Self-perception and Oral Health in Pregnant Adolescents

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Abstract

Objective: To evaluate the oral health indicators by determining the experience of dental caries and periodontal disease and identification of self-perceived oral health status of pregnant adolescents and to assess the association between the studied variables.
Materials and Methods: A transversal study, survey type and survey of the oral health status of 127 adolescents, 10-19 years of age, pregnant, accompanied by the Unified Health System of Araçatuba-SP was performed. The self-perceived oral health and socio-demographic data were recorded using an adapted questionnaire. The oral health statuses were analyzed using the DMFT and CPI indices in accordance with the criteria established by the WHO for epidemiological survey. Descriptive statistical analyzes and the Fisher's exact test with a significance level of 5% was performed, as well as a logistic regression analysis to verify the association between the variables.
Results: Of the total, 41.0% reported having satisfactory oral health, while 63.0% believed they had problems with their teeth and gums. The DMFT index was 12.51 (SD = 4.21). The percentage of caries-free was 6.3%, and 91.3% had periodontal problems. A statistically significant association was found between the variables: self-perceived oral health and periodontal disease $p = 0.0166$ and self-reported gum disease and periodontal disease $p = 0.0039$.
Conclusion: Most patients considered their oral health as poor and reported having dental and gum problems, which can also be observed in the clinical examination since the caries experience of the pregnant women examined was considered high and the symptoms of periodontal disease were observed in most of the volunteers.

Key Words: Oral health, Self-perception, Adolescent, Pregnancy

Introduction

In Brazil, young people aged 10-19 years account for 17.9% of the population [1]. Childhood and adolescence are periods of the life cycle marked by great vulnerability, they represent stages in which the human being is growing and developing, both physically and intellectually and deserves careful attention [2].

Pregnancy at this age is considered a public health problem in many countries, to cause serious biological and psychological impairments [3] as well, the teens are exposed to complications of pregnancy, childbirth and postpartum. Several studies show that pregnancy in this period of life is associated with negative outcomes related to both mother and child, among the most frequent obstetric complications are pregnancy toxemia, uterine dysfunction, higher rates of cesarean section, cephalopelvic disproportion, hemorrhagic syndromes, perineal lacerations, and preterm premature rupture of membranes. Adds up even maternal anemia, prolonged labor, urogenital infections, miscarriage, low birth weight [4,5].

With regard to oral health in adolescence, at this stage the individual experiences the better health and vitality, which will allow carrying out their tasks in adulthood. However, that is when we observe an increased risk for oral health, because young people are more independent in relation to the consumption of sugar and have certain revulsion in relation to oral hygiene [6].

It is also known that during pregnancy are frequent reports of gingival changes, increasing and worsening of gingivitis, causing redness, swelling, and bleeding gums. These changes are associated with nutritional deficiencies, high hormone levels, presence of plaque, as the transient state of immunosuppression [7].

Thus, one must consider the limited knowledge about the techniques of oral hygiene and the biological and psychosocial characteristics in which most women find themselves in the period gestacional [8-10].

Obtaining epidemiological data to quantify the oral health status of individuals is an important tool for public health managers. Although the quantitative evaluation, is employed in most studies that evaluate the oral health status of individuals and populations it is not sufficient, relying only on clinical indicators of disease, in view of professionals [11].

Additionally, the data of perception are very important and reflect an integrated perception of the individual, including biological, psychosocial and social dimensions, it becomes possible to check when there is a need to change behavior. However, most studies that assessed the perception of pregnant women were based on questionnaires and interviews [12].

Thus, the proposal of analyzing objective and subjective indicators on oral health in pregnant teenagers as well as their associations, it is essential to assess possible discrepancies between what one observes himself and notifies that through quantitative data.

From the above, this study aimed to evaluate indicators of oral, objective and subjective health, through the determination of caries experience, periodontal disease in pregnant adolescents, and identification of self-perception of oral health status in this population and to evaluate the association between variables.

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Materials and Methods

Sectional study, survey type and survey of oral health status of pregnant adolescents were conducted. The population universe considered for this study was pregnant adolescents who were in prenatal care during the period January to May 2013, 13 Basic Health Units from Araçatuba.

Araçatuba belongs to the state of São Paulo, Brazil, with 181 618 inhabitants. The per capita income is about $ 7,355.00 / year, and the Human Development Index is 0.848. Since 1972 was added 0.6 to 0.8 mg/l of fluoride to the municipal water supply.

During data collection in all Basic Health Units was considered the presence of pregnant women a random event, since the researcher did not know how many teenagers would be present at the time of data collection.

127 adolescents aged 10-19 who consented and parents were included in the sample, in the case of minors, their parents consented, after reading and signing the Informed Consent Form (ICF).

To collect the information applied two survey instruments: one on the socioeconomic profile (social class, income, education) and questions that come with pregnancy and access to dental services and the reason for the last dental appointment. To determine social class, the Standard Criterion Brazil 2008, proposed by the Brazilian Association of Research Companies (BARC) was used [13]. This classification takes into account the ownership of movable and years of education of household head. Thus eight groups (A1, A2, B1, B2, C1, C2, D and E) are described in decreasing order, namely, the class A1 is considered the highest and most devoid E.

