Original research article

Oral health-related quality of life in elderly and young patients with periodontal diseases

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ABSTRACT

OBJECTIVE: Due to the increase in the prevalence of periodontal diseases, quality of life decreases with aging. The purpose of this study was to investigate the quality of life and periodontal disease in young adults and elderly individuals.

MATERIALS AND METHOD: A total of 104 individuals, including 52 elderly patients with periodontal disease (Test group: 37 with gingivitis and 15 with periodontitis) (mean age 67.56 ± 3.12) and 52 young adult patients with periodontal disease (Control group: 37 with gingivitis and 15 with periodontitis) (mean age 27.88 ± 6.59), were included in the study. The patients’ quality of life was determined by the Oral Health Impact Profile-14 (OHIP-14) questionnaire. Clinical periodontal parameters (gingival index (GI), plaque index (PI), clinical attachment loss (CAL), and probing pocket depth (PPD)) were used in the evaluation.

RESULTS: In periodontitis, there was no difference in total OHIP scores between the groups (p>0.05), whereas, in gingivitis, OHIP scores were higher in elderly patients (p<0.05). While GI was significantly higher in elderly patients, PPD and CAL were significantly higher in young adult patients with periodontitis (p<0.05). OHIP subgroups' scores for "physical pain, psychological discomfort, and psychological disability" were significantly higher in elderly patients (p<0.05).

CONCLUSION: Oral health-related quality of life was significantly lower in elderly patients with periodontal disease. While gingivitis had a significantly higher effect on the quality of life in elderly patients compared to younger patients, it was observed that there was no difference in both age groups in the presence of periodontitis. Improving oral health with atraumatic and effective treatment applications at early ages can prevent periodontal problems that may occur in advanced ages and increase the quality of life.

KEYWORDS: Adult; aged; gingivitis; periodontal diseases; quality of life

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INTRODUCTION

Periodontal disease, one of the most common chronic diseases, affects more than 65% of the population.1 Periodontitis, a form of periodontal disease, is characterized by severe destruction which may lead to edentulism early in life,2 resulting in aesthetic problems and functional constraints, as well as discomfort.3 Buset et al.4 reported that a correlation existed between the negative effect on the quality of life (QoL) and the severity of periodontal diseases. Durham et al.5 found that the poor quality of life in periodontitis patients was related with psychological concerns, pain, halitosis, and aesthetics. These findings have been confirmed around the world.6-8 Especially with regards to tooth loss, there is a potent evidence of its negative effect on the oral health-related quality of life (OHRQoL).9

In the evaluation of OHRQoL, the clinical findings and their expression as a social impact are combined. It measures the extent of the importance of health status in a normally functioning individual and how it can cause changes in behavior.10 This assessment of OHRQoL is presented as complement to previous subjective evidence found by clinicians. OHRQoL provides information on the quality of oral health status as well as its impact on the self-perceived need for dental and medical care.11

The elderly represent a specific category in the population because they require further dental care...
due to their special conditions and diseases. They may also experience certain limitations due to periodontal destruction in their teeth. Tooth loss due to poor oral health and periodontal diseases does not only affect phonetics, dietary intake, and nutritional status but also creates a risk for general health. Most of the studies representing the oral health of the elderly are limited to conventional measurements of oral diseases and give a limited understanding of how oral health affects the QoL. Measuring how dental or oral disorders affect the lives of individuals has the same importance of measuring its incidence and prevalence. Accordingly, the notion of OHRQoL is based on some questionnaires, including Geriatric Oral Health Assessment13 and Oral Health Impact Profile (OHIP)14 to evaluate the patient’s self-perception. The most widely used evaluation tool is the OHIP-14, which measures the social effect caused by problems compromising oral health. The OHIP questionnaire recommends completing clinical measures with specific interest on problems related to the patient’s physical and physiological needs.14,15 Considering the worldwide life expectancy and the increase in the elderly population, such measures need to be taken into account to ensure the QoL in the population over 60 years of age during the course of planning.16

