

# Differences in Perception of Quality Dental Job Conditions and Job Satisfaction between Dentists and Dental Hygienists

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**Background:** This study aims to investigate the perceptions of dentists and dental hygienists regarding quality dental job conditions and to identify differences in perceptions based on job type.

**Methods:** As a result of conducting face-to-face and online surveys, data from a total of 132 people were analyzed. In order to investigate the perception of quality job conditions, the importance of a total of 13 items was investigated, and the work policies and job satisfaction of the current workplace were examined. Since the data did not follow a normal distribution, a non-parametric test, the Mann-Whitney U test, was performed.

**Results:** Both dentists and dental hygienists perceived income and working hours to be of priority importance for quality job conditions. Dental hygienists valued holiday support and welfare, human relations, and personal development potential more than dentists ( $p < 0.05$ ). Looking at differences by job type, dental hygienists rated all conditions as more important than dentists except income, indicating a statistically significant difference ( $p < 0.05$ ). In terms of the work policies, 96.2% of the practices in the study were required to have the four types of social security contributions, but fewer had flexible working hours (19.7%), healthcare support (23.5%), and incentives (25.0%). Of the participants, 60.6% had parental leave available at their workplace, and dental hygienists had statistically significantly higher job satisfaction when parental leave was available (2.57 points) than when it was not ( $p < 0.05$ ).

**Conclusion:** Quality dental jobs are an important factor in keeping workers happy and maintaining an efficient practice. Dental practice owners need to pay attention to the quality of jobs required by the dental workforce, provide flexible working hours and welfare programs such as parental leave, and create a workplace atmosphere and human resource management system that supports the use of these programs.

**Key Words:** Dental hygienists, Dentists, Job satisfaction

## Introduction

### 1. Background

While the concept of a quality job varies somewhat across time, countries, and industries, it is generally reported that employment ethics, income and benefits, working hours and work-family balance, job security and social protection, social dialogue, skills development, and continuing education, and workplace interpersonal relationships are among the factors that can be used to measure job quality<sup>1,2</sup>. Quality work is important as it not only affects the attitudes and

behaviors of individuals as members of an organization<sup>3</sup>, but it is also related to their health and quality of life<sup>4</sup>. In addition, as job satisfaction is related to job effectiveness and turnover intentions<sup>5,6</sup>, it is necessary to create a work environment that meets the high-quality job conditions in order to maintain organizational stability.

The demand for jobs in the healthcare sector is steadily increasing due to the increase in national income and the aging population in South Korea<sup>7</sup>, and healthcare jobs, which are centered on professional positions, are recognized as quality jobs. However, jobs in care and health

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services workers, medical technicians, and healthcare-related industries are reported to be poorly paid and not recognized as jobs with career prospects<sup>8)</sup>.

As for dental hygienists, emotional labor, stress, long working hours, and low wages have been raised as problems, and the need to improve the working environment has been continuously raised<sup>9,10)</sup>. The reason for the need for quality jobs in the dental field is that the dental work environment affects job satisfaction, work commitment, and turnover intention of dental hygienists, and frequent turnover of dental hygienists can impair the stability of dental organizations and the efficiency of dental patient care<sup>11,12)</sup>.

To date, most studies on dental job quality have focused on dental hygienists to examine dental work-related characteristics<sup>9-12)</sup>, and it is hard to find studies that capture workers' perceptions of the current dental work environment and job conditions. In order to increase the number of quality dental jobs, it is necessary to survey and discuss with dentists, along with dental hygienists, their perceptions of what is needed for a good work environment, given that in most dental practices, dentists are the practice owners and determine dental work policies and job conditions. Furthermore, it is necessary to investigate which work policies are associated with job satisfaction among dental workers and propose measures to improve the quality of dental jobs.

## 2. Objectives

This study aims to investigate the perceptions of dentists and dental hygienists regarding quality dental job conditions and to identify differences in perceptions based on job type. It is also intended to identify any difference in job satisfaction among dentists and dental hygienists depending on the work policies of the dental practice.

## Materials and Methods

### 1. Ethics statement

This study was approved by the Institutional Review Board of Shinhan University (SHIRB-202303-HR-182-02).