To check the self -perception of oral health questionnaire was adapted from Silva et al. [14] used responses self -perception had four possible answers, and these were distributed and categorized in Likert scale: Good (excellent and good) and Poor (fair, poor and very poor).

Have the access to dental care variable was categorized as: No (I never go to the dentist) and Yes (I go to the dentist when they have a problem, I go to the dentist occasionally I go to the dentist regularly).

As regards the age, adolescents were divided into two groups: late adolescence (16 to 19 years) and early adolescence (12 to 15).

In the survey of oral health status indices DMFT and CPI were used according to the criteria established by WHO for epidemiological survey by a calibrated researcher, using the WHO periodontal probe model and clinical mirror, with pregnant women sitting on chair common under illumination natural [15].

After data collection, the questionnaires were entered into a spreadsheet created in Epi Info version 3.5.1 software. For statistical analysis, the eight economic levels, provided by BARC [13] were grouped as follows: A1, A2 and B1 in economic level high (A), B2, C1 and C2 in economic level medium (M), and D; and cheap low level (B). Without periodontal disease (absent symptom and bleeding) and periodontal disease (presence of calculus and periodontal pockets): Symptoms of CPI were also grouped together for statistical purposes two groups being created.

Descriptive statistics of the data was performed, becoming the frequencies for each of the study variables, calculating the appropriate statistical measures to the nature of each and making the tabular presentation of these results. For performing Fisher's exact test with a significance level of 5 %, the two groups of access to oral health and self-perception of oral health were compared considering the oral care variable, perceived treatment need and clinical variables IPC Index.

The Faculty of Dentistry of Araçatuba Ethics Committee in Human Research (CEP)-UNESP, according CNS Resolution 196, approved the study (Case FOA-02492/2011).

Results

Of the 127 pregnant adolescents, 94.5% were in the late teens (16-19 years) and 5.5% in early adolescents (12-15 years) at the time of the study. In terms of social class, there are no teenagers in classes A1 and A2.

Regarding marital status, 59.8% were single, 39.4% lived with their families and 52.8% reported they were white (*Table 1*).

Table 2 presents data perception. Most women believed they had their poor oral health 59%. With regard to oral problems 63% believed they had a problem in your teeth and your gums in 47%.

The vast majority of the women believed require some kind of dental treatment 63.0% (n=80) and 17.3% (n=22) reported having never been to a dentist and adolescents who had access to dental services 60% stated that the reason for the last dental visit was a problem or need treatment (*Table 3*).

The prevalence of caries among adolescents was 93.7% (n = 119), and the mean DMFT index of 12.51 with a standard deviation of 4.21.

As for the CPI, it was observed that 92.1% of adolescents had some type of periodontal involvement, and the presence

***Table 1**. Numerical and percentage distribution of pregnant teenagers, according to sociodemographic characteristics. Araçatuba-SP, Brazil, 2013.*

Variable	n	%
Socioeconomic level		
Class A1	-	-
Class A2	-	-
Class B1	14	11.0
Class B2	34	26.8
Class C1	40	31.5
Class C2	28	22.0
Class D	10	07.9
Class E	01	00.8
Marital status		
Single	76	59.8
Married	50	39.4
Divorced	01	00.8
Dwelling		
Family	67	52.8
Mate	49	38.6
Partner and children	06	04.7
Alone	05	03.9
Skin Color		
White	48	37.8
Mixed	41	32.3
Black	38	29.9
Total	**127**	**100**

Table 2. *Numerical and percentage distribution of pregnant adolescents, according to the issues of self-awareness and self-care in oral health. Araçatuba-SP, Brazil, 2013.*

Variables		
	n	**%**
Self-perceived oral health		
Good	52	41.0
Poor	75	59.0
Self-reported problems with teeth		
Yes	80	63.0
No	47	37.0
Self-reported problems with the gums		
Yes	47	37.0
No	80	63.0
Frequency of brushing		
Never	0	-
Once	16	12.6
Twice	67	52.8
More than twice	44	34.6
Total	**127**	**100**

Table 3. *Numerical and percentage distribution of pregnant adolescents according to the need for treatment, access to oral health and reason for the last dental appointment services. Araçatuba-SP, Brazil, 2013.*

Variable	**n**	**%**
Perceived need for treatment		
Yes	80	63.0
No	47	37.0
Access to dental services		
Yes	105	82.7
No	22	17.3
Total	**127**	**100**
Reason of consultation		
Casual or not having any problems.	36	28.3
Problem or need to have something treatment (tooth or prosthesis).	63	60.0
Routine visit.	06	5.70
Total	**105**	**100**

Table 4*. Value of Community Periodontal Index in Pregnant adolescents. Araçatuba-SP, Brazil, 2013.*

Condition	**Sextant %**					
	16/17	**11**	**26/27**	**36/37**	**31**	**46/47**
Excluded	00,0	00,0	00,0	00,0	00,0	00,0
Health periodontal conditions	22,1	69,3	25,2	18,9	59,6	18,6
Gingival bleedings	52,7	26,8	45,7	47,3	35,3	51,1
Calculus	20,4	02,4	22,9	20,5	03,0	20,2
Periodontal pockets	04,8	01,5	06,2	13,3	02,1	10,1

of gingival bleeding was the most common symptom among sextants examined (*Table 4*).