Recently, it has been suggested that oral health surveillance in young people should include information on self-reported oral health, as in the general population, and this can help people better understand the importance of regular and thorough dental examinations. Self-reported oral health is one of the leading factors with an effect on the QoL and well-being. Kojima et al.20 reported that management/prevention of temporomandibular disorders, stomatitis, and malocclusion might lead to better QoL in the young adult population. However, in previous studies, the negative effect of periodontal disease on OHRQoL has been examined less frequently compared to other oral problems, such as tooth loss and dental caries. Clinical symptoms of periodontal diseases are observed in the later stages; therefore, individuals may not be aware of the present periodontal diseases during the early stage. Individuals who are not aware that their periodontal condition can deteriorate may be late to apply for dental care. In order to prevent periodontal disease in young populations, signs and symptoms of periodontal diseases need to be recognized before a clinical examination. However, differences in the perception of OHRQoL by young adults or elderly individuals with periodontal diseases have been investigated in very few studies.17,18,20

A better understanding of the self-perception of people regarding the effect that periodontal disease has on the OHRQoL can help provide planning and therapy that fits the concerns and needs of the patient. To that end, the purpose of the present study was to investigate the effects of gingivitis and periodontitis on quality of life in young adults and elderly individuals.

**Materials and Method**

The study was approved by the Ethics Committee of Bolu Abant Izzet Baysal University Faculty of Medicine (2018/139) and was enforced in accordance with the relevant guidelines of the Declaration of Helsinki. All participants participated in the study signed the written informed consent.

**Study population**

A total of 108 patients, aged between 20 and 92, were included in the study. Four patients declined to participate in this study. The study was performed with 52 individuals for the elderly (test group) and 52 for the young adults (control group).

The inclusion criteria were: 1) the presence of at least 15 teeth, 2) to be diagnosed with gingivitis/periodontitis, and 3) being systemically healthy. Exclusion criteria were: 1) patients who were breastfeeding or pregnant, 2) patients with systemic diseases such as cardiovascular disease or diabetes, 3) patients requiring antibiotic prophylaxis, 4) patients who received periodontal therapy prior to 6 months, 5) patients using immune-inflammatory drugs, and 6) patients suffering from tooth pain due to deep caries, or had psychiatric disorders.

**Periodontal examination**

The behavioral and demographic data of each subject group were recorded, and then the radiographic and clinical evaluations were performed. The reliability of the measurements, made by the examiner (O.G.) who performed the periodontal examination, was analyzed with fifteen randomly selected patients who did not relate to the study by repeating periodontal measurements within 48 hours after initial evaluation. The kappa value between the visits for assessment of probing pocket depth (PPD) was 0.83. The clinical examination included the evaluation of plaque index (PI), gingival index (GI), PPD, and clinical attachment loss (CAL) at six sites around each tooth. Periodontal measurements were performed according to the nearest millimeter using manual periodontal probe.

The calibrated examiner determined the state of periodontal health and the diagnosis of a periodontal disease with respect to the criteria of Classification of Periodontal and Peri-Implant Diseases and Conditions of the 2017 World Workshop according to clinical and radiographic evaluation. Patients with no clinical attachment loss, no radiographic bone loss, having a probing pocket depth <3 mm and bleeding on probing ≥ 10%, were diagnosed with gingivitis. Patients who had a radiographic bone loss on the coronal third of tooth roots and interdental CAL, which was detectable at ≥ 2 non-adjacent teeth or buccal or oral CAL ≥ 3 mm with pocketing depth ≤ 5 mm detectable at ≥ 2 teeth, were diagnosed with stage II periodontitis.
Evaluation of the quality of life

The effect of periodontal disease on the quality of life was examined using the OHIP-14 questionnaire.\textsuperscript{14,15} OHIP-14 is a 14-item measurement and a self-reported oral health assessment index. OHIP-14 examines the quality of life in seven aspects: Functional Limitation (items 1 and 2), Physical Pain (items 3 and 4), Psychological Discomfort (items 5 and 6), Physical Disability (items 7 and 8), Psychological Disability (items 9 and 10), Social Disability (items 11 and 12), and Handicap (items 13 and 14).\textsuperscript{15} Ratings were made on a 5-point Likert scale; 4: very often/every day, 3: fairly often, 2: occasionally, 1: hardly ever, and 0: never. All of the points given to 14 items were collected and the totals of OHIP-14 scores were calculated. The higher OHIP-14 scores indicate a poorer quality of life. OHIP-14 scale was previously validated by performing on Turkish dental outpatients.\textsuperscript{22} In addition, Balci et al.\textsuperscript{24} have reported that OHIP-14-TR is a reliable, valid, and comprehensible scale for measuring OHRQoL in the Turkish population.