### 2. Study design

This study examined the general characteristics of the

participants, their perceptions of quality job conditions, and their job satisfaction with their current workplace's work policies and job conditions through face-to-face or online surveys. In order to investigate the perception of quality job conditions, 13 conditions related to quality job indicators were identified based on previous studies<sup>13,14)</sup>, and a survey questionnaire was constructed asking respondents to rate their importance. This study reviewed the work policies that affect quality jobs<sup>9,10,15,16)</sup> and selected 10 survey items to investigate the work policies of workplaces.

### 3. Sample size

This study surveyed dentists and dental hygienists working in dental practices for about one month starting in June 2023, either in person or online using Google Forms. By convenience sampling, participants were selected if they understood the purpose of the study and agreed to participate in the survey. The number of participants was calculated using G\*Power 3.1 for Windows with a significance level of 0.05, an effect size of 0.5, a power of 95%, and a dropout rate of 10%, resulting in a minimum sample size of 142 for the t-test. A total of 142 participants participated in this study, and after excluding those with missing values, 132 participants were included in the analysis.

### 4. Intervention

The general characteristics of the participants included gender, job type, clinical experience, workplace type, and working hours per week. The workplace types were general hospitals, dental school hospitals, dental hospitals, and dental clinics, which were reclassified into dental and general hospitals, dental hospitals, and dental clinics for analysis.

Perceptions of quality job conditions were measured on a 13-item scale ranging in importance from "not important at all" (0 points) to "very important" (4 points) and then converted to a 4-point scale for analysis. Participants were asked to prioritize quality job conditions by ranking them from 1 to 3. The Cronbach's alpha for the perception of quality job conditions item was 0.892.

The work policies of the studied workplaces were surveyed in 10 items, with each item rated as "there is a policy," "there is a policy, but it is difficult to use," "there is no policy," and "I don't know." "I don't know" was then

reclassified as “there is no policy” for analysis.

Job satisfaction was rated as “very dissatisfied” to “very satisfied” and then converted to a 4-point scale for analysis.

## 5. Statistical methods

The general characteristics of the participants were analyzed by frequency analysis, and the importance of quality job conditions was measured by descriptive statistics. In order to analyze the difference in job satisfaction according to the job type and work policies of the workplace, the normality of the dependent variable was examined, and since the Kolmogorov-Smirnov test did not follow a normal distribution ( $p < 0.001$ ), the Mann-Whitney U test, a non-parametric test, was performed. Statistical analysis was performed using SPSS 26.0 (IBM Corp., Armonk, NY, USA), and the statistical significance level was set at 0.05.

## Results

### 1. General characteristics

Dentists comprised 28.0% of the participants, while dental hygienists comprised 72.0%. The most common workplace type was dental and general hospitals (50.0%), followed by dental hospitals (27.3%) and dental clinics (22.7%). As for the working hours per week, 72.7% wor-

ked five or fewer days per week (Table 1).

### 2. Importance of quality job conditions

When asked about their top three priorities by profession, dentists rated income as the most important, followed by working hours and interpersonal relationships, while dental hygienists rated income as the most important, followed by holiday support and welfare, working hours, and interpersonal relationships (Fig. 1).

Looking at differences by job type, dental hygienists rated

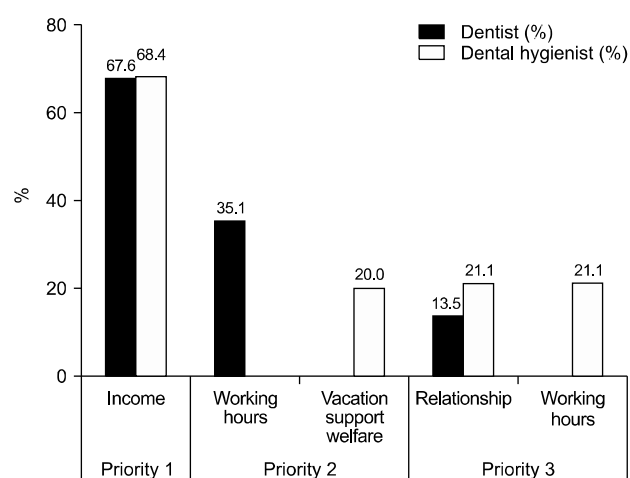


Fig. 1. Prioritizing quality job conditions.

