

# Oral Health Related Quality of Life Among the Staff of the Shahid Beheshti Dental School

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**Objectives** Health workers are considered as an important part of society and a role model for service recipients. Quality of life related to oral health is a common concept to assess the impact of oral conditions and the impact of dental interventions that affect people in many aspects such as physical, mental, social and ability to perform daily activities of life. The aim of this cross-sectional study was to assess the quality of life related to oral health among the staff of Shahid Beheshti Dental School.

**Methods** This study was performed on 85 employees of Shahid Beheshti Dental School in 2021. The Participants completed the OHIP-49 (Oral health impact profile-49) questionnaire. Independent t-test, and one way ANOVA were used for data analyzing by SPSS 21 statistical software.

**Results** The mean total score of OHIP was 13.86 with a standard deviation of 12.44. The most problematic subscale was physical pain (20.65±14.01). The psychological disability and social disability subscales were significantly associated with female gender ( $p < 0.05$ ), and there was no relationship between the mean OHIP scores and the rest of measured demographic variables, including age, marital status, level of education, and chronic disease.

**Conclusion** The results of the study showed that the quality of life related to oral health in dental staff was acceptable. On other hand, the Persian version of OHIP-49 questionnaire was validated to be used in Iran.

**Keywords** Dental Staff; Oral Health; Quality of Life

## Introduction

Today, in modern dentistry, in addition to paying attention to the physical dimensions and pathology of diseases and oral health, the consequences and socio-economic and psychological dimensions and patient satisfaction as well as quality of life related to oral health are also evaluated. <sup>1</sup> Studies have shown that oral problems affect the psychological, social and physical aspects of the patient and also those can affect the quality of life, important aspects of individual life through impaired social presence and interpersonal relationships. <sup>2, 3</sup>

Oral Health Related Quality of Life (OHRQoL) is a concept that reflects how oral health affects a person's well-being, function and satisfaction in their daily lives. This includes things like oral function, emotional well-being, social well-being, expectations and satisfaction with care, and feelings of self. OHRQoL is an important indicator of general health and quality of life, since oral diseases can have significant impacts on the physical, psychological and social domains. <sup>4, 5</sup> Some examples of how oral diseases can affect OHRQoL are dental caries that can cause pain, infection, tooth loss and difficulty in eating and speaking; periodontal disease that can lead to inflammation, bleeding, bad breath and tooth mobility; oral cancer that can result in pain, ulceration, disfigurement and impaired speech and swallowing

and oro-dental trauma that can cause pain, loss of function, aesthetic problems and reduced self-esteem. <sup>6</sup>

Therefore, it is important to maintain good oral hygiene and seek regular dental care to prevent and treat oral diseases and improve OHRQoL. Quality of life related to oral health has important implications for the clinical practice of dentistry and dental research and is an integral part of public health and well-being recognized by the World Health Organization as an important part of the Global Oral Health Program. <sup>7</sup>

Quality of oral health in staff is important for several reasons. It can affect the oral health and well-being of the patients or residents they care for, as poor oral health can lead to pain, infection, malnutrition and other complications. <sup>7</sup> It can reflect the knowledge, skills and attitudes of the staff towards oral care, as well as their compliance with guidelines and protocols. It can influence the quality of care and service delivery, as well as the satisfaction and trust of the patients or residents and their families. <sup>8</sup> Therefore, it is essential to provide adequate training, resources and support for staff to improve their oral health and oral care practices. However, these self-report tools have certain limitations, such as not reporting satisfaction with oral health. <sup>4, 5, 9, 10</sup> Considering that one of the benefits of using the quality of life index related to oral health is

assessing the needs and consequences of the treatments performed.<sup>11</sup>

No previous studies have assessed the oral health status of working adolescents in dentistry schools. Therefore, this study aimed to evaluate the oral health status of whom have worked in dental school of Shahid Beheshti university of medical sciences.

### Methods and Materials

This descriptive cross-sectional study was conducted in 2021 on all the 85 staff members at Shahid Beheshti Dental School. The participants consciously and satisfactorily completed the Oral Health Impact Profile Questionnaire (OHIP-49).

The original English version questionnaire was used after translation and re-translation by the experts and by using the corrective comments of university professors. The questionnaire had two parts. In the first part, participants were asked about age, gender, education, chronic diseases, and frequency of dental visits. The second part of questionnaire was OHRQoL-49 scale. The OHIP-49 was translated into Persian. Face validity was approved by specialist in the field of oral health. The reliability was evaluated and assessed by test-retest in 14 staff after 2 weeks interval (ICC=0.9). This OHIP-49 assesses the quality of life in 7 subscales. These 7 subscales are functional limitations (9 questions), physical pain (9 questions), psychological discomfort (5 questions), physical disability (9 questions), Psychological disability (6 questions), social disability (5 questions) and handicap(6 questions). Responses are based on a Likert scale ranging from 0 for "never" to 4 for "very often". A score of zero indicates the absence of any impact and a score of 4 indicates the worst effect of oral health on quality of life. For better explanation, the score of each of the subscales were converted to 0-100.

