Suri, Rao and Aggarwal [12] (2014) and Wilder., *et al.* [15] (2007), once observed that most professionals do not have this attitude as routine.

Dental treatment can be performed during pregnancy. There is a consensus that most dental procedures, if properly conducted, do not generate any harm to the fetus, particularly when carried out in ideal gestational period corresponding to the second trimester of pregnancy [16-20]. However there is still refusal by dentists to provide dental care to pregnant because of the controversy of opinions, poor approach to the subject during the academic background and lack of interdisciplinarity [16,21-23].

Regarding the dental procedures they consider contraindicated during pregnancy, 92.31% nurses have referred to the radiographic examination. Disagreeing with the results of Zanata, Fernandes and Navarro [13] (2008) and Laslowski., *et al.* [17] (2012), by emphasizing that most professionals considered the dental radiography during pregnancy is safe. Those who no-indication, referred to the 1st trimester, organogenesis period.

Although it is known that the smaller the cell, the greater risk of teratogenicity, there is no evidence in the literature that radiation can harm the fetus and may be indicated when necessary. Although the risk of teratogenicity is extremely low, the amount of radiation exposed to the mother and fetus should be minimized with the use of high-speed films, proper collimation and aprons lead [18,19].

The anesthesia was considered to be no-indicated for 41.03% of the sample. Different results were found in the study of Suri, Rao and Aggarwal [12] (2014), to establish that obstetricians believed that local anesthesia can be safely used, but without vasoconstrictor. Likewise Laslowski., *et al.* [17] (2012) and Zanata, Fernandes and Navarro [13] (2008) observed that many professionals considered lidocaine as ideal anesthetics without vasoconstrictor, since vasoconstriction could lead to the displacement of the placenta, hypertension and heart diseases. It is noteworthy that vasoconstrictors are not no-indicated in pregnant healthy as they reduce the toxicity and release of harmful endogenous substances during a painful procedure [16].

The use of local anesthetics has no teratogenic risks, and the 2% lidocaine as anesthetic recommended for pregnant, with a maximum of 2 ampoules, and adrenaline can be used as a vasoconstrictor in the concentration of 1:100.000 [20]. The methemoglobinemia is a hematological disorder that occurs by the oxidation of hemoglobin to methemoglobin, unable to properly carry oxygen, but the effects occur only at high doses of prilocaine and articaine in susceptible patients [21].

Most of nurses said that pregnancy can predispose to oral changes like gingivitis cited by 84.62% and decay 51.28% of the sample. Similar results were found by Suri, Rao and Aggarwal [12] (2014) and Rock*., et al.* [14] (2011), being gingivitis and dental caries the most prevalent. Hormonal changes in pregnancy associated with lack of oral hygiene are responsible for developing gingivitis pregnancy, being more common in women who had periodontal disease prior to pregnancy [22]. Dietary changes, such as increasing carbohydrates, decreased salivary pH, associated with nausea and puking and the lack of care with oral hygiene, predispose the pregnant to episodes of erosion and caries [3,23].

To 53.85% of the participants, the ideal period for dental treatment is the second trimester. The data are not similar to the study Zanata, Fernandes and Navarro [13] (2008) to emphasize that the vast majority of professionals believe can be done at any time. The dental care to pregnant should preferably be in the 2nd trimester of pregnancy, but in an emergency, any time is acceptable, the first one is the most critical period for outpatient elective interventions because it is of intense cellular activity. In the last trimester, several factors associated with the procedure may lead to vascular stimulation and/or associated with the autonomic nervous system, influencing the time of birth [16].

To 61.54% of the nurses there is a correlation between oral conditions of pregnant with the low weight of the baby at birth and preterm birth, corroborating the findings of other authors [12,14,15,17,24,25], who observed that professionals consider periodontal disease is a risk factor for preterm birth or low birth weight.

A percentage of 33.33% of the nurses considered necessary to prescribe fluoride supplements to pregnant women and other 25.64% only if necessary, but also been observed by Zanata, Fernandes and Navarro [13] (2008) who establish that the fluoride supplement has been prescribed by a high number of health professionals.

However fluoride supplements present in some vitamin complexes, especially those containing calcium, it is not recommended as it may interfere with the absorption of this ion, which is extremely important for the pregnant and the fetus. The fluoride prescription drugs does not promote any benefit to justify his appointment to fluoride therapy may be performed topically on pregnant [26].

As for dietary control, the nurses were asked about guidelines about the sucrose consumption. A percentage of 64.10% said guidelines do about it.

The lifestyle in pregnancy, obesity and a diet high in sugar can be considered risk factors for caries in children with pre-escolar age [27]. Likewise, periodontal disease is significantly greater in diabetic than in non-pregnant diabetics [28]. The adequate intake of dairy products and calcium during pregnancy is associated with fewer caries in children, new studies are needed to clarify the mechanisms [29].

Most participants in this study had their knowledge and attitudes about oral health of pregnant at a moderate level. The group that received instructions during graduation had better results, but without statistically significant difference. However it is still high number of professionals who are unaware of the damage that can cause oral changes in this period, as well as the benefit of dental care during the prenatal period.

For the interpretation of results must be considered the limitations inherent in this study. The city where the research was conducted in Brazil is underdeveloped, economically and socially, which makes scant public investment in the improvement of professionals.

Our hope is that the results of this research allow greater supply of training courses for nurses in order to broaden their knowledge and promote greater completeness with other primary care professionals. It is very important that future studies may include clinical examination of pregnant.

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