# Investigation of the Actual Condition of Oral Health Concerns of Patients In Dental Clinics

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## Abstract

Many studies have demonstrated the Quality of Life to oral health of the periodic dental visitors. Despite of the theoretical importance, a critical determinants of oral health concern have not yet been identified by intuition. The purpose of the present study is : (1) to analyze the relationship between clinical oral health status and subjective oral health concern(self-rated); (2) use them as basic data to efficiently operate oral health management programs specializing in prevention. The distribution of oral health concerns differed depending only on whether or not oral health care was performed periodically ($P<0.05$, Table 1).

**Keywords** : Oral Health Concern, Oral Care, Prevention

Oral problems can result in pain and discomfort and lead to problems in eating, communication, and appearance, consequently to embarrassment, social problems, particularly among older adults[1] These phenomena make people concerned about their oral health. Since most dental conditions are not life threatening with exception of oral neoplasms, we would not expect self-assessments of oral health to be related to mortality. But subjective oral health awareness included oral health concern is an individual subjective assessment of oral health, so it can better reflect the quality of life of an individual than the objective oral epidemiological index[2].

With increasing awareness by the public of the possibilities for prevention, the consumers of dental services (the patients) can be expected more and more to demand a preventive type of care rather than a invasive treatment if all possible.

It is essential that the dental profession breaks right away from this form of dental treatment in favour of scientifically based dental care aimed at optimizing oral health and maintaining the natural dentition as intact as possible[3-6].

Periodic oral health care is a preventive care-oriented course that removes oral health risk factors in advance and enhances an individual's oral health care skills through oral health care education[7,8]. Patients to periodic specialized oral health care are treated with the aim of improving the quality of life related to oral health by conducting dental floss tests, tooth brushing lessons and expert tooth brushing, performing dental flossing, removing plaque, and performing dental work as necessary, guiding the use of oral care products. It is also considered desirable to measure oral health concern for patient-centered operation of preventive care[9].

The purpose of this study is to survey the oral health concerns of patients aged 40 or older among patients who visit C Dental Hospital with the oral care of periodontitis and periodontal disease, and use them as basic data to efficiently operate oral health management programs specializing in prevention.

## 1. Subjects

The subjects of this study were reviewed in 2014 and approved (CD-MDIRB-1324-136) and surveyed 771 adults aged 40 or older who agreed to the purpose from Feb. 1st to Mar. 25nd 2014 at C Dental Hospital in Gwangju, and selected 717 people who had no defects in the results of this survey.

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## 2. Methods

### 2.1. Selection of Variables

The oral examination records data investigated whether chronic diseases affecting demographic and sociological characteristics such as age and gender and overall health were retained, natural teeth that reflected objective oral health conditions, periodontal pocket (CPI code 3·4), implant holdings, prosthesis status were investigated and used as explanatory variables. The average number of natural teeth held by the study subjects was analyzed to be 25.5 and the maximum number of natural teeth was 28 and categorized into groups of 26 or less and 27-28. The presence of periodontal pockets representing periodontal conditions was categorized into groups of 4 mm or more and groups of healthy periodontium.

In according to dental service utilization, periodic preventive oral care were divided into groups of initial group(early disease treatment group) visiting preventive dentistry for treatment of diseases occurring in the oral cavity and those receiving periodic preventive oral care.

Oral health concerns, which are subordinate variables, are 'seldom(not worried at all)', 'sometimes worried' and 'always worried' using a three-point Likert scale.

### 2.2. Method of Survey

(1) Oral examination

The oral health condition and basic human information of the subjects were checked or examined by two trained investigators (dentist and dental hygienist). The variables are age, gender, periodic preventive oral care carried out (more than one year of periodic professional oral health care, less than one year of regular care, or oral treatment), number of natural teeth, removable prothesis, fixed prothesis, implant prothesis (referred to replace the teeth), the presence of periodontal pockets over 4 mm and chronic disease.

(2) Questionnaire (oral health concerns)

Each questionnaire was prepared in writing and distributed directly after obtaining consent from patients in advance, and two trained investigators provided additional speech names for each question to the subjects.