N (%) and mean (SD) were reported. Independent t-test, one-way ANOVA or Welch test were performed for statistical analysis. SPSS software Version 21 was used.  $\alpha = 0.05$  was considered as the significance level.

### Results

A total of 85 staff participated in the study, of which 76 (89.4%) were female and 9 (10.6%) were male. The mean age of participants in the study was 41 years with a range of 36-46 years. 62 (72.9%) of the participants were married. The main degree of the participants was higher than diploma (85.9%). 68

participants, or 80%, see a dentist whenever they have a dental problem, and 17 (20%) see a dentist more than twice a year. 74 participants (87.1%) did not report any chronic disease (Table 1). The average score of the Oral Health Impact Profile (OHIP) in the staff of Shahid Dental School Beheshti was 13.86 with a standard deviation of 12.44. Table 2 shows the average scores of OHIP subscales. According to this table, and the results of Repeated Measure ANOVA, it reveals that the most problematic subscale were primarily the subscales of functional limitations, physical pain and psychological discomfort which their average were significantly larger than the rest of subscales ( $p < 0.001$ ). According to Table 3, the mean subscales of OHIP score were compared between some of the interested demographic variables. Psychological disability, social disability and somehow the total score had significant higher average values in females compared to the male participants ( $p < 0.05$ ).

**Table 1-** Demographic characteristics of the subjects

| Variable                                  | Category              | N  | %    |
|---|-----------------------|----|------|
| Age (years)                               | 25-35                 | 21 | 24/7 |
|   | 36-46                 | 42 | 49/4 |
|   | 47-57                 | 22 | 25/9 |
| Gender                                    | Male                  | 9  | 10/6 |
|   | Female                | 76 | 89/4 |
| Marital status                            | Married               | 62 | 72/9 |
|   | Single                | 23 | 27/1 |
| Work Experience (years)                   | 1-10                  | 24 | 28/2 |
|   | 11-21                 | 41 | 48/2 |
|   | 22-30                 | 20 | 23/5 |
| Level of Education                        | Diploma               | 12 | 14/1 |
|   | Higher than diploma   | 73 | 85/9 |
| Dental Visit times (in the previous year) | If there is a problem | 68 | 80   |
|   | More than twice       | 17 | 20   |
| Chronic disease                           | Yes                   | 11 | 12/9 |
|   | No                    | 74 | 87/1 |

**Table 2-** Average score of OHIP subscales in the staff of Shahid Beheshti Dental School

| OHIP subscales           | Mean         | SD           |
|--------------------------|--------------|--------------|
| Functional limitations   | 18.28        | 14.97        |
| Physical pain            | 20.65        | 14.01        |
| Psychological discomfort | 18.65        | 17.79        |
| Physical disability      | 9.08         | 11.27        |
| Psychological disability | 10.75        | 14.84        |
| Social disability        | 7.30         | 12.85        |
| Handicap                 | 8.78         | 13.96        |
| <b>Total score</b>       | <b>13.86</b> | <b>12.44</b> |