Statistical analysis

All analyses were performed using a statistical package software program (SPSS, SPSS Inc., Armonk, NY, USA). Before the initiation of the study, a power analysis was performed. Individuals in each group were determined based on power calculation of 80% power with 5% type I error level. It was calculated based on an estimated 40% difference in oral health between young adults and elderly individuals with a ratio of 1:1 in periodontal diseases.\textsuperscript{25} The original number was 45 in each group, and 104 patients were included in the study to compensate for any possible drop-outs. Data were summarized as mean and standard deviation. Kolmogorov-Smirnov test was used to determine the normal distribution of data. The association between sociodemographic variables was tested with the Chi-square test. The comparisons of OHIP-14 scores between the groups were analyzed by independent groups t-test analysis. When comparing periodontal disease for the elderly and young adult individuals, the ANOVA analysis was performed. Individuals in each group were determined based on power calculation of 80% power with 5% type I error level. It was calculated based on an estimated 40% difference in oral health between young adults and elderly individuals with a ratio of 1:1 in periodontal diseases.\textsuperscript{25} The original number was 45 in each group, and 104 patients were included in the study to compensate for any possible drop-outs. Data were summarized as mean and standard deviation. Kolmogorov-Smirnov test was used to determine the normal distribution of data. The association between sociodemographic variables was tested with the Chi-square test. The comparisons of OHIP-14 scores between the groups were analyzed by independent groups t-test analysis. When comparing periodontal disease for the elderly and young adult individuals, the ANOVA analysis was performed. The Cronbach alpha coefficient was calculated to determine internal consistency.

| Table 1. Demographic data of the study population |
|-----------------------------------------------|
| Periodontal status [n (%)]                     |
| Control (n = 52)                               |
| Test (n = 52)                                  |
| p*                                             |
| Gingivitis                                     |
| 37 (71.1)                                      |
| 37 (71.1)                                      |
| Periodontitis                                  |
| 15 (28.8)                                      |
| 15 (28.8)                                      |
| Education level [n (%)]                        |
| Low                                           |
| 11 (21.2)                                      |
| 34 (65.4)                                      |
| 0.000                                          |
| Moderate                                      |
| 11 (21.2)                                      |
| 7 (13.5)                                       |
| High                                          |
| 30 (57.7)                                      |
| 11 (21.2)                                      |
| Income level [n (%)]                           |
| Low                                           |
| 9 (17.3)                                       |
| 11 (21.2)                                      |
| 0.713                                          |
| Moderate                                      |
| 23 (44.2)                                      |
| 19 (36.5)                                      |
| 0.686                                          |
| High                                          |
| 20 (38.5)                                      |
| 22 (42.3)                                      |
| Gender [n (%)]                                 |
| Female                                        |
| 34 (65.4)                                      |
| 18 (59.6)                                      |
| 0.686                                          |
| Male                                          |
| 31 (54.6)                                      |
| 21 (40.4)                                      |

The statistically significant level of comparisons was determined as p < 0.05.