Table 1. General Characteristics

| Variable                     | Total      | Dentist   | Dental hygienist |
|------------------------------|------------|-----------|------------------|
| Sex                          |            |           |                  |
| Male                         | 19 (14.4)  | 16 (43.2) | 3 (3.2)          |
| Female                       | 113 (85.6) | 21 (56.8) | 92 (96.8)        |
| Workplacetype                |            |           |                  |
| Dental and general hospitals | 66 (50.0)  | 29 (78.4) | 28 (29.5)        |
| Dental hospitals             | 36 (27.3)  | 6 (16.2)  | 30 (31.6)        |
| Dental clinics               | 30 (22.7)  | 2 (5.4)   | 37 (38.9)        |
| Clinical experience          |            |           |                  |
| 1 ~ 2 years                  | 32 (24.2)  | 16 (43.2) | 16 (16.8)        |
| 3 ~ 5 years                  | 28 (21.2)  | 10 (27.0) | 18 (18.9)        |
| 6 ~ 10 years                 | 23 (17.4)  | 9 (24.3)  | 21 (22.1)        |
| 11 years or more             | 49 (37.0)  | 9 (24.3)  | 40 (42.1)        |
| Working hours per week       |            |           |                  |
| 5 days or less               | 96 (72.7)  | 18 (48.6) | 78 (82.1)        |
| 6 ~ 7 days                   | 36 (27.3)  | 19 (51.4) | 17 (17.9)        |
| Total                        | 132 (100)  | 37 (28.0) | 95 (72.0)        |

Values are presented as n (%).

all conditions as more important than dentists except income, indicating a statistically significant difference ( $p < 0.05$ ). In particular, the conditions with the greatest difference in importance between dental hygienists and dentists were holiday support and welfare, followed by human relationships and personal development potential (Table 2).

### 3. Status of work policies in studied workplaces

In terms of the work policies, 96.2% of the practices in the study were required to have the four types of social security contributions, but fewer had flexible working hours (19.7%), healthcare support (23.5%), and incentives (25.0%). There were 62.1% and 60.6% of workplaces supporting maternity and parental leaves, respectively. Training support (19.7%), flexible working hours (15.9%), and overtime pay (15.9%) were more likely than other items to have policies but were difficult to use (Table 3).

### 4. Job satisfaction based on the work policies of workplaces

Looking at job satisfaction based on dental work policies, dentists who received holiday expense support (3.06 points) and overtime pay (3.19 points) were statistically significantly more satisfied with their jobs than those who did not ( $p < 0.05$ ).

Dental hygienists were statistically significantly more likely to be satisfied with their jobs if they received edu-

cation support (2.61 points) and if they had access to parental leave (2.57 points) than if they did not ( $p < 0.05$ ) (Table 4).

## Discussion

### 1. Key results

This study compared the perceptions of dentists and dental hygienists regarding quality dental job conditions and identified differences in perceptions based on job type.

**Table 3.** Status of Work Policies in Dental Practices

|   | There is a policy (%) | There is a policy, but it is difficult to use (%) | There is no policy (%) |
|---|-----------------------|---|------------------------|
| Four types of social security contributions | 96.2                  | 1.5   | 2.3                    |
| Holiday expense support                     | 44.7                  | 5.3   | 50.0                   |
| Overtime pay                                | 64.4                  | 15.9  | 19.7                   |
| Incentives                                  | 25.0                  | 6.1   | 68.9                   |
| Flexible working hours                      | 19.7                  | 15.9  | 64.4                   |
| Using annual, monthly, and sick leaves      | 86.4                  | 9.1   | 4.5                    |
| Education support                           | 49.2                  | 19.7  | 31.1                   |
| Healthcare support                          | 23.5                  | 12.9  | 63.6                   |
| Maternity leave                             | 62.1                  | 6.8   | 31.1                   |
| Parental leave                              | 60.6                  | 3.0   | 36.4                   |