(3) Statistical Analysis

To investigate the association between the oral health concerns and objective oral health, Pearson Chi-square test was conducted. To estimate the morbidity of oral health concerns, the descriptive statistics was applied.

A significant level of 0.05 was applied as a basis for determining statistical significance and statistical analysis was performed using statistical packages SPSS version 26.0 (IBM Co., Armonk, NY, USA).

## Results

### 1. Clinical Oral Health Status According to Concern About Oral Health

62.1% of all respondents said they had 'occasionally', 32.2% answered 'frequently', and only 5.7% answered 'seldom'.

The distribution of oral health concerns differed depending only on whether or not oral health care was performed periodically ($P<0.05$, Table 1).

### 2. The Distribution of Oral Health Concern in Initial Group

48.3% of males in this sample said they had 'frequently', 46.6% answered 'occasionally', and only 5.2% answered 'seldom'. 61.4% of females in this sample said they had 'occasionally', 33.8% answered 'frequently', and only 4.8% answered 'seldom'.

Among the respondents aged 40~49-year-old, 53.3% answered 'frequently'. Among the respondents aged 50~59-year-old, 38.5% answered 'frequently'. Among the respondents aged 60~69-year-old, 38.9% answered 'frequently'. In contrast, among the respondents aged over 70, 30.2% answered 'frequently'.

### 3. The Distribution of Oral Health Concerns in Periodic Preventive Oral-care Group

66.9% of males in this sample said they had 'occasionally', 26.5% answered 'frequently' and only 6.6% answered 'seldom'. 67.1% of females in this sample said they had 'occasionally', 26.7% answered 'frequently', and only 6.2% answered 'seldom'.

Among the respondents aged 40~49-year-old, 21.1% answered 'frequently'. Among the respondents aged 50~59-year-old, 27.5% answered 'frequently'. Among the respondents aged 60~69-year-old, 26.5% answered 'frequently'. Among the respondents aged over 70, 28.3% answered 'frequently'.

**Table 1.** Clinical oral health status according to concern about oral health

| Variables | N | Concern about oral health N(%) | | | $\chi^2$ | P* |
|---|---|---|---|---|---|---|
| | | frequently | occasionally | seldom | | |
| Total | 717 | 231(32.2) | 445(62.1) | 41(5.7) | | |
| Gender | | | | | | |
| male | 297 | 104(35.0) | 175(58.9) | 18(6.1) | 2.143 | .342 |
| female | 420 | 127(30.2) | 270(64.3) | 23(5.5) | | |
| Age | | | | | | |
| 40~49 | 68 | 24(35.3) | 41(60.3) | 3(4.4) | | |
| 50~59 | 260 | 85(32.7) | 165(63.5) | 10(3.8) | 9.116 | .333 |
| 60~69 | 293 | 94(32.1) | 180(61.4) | 19(6.5) | | |
| Over 70 | 96 | 28(29.2) | 59(61.4) | 9(9.4) | | |
| Periodic preventive oral-care | | | | | | |
| Yes | 391 | 104(26.6) | 262(67.0) | 25(6.4) | 12.50 | .002 |
| No (initial care, under 1 year) | 326 | 127(39.0) | 183(56.1) | 16(4.9) | | |
| Number of natural teeth | | | | | | |
| 27-28 | 407 | 118(29.0) | 268(65.8) | 21(5.2) | 5.724 | .057 |
| Below 26 | 310 | 113(36.5) | 177(57.1) | 20(6.5) | | |
| Removable prothesis | | | | | | |
| Yes | 23 | 9(39.1) | 12(52.2) | 2(8.7) | 1.095 | .578 |
| No | 748 | 222(32.0) | 433(62.4) | 39(5.0) | | |
| Fixed prothesis | | | | | | |
| Yes | 236 | 80(33.9) | 141(59.7) | 15(6.4) | .863 | .649 |
| No | 481 | 151(31.4) | 304(63.2) | 26(5.4) | | |
| Implant prothesis | | | | | | |
| Yes | 190 | 68(35.8) | 112(58.9) | 10(5.3) | 1.522 | .467 |
| No | 527 | 163(30.9) | 333(63.2) | 31(5.9) | | |
| Periodontal pocket over 4 mm | | | | | | |
| Yes | 380 | 136(35.8) | 225(59.2) | 19(5.0) | 4.992 | .082 |
| No | 337 | 95(28.2) | 220(65.3) | 22(6.5) | | |
| Chronic disease | | | | | | |
| Yes | 264 | 92(34.8) | 157(59.5) | 15(5.7) | 1.352 | .509 |
| No | 453 | 139(30.7) | 288(63.6) | 26(5.7) | | |