| Table 2. Periodontal clinical parameters and quality of life scores in test and control groups (mean ± standard deviation) |
|--------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                            |
| Gingivitis                                                                  | Periodontitis                                                                |
| PPD (mm)                                                                   | Control group | Test group | p*     | Control group | Test group | p*     |
| 2.39 ± 0.39                                                                | 2.21 ± 0.71 | 0.927      |        | 5.09 ± 0.36 | 4.46 ± 0.51 | 0.011  |
| GI                                                                         | 1.70 ± 0.69 | 2.75 ± 0.59 | 0.000  | 2.53 ± 0.63 | 2.33 ± 0.48 | 0.305  |
| PI                                                                         | 2.13 ± 0.71 | 2.05 ± 0.62 | 0.760  | 2.62 ± 0.49 | 2.56 ± 0.49 | 0.744  |
| CAL                                                                       | -            | -          | -      | 3.28 ± 0.04 | 3.14 ± 0.02 | 0.010  |
| OHIP-14 (Total)                                                            | 8.72 ± 10.56 | 14.81 ± 8.10 | 0.007 | 10.06 ± 10.25 | 12.93 ± 6.35 | 0.365 |
| OHIP-Functional limitation                                                | 1.32 ± 2.04 | 1.08 ± 1.46 | 0.557  | 1.33 ± 1.29 | 1.86 ± 1.45 | 0.298  |
| OHIP-Pain and discomfort                                                  | 1.78 ± 2.08 | 3.62 ± 2.01 | 0.000  | 1.53 ± 1.99 | 3.80 ± 1.93 | 0.004  |
| OHIP-Psychosocialia discomfort                                            | 2.62 ± 3.58 | 6.72 ± 4.49 | 0.000  | 4.13 ± 4.61 | 3.60 ± 3.01 | 0.711  |

*Independent samples t-test analysis. Statistically significant p values (p<0.05) are indicated with bold. PI: plaque index; GI: gingival index; PPD: probing pocket depth; CAL: clinical attachment loss; OHIP: Oral Health Impact Profile
individuals with gingivitis, indicating that elderly individuals suffer more from “pain, physical and psychological discomfort” (p<0.05, Table 2).

The general distribution of the OHIP-14 items along with the scores of the test group is presented in Table 3. The effect of oral health on the QoL in elderly patients is statistically significant in terms of “physical pain, psychological disability, and psychological discomfort”. Eighty-three percent of elderly patients reported a painful condition due to complications concerning the teeth and gums. In addition, 67% of elderly patients declared that they felt self-conscious due to their teeth and gums, and 69% of elderly patients stated that they had difficulties in relaxing because of their teeth and gums (Table 3).

The general distribution of the OHIP-14 items and the scores of the control group are presented in Table 3. The effect of oral health on the QoL of young adult individuals with gingivitis, indicating that elderly individuals suffer more from “pain, physical and psychological discomfort” (p<0.05, Table 2).

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The general distribution of the OHIP-14 items and the scores of the control group are presented in Table 3. The effect of oral health on the QoL of young adult

**Table 3. Distribution of OHIP-14 individual item in test and control groups’ responses. Data are represented as n (%).**

| Test group                     | Never 0 | Seldom 1 | Sometimes 2 | Often 3 | Very Often 4 |
|--------------------------------|---------|----------|-------------|---------|--------------|
| **Functional limitation**      |         |          |             |         |              |
| 1. Trouble pronouncing words   | 35 (67.3) | 7 (13.5) | 9 (17.3)    | 1 (1.9) | 0 (0)        |
| 2. Sense of taste worse        | 28 (53.8) | 10 (19.2) | 12 (23.1)   | 2 (3.8) | 0 (0)        |
| **Physical pain**              |         |          |             |         |              |
| 3. Painful aching in mouth     | 9 (17.3)  | 5 (9.6)  | 28 (53.8)   | 10 (19.2) | 0 (0)        |
| 4. Uncomfortable to eat foods  | 10 (19.2) | 10 (19.2) | 11 (21.2)   | 16 (30.8) | 5 (9.6)      |
| **Psychological discomfort**   |         |          |             |         |              |
| 5. Being self-conscious        | 17 (32.7) | 12 (23.1) | 9 (17.3)    | 14 (26.9) | 0 (0)        |
| 6. Felt tense                  | 19 (36.5) | 7 (13.5)  | 18 (34.6)   | 7 (13.5)  | 1 (1.9)      |
| **Physical disability**        |         |          |             |         |              |
| 7. Unsatisfactory diet         | 30 (57.7) | 13 (25)  | 9 (17.3)    | 0 (0)    | 0 (0)        |
| 8. Had to interrupt meals      | 26 (50)  | 11 (21.2) | 11 (21.2)   | 4 (7.7)  | 0 (0)        |
| **Psychological disability**   |         |          |             |         |              |
| 9. Difficult to relax          | 16 (30.8) | 19 (36.5) | 8 (15.4)    | 7 (13.5)  | 2 (3.8)      |
| 10. Being embarrassed          | 25 (48.1) | 12 (23.1) | 11 (21.2)   | 1 (1.9)  | 3 (5.8)      |
| **Social disability**          |         |          |             |         |              |
| 11. Being irritable with others| 35 (67.3) | 5 (9.6)  | 12 (23.1)   | 0 (0)    | 0 (0)        |
| 12. Difficulty doing usual jobs| 26 (50)  | 13 (25)  | 13 (25)     | 0 (0)    | 0 (0)        |
| **Handicap**                   |         |          |             |         |              |
| 13. Felt life is less satisfying| 32 (61.5) | 12 (23.1) | 6 (11.5)    | 2 (3.8)  | 0 (0)        |
| 14. Totally unable to function | 17 (32.7) | 19 (36.5) | 11 (21.2)   | 5 (9.6)  | 0 (0)        |

