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Original Article

Evaluating Oral Hygiene Knowledge and Attitude of Pregnant Women

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Abstract

Background: The purpose of this study was to describe the knowledge and attitude of pregnant women in Qazvin Province, central Iran, Relating to oral Hygiene.

Methods: The study group comprised of 760 pregnant women living in Qazvin, center of Iran in 2004. The questions were formulated to evaluate information without the need for dental examination. The age groups between 17-41 years old were randomly selected and a question was given to woman in three family planning center. Statistical analysis was done by SPSS.

Results: 94.4% responded the questionnaire and participated in statistical procedure. 73.1% of the patients used to brush their teeth at least twice a day and also 70.3% used to brush their teeth after meal.

Conclusion: Health authorities should strengthen the implementation of community- based oral disease prevention and health promotion programmes. More importance must be given to oral health care center in family planning centers.

Keywords: *Oral hygiene, Oral health, Pregnancy, Iran*

Introduction

Oral hygiene is the cumulative result of both the progressive and relatively diseases-free periods during a lifetime (1). Recently in public health aspect of medical sciences, the importance of general hygiene has been highlighted. One of the most important elements of general health is oral hygiene. Dental health education is based on the community approach and the development of community health may hold most promise for modification and change in health behavior. Personal knowledge combined with professional tooth brushing can reduce the progression of dental caries and periodontal disease (2).

The role of the dentist and hygienist in providing information and motivating patient is important. This can promote oral health statues of patients, which is important in general wellbeing. Preventive measures such as dental health educational programs, dietary control and adoption of proper procedures for plaque removal, particularly correct tooth brushing and interproximal cleaning, have been shown to be important in improving oral health (3).

A number of epidemiological studies in clinical and experimental trials have shown that both caries and periodontitis are caused by bacterial growth on tooth surfaces (4). Professional tooth cleaning and oral hygiene instruction may reduce the progression of caries and periodontal disease (5). It has been shown that prenatal counseling help parents to improve their own oral health status (6). It has been known for years that caries susceptibility is virtually unaffected by pregnancy (7). There are additional reasons why dental practitioners should be involved in mother's education and not leave preventable dental disease to chance. Sometimes excessive material consumption of fluoride may cause fluorosis and the ingestion of tetracycline antibiotics can cause staining of the developing primary dentition (8). The aim of antenatal care is to promote general maternal well-being (9). Dental health knowledge in pregnant mothers has previously been reported

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in attending centers in USA. By this research it is revealed that the dental health knowledge of pregnant mothers is not acceptable and must be increased (10). One of the problems of our society is the lack of enough knowledge regarding dental and oral health that results in inappropriate hygiene behavior (11). Dental and oral hygiene training and applying preventive methods in developed countries, have decreased dental caries and periodontal disease (12).

The purpose of the present investigation was to undertake a questionnaire survey of pregnant women with particular reference to their knowledge, attitudes and habits in relation to oral and dental health care. In this way, it is possible to determine deficiencies exist and to formulate recommendations to improve the oral health status of mothers.

Materials and Methods

A 35-item questionnaire was designed to investigate patient's attitudes toward and knowledge of oral hygiene practices. The questionnaire was divided into five sections: personal information regarding age, occupation, education, and number of children; dental health knowledge, dental history and utilization of dental services. The third section of the questionnaire was related to dental status which dealt with current oral problems and the last section was family planning clinic care and the time undertaken in attending this clinic and whether they were advised by the clinical staff to visit their dentist (13).

Seven hundred sixty patients in different stages of pregnancy were randomly selected from the three different family planning clinics in the Qazvin area where they were given cards with serial numbers. In this study, patients with odd-numbers were handed the questionnaire. Their ages ranged from 17-41 yr. A female general practitioner and midwife assisted the patients in answering the questionnaire. 94.4%of questionnaire was accurately completed. The data were analyzed to determine the frequency distribution and percentage ratio for each of the variables. The data were analyzed via SPSS 13. The statistical signification was measured using chi-square test for qualitative variables and *t*-test for quantitative variables considering any *P* value, which was less than 0.05 as significant.