Table 5 presents the results of the association study variables sneaky tests (*Table 5*).

Discussion

For the effectiveness of the actions of health services not only proper planning, accompanied by his organization and monitoring of specific population, but also the knowledge of the need of this population are needed and, above all, how they recognize. The perception of oral health in pregnant women has been assessed by questionnaires and interviews. Concomitant analysis of clinical data in this group has not been the subject of recent studies, there highlighting the importance of this study had the purpose to analyze objective and subjective indicators related to oral health in pregnant women, as well as their associations.

The present study showed that most of the women were in late adolescence (over 15 years) which agrees with the data of the Ministry of Health [16], which indicated that in girls under 15 years of age (early adolescence), pregnancy rate is 0.9% and for those between 15 and 19 years (late adolescence) is 22.6%. Similar results were also found by Hamilton et al. [17] in 2012 in the United States in which demonstrated rate of 29.4% of pregnant women in late adolescence.

The data relating to socioeconomic factors delineate a profile of adolescents belonging to the lower classes, which can be explained by the fact that the target populations of this study were attending a public health system. Of adolescents 59.1% were single, result was lower than that for the national Demographic and Health Child and Woman - PNDS -2006, nationally representative survey of large, what showed 72.1% unmarried women between 15 and 19 years. In relation to housing more than 50% lived with their parent and this pattern is repeated in Brazilian capitals [18,19].

Regarding self-perceived oral health in 41% of adolescents believed exhibit good oral health, but 63 % said they have problems in their teeth and gums. Note that the data of perception are fundamental to know how the individual perceives their own oral health conditions and their treatment needs, and thus motivate them to change behavior aimed at improving their oral condition, however the related literature this theme is still very scarce. In a study on the oral health status of the women in Araraquara, Brazil 8 36.0 % pregnant women considered their satisfactory oral appearance. A similar study was conducted in Guamá the city of Belém, Brazil, where 45.7 % of respondents believed they had good health bucal [20].

In findings about cavities, the average DMFT of 12.54 is considered high, but was similar to that found by Zanata et al. in 2003. On the other hand, was higher than that observed in studies of Ramos et al. (DMF=10.4), in Tonello et al. (DMF=11.08) and Villa et al. (DMF=8 0) [21-24].

In this study 93.7% of adolescents had decayed teeth. Freg et al. found similar results where 76 % of the women in their sample had decayed teeth. However, studies by Ramos et al. and Leon et al. most of the women were healthy teeth with only 13.8% and 7.1% respectively of decayed teeth [25-27].

Have gingival bleeding observed in more than half (85.0%) of pregnant adolescents may suggest a tendency to

Table 5. *Association between variables: Self-perceived oral health and, Self-reported gingival problems and periodontal disease. Araçatuba - SP, Brazil, 2013.*

	Periodontal Disease		
	No	Yes	p
Self-perceived oral health			
Good	35	17	0,016
Poor	35	40	
Self-reported gingival problems			
Good	1	46	0,039
Poor	10	70	

Fisher Exact Test (p>0.05)

bleeding during pregnancy, since the increase in circulating levels of progesterone cause dilation of gingival capillaries, permeability and release of gingival exudate, which may explain the trend of the increase in redness and bleeding during the gestational period [28].

The vast majority of the examined women had some need for periodontal treatment, findings similar to those already reported in the literature [18,29]. Since the greatest demand would be for basic periodontal treatment by scaling and root planning, and oral hygiene instruction, which has also been identified and suggested by other authors [30].

The Brazilian periodontal status assessed by the Community Periodontal Index (CPI) said the report pointed SB Brazil 2010, 50.9% of periodontal disease between 15 and 19 years [31], below the value that was found in our study. However the prevalence of periodontal disease observed in postpartum women in this study was similar to that reported by Santana et al. who detected 91.2% of periodontal disease among pregnant women in a public hospital in the city of Pernambuco, Brazil, and Moimaz et al. reported that 92 % of periodontal disease in health units two counties [32,33].

There was a significant association between perceived oral health as Periodontal Condition Index (CPI) which may possibly indicate that gum problems are as important as caries for pregnant women examined, probably because of the women believe that bleeding of the gums is not something normal during pregnancy.

Thus it is believed as well as other authors a dental care program which prioritizes this population group and is focused on prevention and treatment of periodontal disease and caries is required [11,34,35]. Moreover, it is necessary to carry out more research geared to this population, especially associating subjective and objective indicators. In this context, it makes it necessary to analyze the needs and know how they relate to the demands and services, recognizing that these data are essential for targeting the health care programs under the approaches to promotion, prevention and/or rehabilitation of health of the individual.

Conclusions

Most patients considered their poor oral health and reported having dental and gum problems, which can also be observed in the clinical examination as the caries experience was considered high and symptoms of periodontal disease were perceived largely voluntary.

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