| Control group                  |         |          |             |         |              |
|--------------------------------|---------|----------|-------------|---------|--------------|
| **Functional limitation**      |         |          |             |         |              |
| 1. Trouble pronouncing words   | 32 (61.5) | 7 (13.5) | 7 (13.5)    | 4 (7.7) | 2 (3.8)      |
| 2. Sense of taste worse        | 39 (75)  | 4 (7.7)  | 6 (11.5)    | 0 (0)   | 3 (5.8)      |
| **Physical pain**              |         |          |             |         |              |
| 3. Painful aching in mouth     | 32 (61.5) | 3 (5.8)  | 12 (23.1)   | 2 (3.8) | 3 (5.8)      |
| 4. Uncomfortable to eat foods  | 31 (59.6) | 2 (3.8)  | 16 (30.8)   | 2 (3.8) | 1 (1.9)      |
| **Psychological discomfort**   |         |          |             |         |              |
| 5. Being self-conscious        | 41 (78.8) | 6 (11.5) | 3 (5.8)     | 1 (1.9) | 1 (1.9)      |
| 6. Felt tense                  | 40 (76.9) | 2 (3.8)  | 4 (7.7)     | 1 (1.9) | 5 (9.6)      |
| **Physical disability**        |         |          |             |         |              |
| 7. Unsatisfactory diet         | 34 (65.4) | 8 (15.4) | 3 (5.8)     | 2 (3.8) | 5 (9.6)      |
| 8. Had to interrupt meals      | 39 (75)  | 3 (5.8)  | 6 (11.5)    | 2 (3.8) | 3 (3.8)      |
| **Psychological disability**   |         |          |             |         |              |
| 9. Difficult to relax          | 36 (69.2) | 4 (7.7)  | 8 (15.4)    | 1 (1.9) | 3 (5.8)      |
| 10. Being embarrassed          | 34 (65.4) | 9 (17.3) | 4 (7.7)     | 2 (3.8) | 3 (5.8)      |
| **Social disability**          |         |          |             |         |              |
| 11. Being irritable with others| 41 (78.8) | 7 (13.5) | 2 (3.8)     | 2 (3.8) | 0 (0)        |
| 12. Difficulty doing usual jobs| 37 (71.2) | 5 (9.6)  | 7 (13.5)    | 0 (0)   | 3 (5.8)      |
| **Handicap**                   |         |          |             |         |              |
| 13. Felt life is less satisfying| 31 (59.6) | 10 (19.2) | 8 (15.4)    | 1 (1.9) | 2 (3.8)      |
| 14. Totally unable to function | 31 (59.6) | 7 (13.5) | 11 (21.2)   | 1 (1.9) | 2 (3.8)      |
patients was statistically significant in terms of “physical pain, psychological disability, and psychological discomfort”. Thirty-nine percent of young adult patients reported experiencing discomfort while eating due to problems with their teeth and gums. Approximately 21% of young adult patients stated that they felt self-conscious and 30% of young adult patients felt tense because of problems with their teeth and gums (Table 3).

The internal consistency coefficients of the individual subscales and OHIP-14 scores of all groups are shown in Table 4. Cronbach’s alpha values in elderly patients were 0.792 and ranged from 0.744 to 0.780. Cronbach’s alpha values in young adult patients were 0.736 and ranged from 0.676 to 0.752 for OHIP-14 subscales (Table 4).