Results

Demographic Characteristics

Results of descriptive analysis of demographic data revealed that about 70% of patients surveyed aged between 17 and 32 yr with the remaining 30% between 33 and 41 yr old. The majorities of patients (78%) were housewives and had between one to six children. Twenty two percent of pregnant women were employed (mostly collage graduates) and the number of their children ranged from 0-3.

Dental Knowledge

Ninety four point two percent of patients believed that their teeth were clean and reported that they brush their teeth every day 5.8% of them used to brush their teeth and the frequency of tooth brushing and the timing of tooth brushing in relation to mealtimes are shown in Table 1 and 2.

Questionnaire results showed that 94.2% of pregnant women believed that cleaning their teeth will reduce tooth decay. Five point eight percent of them did not consider that dental hygiene can lessen dental caries and never brush their teeth. Eighty nine point nine percent were aware that brushing their teeth helps maintain healthy gums. Seventy seven point five percent knew that excessive sugar in the diet contribute to dental caries. Forty seven point nine percent thought that pregnancy made their teeth worse and 26.4% believed that early dental caries is hereditary.

Personal Dental History

Sixty three point seven percent of women lost their teeth at an early age and 85.5% had restorations in their mouth. The majority of patients (94.9%) claimed that they received diet as advice from their doctor only during the preg-

nancy seldom received dietary advice from their dentist. Few patients smoked (5.3%) but they avoid smoking during pregnancy. Fifty six percent of patients visited their dentist when they have problem ($\chi 2$= 258, df= 1, *P*= 0.000).
With their teeth and 42.7% claimed that they have previously received scaling and polishing ($\chi 2$= 15.5, df= 1, *P*= 0.000). The main factor limiting regular dental visits was fear and furthermore they felt that there had no dental problems.

Reported Dental Health Status
Seventeen percent reported that they feel having problem with their teeth at present. 89.1% claimed that they might need dental treatment. Eighty nine percent answered that they had problems with their teeth at present or claimed that they might need dental treatment; remainder 3% did not have any dental problems then. Twenty seven point six percent said that they wore removable partial dentures ($\chi 2$= 142.7, df= 1, *P*= 0.000) and 13.7% claiming having problem with dentures. Some of the patients felt that when they become pregnant they lose motivation to brush their teeth.

Dental Care Family Planning Clinic
Forty two point seven percent have been in the family planning clinic more than once and 46 of the patients (33.3%) had only one visit, 23.9% did not specify the number of visits. Sixty one percent of patients had never been advised by their doctor to see a dentist. And 21% of patients did not respond to this question. Seventy four percent replied that they would be willing to attend for dental examination as part of prenatal care and being examined by dentist ($\chi 2$= 167.6, df= 1, *P*= 0.000).

Table 1: Frequency of tooth brushing (daily)

Answer	Number of patients (%)	Percentage
Once	141	21
Twice	493	73.1
Three times	41	6
Total	675	100

($\chi 2$= 501.05, df= 2, *P*= 0.000)

Table 2: Timing of tooth brushing in relation to mealtimes

Answer	Number of patients	Percentage
Before	171	23.9
After	504	70.3
Total	675	94.2

($\chi 2$= 169.3, df= 1, *P*= 0.000)

Discussion
Very few studies have investigated dental awareness during pregnancy. Consequently, it is difficult to assess how knowledgeable an expectant mother is about oral hygiene care and how she can put this knowledge into practice. With poor oral hygiene, seventy percent of periodontal disease can increase during pregnancy. In the course of pregnancy, however the plaque index will increase but during the last month of gestation, the scores leveled off well above the point for the onset of pregnancy (14). The results obtained from the questionnaire showed that most of the woman exhibited a high degree of dental knowledge. This is not surprising since" health for all in the year 2000" promoted by the word Health organization (WHO) has enable dentistry to make progress in establishing oral health care awareness. One of the most significant attitudes identified in the survey was the fact that 8% of the patients have never visited a dentist and over 56% visited the dentist only when they have problems with their teeth. Time spent on tooth brushing varied between patients. Oral health knowledge and attitude among Iranian pregnant women was not evaluated before in English. So health authorities should strengthen the implementation of community- based oral disease prevention and health promotion programmes. More importance must be given to oral health care center in family planning centers.

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