**Table 3-** The effect of demographic variables and dental visit and chronic disease with average OHIP subscales

|                 |                       | functional limitations |      | P-value | Physical pain |      |         | Psychological discomfort |      |         | Physical disability |      |         | Social disability |      |         | Social disability |      |         | Handicap |      |         | Total score |      |         |
|-----------------|-----------------------|------------------------|------|---------|---------------|------|---------|--------------------------|------|---------|---------------------|------|---------|-------------------|------|---------|-------------------|------|---------|----------|------|---------|-------------|------|---------|
|                 |                       | mean                   | SD   |         | mean          | SD   | P-value | mean                     | SD   | P-value | mean                | SD   | P-value | mean              | SD   | P-value | mean              | SD   | P-value | mean     | SD   | P-value | mean        | SD   | P-value |
| Gender          | Male                  | 12.3                   | 7.5  | 0.2     | 16.4          | 7.7  | 0.1     | 11.1                     | 11.7 | 0.1     | 6.9                 | 7.4  | 0.6     | 2.8               | 4.7  | 0.001   | 1.7               | 3.5  | 0.005   | 5.6      | 6.6  | 0.1     | 9.1         | 5.7  | 0.05    |
|                 | Female                | 18.9                   | 15.2 |         | 21.9          | 14   |         | 20.1                     | 17.5 |         | 9.4                 | 11.4 |         | 11.5              | 14.9 |         | 7.3               | 12.8 |         | 10       | 14.8 |         | 14.4        | 12.9 |         |
| Age             | 25-35                 | 15.5                   | 12.1 | 0.5     | 19.8          | 11.5 | 0.1     | 21.2                     | 16.6 | 0.7     | 7.4                 | 8.1  | 0.4     | 7.5               | 11.2 | 0.6     | 4.8               | 8.2  | 0.7     | 5        | 9.2  | 0.1     | 11.7        | 8.4  | 0.4     |
|                 | 36-46                 | 18.5                   | 16.8 |         | 19            | 14.4 |         | 17.6                     | 17.7 |         | 8.8                 | 12.3 |         | 11.6              | 16.1 |         | 7.2               | 13.9 |         | 10.4     | 15.4 |         | 13.9        | 14.1 |         |
|                 | 47-57                 | 20.8                   | 12.1 |         | 26.8          | 12.6 |         | 20.2                     | 17.1 |         | 11.8                | 10.9 |         | 11.3              | 13.5 |         | 7.7               | 12.5 |         | 12.3     | 15.3 |         | 16.4        | 12.3 |         |
| Marital state   | Married               | 18.8                   | 15.2 | 0.6     | 21            | 14.4 | 0.8     | 18.6                     | 17.8 | 0.6     | 9.4                 | 11.7 | 0.8     | 10.8              | 14.7 | 0.8     | 7.6               | 13.6 | 0.2     | 9.7      | 15   | 0.8     | 14.2        | 13.2 | 0.7     |
|                 | Single                | 16.7                   | 13.5 |         | 21.9          | 11.2 |         | 20.7                     | 15.5 |         | 8.6                 | 9.3  |         | 9.7               | 13.8 |         | 4.3               | 7.36 |         | 8.9      | 12   |         | 12.9        | 10   |         |
| Education       | Diploma               | 21                     | 17.5 | 0.5     | 22.5          | 15.4 | 0.7     | 22.5                     | 22.3 | 0.5     | 12                  | 13.6 | 0.3     | 13.2              | 17.5 | 0.5     | 6.3               | 14.9 | 0.9     | 10.8     | 17.9 | 0.7     | 16          | 16.3 | 0.5     |
|                 | Higher than diploma   | 17.8                   | 14.3 |         | 21.1          | 13.3 |         | 18.6                     | 16.3 |         | 8.7                 | 10.6 |         | 10                | 13.9 |         | 6.8               | 11.9 |         | 9.3      | 13.6 |         | 13.5        | 11.8 |         |
| Dental Visit    | If there is a problem | 19.6                   | 15.4 | 0.1     | 22.3          | 13.8 | 0.2     | 20.4                     | 17.3 | 0.2     | 9.7                 | 11.1 | 0.4     | 11.5              | 14.8 | 0.2     | 6.8               | 12.4 | 0.9     | 9.7      | 14.3 | 0.8     | 14.6        | 12.7 | 0.3     |
|                 | More than twice       | 13.1                   | 10.5 |         | 17.2          | 11.8 |         | 14.4                     | 16.1 |         | 6.9                 | 10.9 |         | 6.8               | 12.3 |         | 6.5               | 12.2 |         | 8.6      | 13.9 |         | 10.7        | 11.4 |         |
| Chronic Disease | No                    | 18.6                   | 15.2 | 0.5     | 21.8          | 13.6 | 0.4     | 19.6                     | 17.2 | 0.6     | 9.5                 | 11.4 | 0.6     | 10.8              | 14.6 | 0.7     | 6.4               | 12.8 | 0.5     | 10       | 14.5 | 0.5     | 14.2        | 12.8 | 0.6     |
|                 | Yes                   | 15.7                   | 10.9 |         | 17.9          | 12.8 |         | 16.4                     | 17.2 |         | 7.3                 | 8.2  |         | 8.7               | 13.2 |         | 9.1               | 8.3  |         | 6.4      | 12.3 |         | 12          | 10.5 |         |

## Discussion

Based on a review of previous studies, there has been no study of oral health quality of life for dental workers. Since within this group there is access to services at a reasonable price or even free of charge, the study's attention is on things that we have sometimes overlooked. As a result, the quality of life indicators related to oral health in these individuals have not been favorable.

The current study assessed the oral health-related quality of life performance of staff at the Shahid Beheshti Dental School in 2021. The results of the study on staff referral to dentistry showed that 80% of people refer to dentist whenever they have a problem, which was contrary to the study of Akbari et al.<sup>8</sup> In the present study, there was no statistically significant relationship between age and gender with the mean score of quality of life, which was consistent with the research of Bokhari<sup>13</sup>; but it contradicted the study of Jabbarifar et al.<sup>6</sup> The lack of relationship between age and gender factors and the quality of life of the subjects could be due to the small sample size or the type of statistical population. This study analyzed the quality of life related to oral health, examining education as a demographic indicator, and examining the relationship between oral health and quality of life. The study of Khatami Nasab et al. showed that there was no statistically significant

relationship between education and oral health quality of life.<sup>14</sup> In the study by Mohebbi et al., the most common condition was related to toothaches.<sup>15</sup> In the present study, 96.5% of the subjects reported at least one functional limitation due to oral diseases, which in the study of Mohammad zadeh et al.<sup>16</sup> this rate was 98% and in the study of Dorri et al.<sup>17</sup> 85.6% was reported. The difference between this study and the Dorri study can be seen in the difference between the types of population studied.

According to the result of this study, workers who have good access to dental services and probably have sufficient knowledge, still do not live in an ideal state of oral health related to quality of life. In this regard, it is suggested that the obstacles to increasing this index be expressed in future studies.

## Conclusion

The results of the study showed that the quality of life related to the oral health in the dental staff has an acceptable performance. On the other hand, the Persian version translated of OHIP-49 Persian questionnaire was a validated to be used in Iran.

## Conflict of Interest

No Conflict of Interest Declared ■

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