The total scores obtained from OHIP-14 and subscales of the control and test groups are presented in Table 4. OHIP-14 scores and “Physical pain, psychological disability, and psychological discomfort” subscales showed a statistically significant difference between control and test groups (p<0.05, Table 4).

**DISCUSSION**

The purpose of this study was to evaluate the oral health-related quality of life and periodontal disease in younger adults and elderly individuals. The findings provided by this study showed that there was a statistically significant difference between young adults and elderly patients in terms of OHIP-14 score and its subscales as “Physical pain, psychological disability, and psychological discomfort”. Additionally, elderly individuals had higher OHIP-14 scores and poorer QoL.

It has been shown that as age progresses, certain conditions, such as loss of income, the presence of chronic disease, and exclusion from health programs, affect health and QoL. Lamster et al. demonstrated that periodontal health was important for elderly people by indicating a relation between periodontitis and root caries, which was not present in young adults. Liang et al. found that elderly patients who had a poor chewing ability, removable denture-wearing, and a periodontal disease had a lower quality of life. Another study also reported that the number of missing teeth, gender, mean probing depth, and mean clinical attachment loss frequently affected OHQoL, and age was negatively associated with lower OHQoL. However, the effect of oral health on QoL in the young population was evaluated in a few studies. Yamane-Takeuchi et al. investigated the relationship between QoL and clinical oral health along with subjective oral symptoms such as temporomandibular disease, stomatitis, and oral pain in young individuals. They found that self-rated oral health, malocclusion, oral pain, and the decayed, missed, filled teeth scores were directly related with the OHQoL, and subjective symptoms of recurrent aphthous stomatitis and temporomandibular disorders were both indirectly and directly associated. Besides, they concluded that the mean score (± SD) of OHIP-14 was 1.92 ± 5.47 and this score was relatively low compared to those in elderly people and clinical periodontal conditions such as the plaque score, and % bleeding on probing did not show a significant effect on OHQoL.

Ustaoglu et al. evaluated the effect of generalized aggressive periodontitis (GAP), generalized chronic periodontitis (GCP), and gingivitis (G) on QoL in young adult individuals. They concluded that different forms of periodontal disease had different effects on the QoL of patients, and patients with GCP and GAP had poorer QoL than G patients. In the present study, young adult patients had low OHIP-14 scores compared to elderly patients. There were no differences between young and elderly patients with periodontitis in terms of OHIP-14 scores, functional limitation, and psychosocial effects. These findings show that periodontitis has a similar effect on the QoL among the young and the elderly. Elderly patients with periodontitis had lower QoL in terms of discomfort compared to the young adult patients, and this result was consistent with other studies. Besides, the increase in the number of tooth loss in the elderly compared to young people in periodontitis may be the reason why elderly periodontitis patients have lower QoL in terms of discomfort. OHIP scores were lower in elderly patients with gingivitis compared to young patients with gingivitis. These results show that gingivitis affects the QoL of elderly patients more than young people. Early diagnosis and early therapy of oral
diseases should be considered in the improvement of OHRQoL in young adults as in the elderly.

Previous studies evaluating the QoL showed that there was an association between OHRQoL and the clinical status of periodontitis patients with periodontal symptoms. Periodontal diseases affect the QoL negatively by causing pain and physical, psychological, and social disability, functional limitation. Ng and Leung investigated the association between QoL and periodontal status and reported that a comparison of the mean OHIP-14S scores of the healthy/groups with low levels of periodontal clinical attachment loss and the groups with high/severe loss of periodontal clinical attachment demonstrated statistically significant differences with respect to the subscales of functional limitation, psychological discomfort, physical pain, psychological, and physical disabilities. Grover et al. found that the most influenced domain in the rural population was "functional limitation", whereas "psychological disability" was the most influenced in the urban population and statistically positive correlation was revealed between the OHIP-14 and periodontal parameters. In this study, the effect of oral health on the QoL in young adults and elderly people with gingivitis was found statistically significant in both groups in terms of "physical pain, psychological discomfort, and psychological disability". According to the previous study's findings, two psychological parameters may be related to the symptoms of gingivitis such as the change of color, bleeding, redness, and edema. Tomazoni et al. reported that the prevalence of gingivitis was associated with negative perceptions of daily life in adolescents. Ediani Machado et al. showed that the presence of gingival bleeding caused a decrease in the QoL. Similarly, in the present study, the quality of life of elderly patients with gingivitis was found to be lower in which the gingival index was significantly higher than the young adult patients.