*P<0.05 by $\chi^2$-test

**Table 2.** A distribution of oral health concern in initial group                                                    Unit:N(%)

| Variables | | Total | Frequently | Occasionally | Seldom |
|---|---|---|---|---|---|
| | Total | 326 | 127(39.0) | 183(56.1) | 16(4.9) |
| Gender | Male | 116 | 56(48.3) | 54(46.6) | 6(5.2) |
| | Female | 210 | 71(33.8) | 129(61.4) | 10(4.8) |
| | 40-49 | 30 | 16(53.3) | 12(40.0) | 2(6.7) |
| Age | 50-59 | 122 | 47(38.5) | 74(60.7) | 1(0.8) |
| | 60-69 | 131 | 51(38.9) | 71(54.2) | 9(6.9) |
| | Over 70 | 43 | 13(30.2) | 26(60.5) | 13(9.3) |

**Table 3.** A distribution of oral health concern in periodic preventive oral-care group                    Unit:N(%)

|  | Variables | Total | Frequently | Occasionally | Seldom |
|---|---|---|---|---|---|
| Gender | Total | 391 | 104(26.6) | 262(67.0) | 25(6.4) |
|  | Male | 181 | 48(26.5) | 121(66.9) | 12(6.6) |
|  | Female | 210 | 56(26.7) | 141(67.1) | 13(6.2) |
| Age | 40-49 | 38 | 8(21.1) | 29(76.3) | 1(2.6) |
|  | 50-59 | 138 | 38(27.5) | 91(65.9) | 9(6.5) |
|  | 60-69 | 162 | 43(26.5) | 109(67.3) | 10(6.2) |
|  | Over 70 | 53 | 15(28.3) | 33(62.3) | 5(9.4) |

## Summary and Discussion

Oral health can be exacerbated by various causes or improved in an appropriate oral care. These causes can also be managed by individual efforts, but they can be managed more effectively when oral health professionals intervene, sometimes through dental care.

Periodic preventive care has long been necessary, especially since dental and dental diseases are typical chronic diseases that need to be improved through dental care as well as individual efforts. If researchers undertake some sort of intervention and try to track its impact, they could measure the effect of an intervention on Quality of Life related Oral Health[10].

Another studies for researchers working with patient populations are that because minor health problems do not affect general well-being, people with minor problems may not enter the health care results. In order to relieve this tendency, The oral health concerns' question is adopted and used in oral health care surveys for the National Oral Health Projects, and similar items are included in the oral examination questionnaire for insured persons conducted by the National Health Insurance Corporation in Korea[11-13].

The results of the present study revealed that the factor between the periodic preventive oral care group and the initial group was influenced by the oral health concern($P$<0.05, Table 1). Considering the factors associated with oral health concerns, the periodic preventive oral care group revealed lower tendency in 'frequently'. The distribution of oral health concerns in periodic preventive oral-care group is different to those with initial care group.

In fact, the concern about oral health means anxiety that is appropriate to measure adult's perceptions. I think that the periodic preventive oral care has long been necessary, especially since dental caries and peri-

odontal diseases are typical chronic diseases that need to be improved through dental care as well as individual efforts, according to this dimension.

This results would be likely difficult to generalize the descriptive results of the study because the selection of the subjects was conducted by a convenience sampling method at a dental clinic in one city in Korea and be analyzed in a difficult state to build a complex model not included socioeconomic factors and oral health behaviors. Nevertheless, the program of periodic preventive oral care is thought to have been effective in relieving their anxiety in mind when patients obtain dental benefits.

## Acknowlegements

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