Another factor affecting the QoL is the education level. Studies reported a negative correlation between periodontal diseases and the level of education. The individuals suffering from a periodontal disease with a high severity were reported to have a lower education level. Recently, He et al. has demonstrated that periodontitis has a direct dose-response relationship with OHRQoL regardless of sociodemographic factors and variability in determinants, such as gender, age, education, and tooth decay variance. Similarly, it was reported by another study that sociodemographic factors such as gender, age, and income level affect oral health. The individual's level of education may be a factor affecting OHRQoL. In this study, elderly people had a significantly lower education level in comparison to young adults. Consequently, poor QoL in elderly people may be related to lower education level.

Based on this study and literature data, it can be stated that the quality of life decreases with aging; conjointly, the clinical symptoms of inflammation in periodontal tissues affect the QoL in a negative manner.

This study has some limitations. A major limitation of this study is the small sample size. The effect of periodontal status on quality of life should be evaluated with more participants. Another limitation of this study includes the lack of additional data on other specific dental problems such as food impaction, caries, gingival recessions, and other dental problems.

**Conclusion**

In this study, it was observed that the QoL was lower in elderly individuals with periodontal disease compared to young adults. In addition, the effect of gingivitis on the QoL was higher compared to periodontitis in both young adults and elderly individuals. Information obtained from this study can help determine to what extent periodontal treatments will improve the quality of life. However, additional studies are still needed to examine the relationship between age-related QoL and periodontal status.

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ÖZET

AMAÇ: Yaşlanma ile periodontal hastalıkların prevalansındaki artış yaşam kalitesini düşüktürektir. Bu çalışmanın amacı, genç erişkinlerde ve yaşlı bireylerde yaşam kalitesini ve periodontal hastalık durumunun değerlendirilmesidir.

GEREÇ VE YöNTEM: Periodontal hastalığı olan 52 yaşlı birey (Test grubu: 37 gingivitisli ve 15 periodontitisli birey) (ortalama yaş 67.56 ± 3.12) ve periodontal hastalığı olan 52 genç birey (Kontrol grubu: 37 gingivitisli ve 15 periodontitisli birey) (ortalama yaş 27.88 ± 6.59) olmak üzere, toplam 104 birey çalışmaya dahil edildi. Hastaların yaşam kalitesi Ağrı Sağlığı Etki Profili-14 (OHIP-14) anketi ile belirlendi.

BULGULAR: Periodontitisli bireylerde, gruplar arasında toplam OHIP skorları arasında anlamlı fark bulunmadığı gözlemlendi (p>0.05). Gingivitisli bireylerde OHIP skorlarının yaşlı bireylerde daha yüksek olduğu ve periodontitisli bireylerde ise gençlerde daha düşük bulunuyor (p<0.05) (OHIP alt grupları incelendiğinde, yaşlı bireylerde "fiziksel ağrı, psikolojik rahatsızlık ve psikolojik yetersizlik" skorlarının daha yüksek olduğu görüldü (p<0.05).

SONUÇ: Periodontal hastalık olan yaşlı hastalar daha düşüklüğe ağız sağlığı ile ilgili yaşam kalitesinde sahiptir. Gingivitisli yaşlı hastalarında genç hastalara kıyasla yaşam kalitesi üzerinde anlamlı derecede yüksek etkisi görülmüştür. Periodontitisli hastalarda ise yaş grubunda bir farkın olmadığı gözlemlenmiştir. Ağrı sağlığını artırmak ve etkili tedavi uygulamalarını erken yaşta geliştirilmiş, ileri yaşlarda ortaya çıkan periodontal sorunları önleyebilir ve bireylerin yaşam kalitesini artırabilir.

AANANTHER KELİMELER: Erginlik; gingivitis; periodontal hastalıklar; yaşam kalitesi; yaşlı