**Table 2.** Importance of Quality Job Conditions

|   | Dentist (n=37) | Dental hygienist (n=95) | p-value |
|---|----------------|-------------------------|---------|
| Income                                      | 3.57±0.50      | 3.72±0.52               | 0.064   |
| Working hours                               | 3.46±0.56      | 3.67±0.49               | 0.033   |
| Employment security                         | 3.30±0.57      | 3.64±0.58               | 0.001   |
| Education and healthcare support            | 2.81±0.62      | 3.17±0.75               | 0.009   |
| Holiday support and welfare                 | 3.22±0.67      | 3.71±0.56               | < 0.001 |
| Four types of social security contributions | 3.41±0.60      | 3.73±0.51               | 0.001   |
| Social reputation                           | 2.92±0.55      | 3.26±0.72               | 0.006   |
| Job autonomy                                | 3.11±0.61      | 3.39±0.69               | 0.018   |
| Individual empowerment                      | 3.08±0.72      | 3.38±0.72               | 0.027   |
| Comfortable and safe work environment       | 3.27±0.61      | 3.60±0.57               | 0.003   |
| Interpersonal relations                     | 3.16±0.69      | 3.58±0.63               | 0.001   |
| Personal development potential              | 2.95±0.70      | 3.37±0.67               | 0.002   |
| Industrial relations                        | 3.00±0.62      | 3.40±0.64               | 0.001   |

Values are presented as mean±standard deviation. p-values were Mann-Whitney test.

**Table 4.** Job Satisfaction according to Dental Work Policies

| Classification                              | Dentist   | Dental hygienist |
|---|-----------|------------------|
| Four types of social security contributions |           |                  |
| There is no policy or is difficult to use   | 3.00±0.00 | 2.75±0.50        |
| There is a policy                           | 2.69±0.82 | 2.44±0.85        |
| p   | 0.652     | 0.413            |
| Holiday expense support                     |           |                  |
| There is no policy or is difficult to use   | 2.37±0.68 | 2.41±0.96        |
| There is a policy                           | 3.06±0.80 | 2.51±0.64        |
| p   | 0.006     | 0.830            |
| Overtime pay                                |           |                  |
| There is no policy or is difficult to use   | 2.33±0.80 | 2.35±0.94        |
| There is a policy                           | 3.19±0.54 | 2.49±0.80        |
| p   | 0.001     | 0.511            |
| Incentives                                  |           |                  |
| There is no policy or is difficult to use   | 2.70±0.79 | 2.45±0.88        |
| There is a policy                           | 2.71±0.95 | 2.46±0.71        |
| p   | 0.803     | 0.943            |
| Flexible working hours                      |           |                  |
| There is no policy or is difficult to use   | 2.66±0.83 | 2.38±0.86        |
| There is a policy                           | 3.00±0.71 | 2.71±0.72        |
| p   | 0.366     | 0.095            |
| Using annual, monthly, and sick leaves      |           |                  |
| There is no policy or is difficult to use   | 2.50±0.85 | 1.88±1.25        |
| There is a policy                           | 2.78±0.80 | 2.51±0.78        |
| p   | 0.379     | 0.188            |
| Education support                           |           |                  |
| There is no policy or is difficult to use   | 2.61±0.74 | 2.23±0.90        |
| There is a policy                           | 3.00±1.00 | 2.61±0.76        |
| p   | 0.161     | 0.039            |
| Healthcare support                          |           |                  |
| There is no policy or is difficult to use   | 2.70±0.79 | 2.41±0.84        |
| There is a policy                           | 2.71±0.95 | 2.58±0.83        |
| p   | 0.803     | 0.312            |
| Maternity leave                             |           |                  |
| There is no policy or is difficult to use   | 2.74±0.86 | 2.11±0.99        |
| There is a policy                           | 2.50±0.55 | 2.54±0.77        |
| p   | 0.467     | 0.069            |
| Parental leave                              |           |                  |
| There is no policy or is difficult to use   | 2.69±0.82 | 2.00±0.92        |
| There is a policy                           | 2.80±0.84 | 2.57±0.77        |
| p   | 0.830     | 0.006            |

Values are presented as mean±standard deviation.  
p-values were Mann-Whitney test.

As a result, both dentists and dental hygienists perceived income and working hours to be of priority importance for quality job conditions (Fig. 1). Decent wages and working hours are key components of the quality job indicators. In particular, working hours are perceived to be more important than in the past, and research on what constitutes a quality

job among young people<sup>17)</sup> has shown that even if wages are met, they do not perceive a job as good if it does not include elements of work-life balance. However, in this study, 27.3% of the participants worked 6~7 days a week (Table 1), suggesting that the dental work environment was somewhat different from the workers' perception.

According to Oh and Hwang<sup>18)</sup>, who analyzed 299 dental hygienist job ads, dental hygienists report working an average of 8.99 hours per day and 5.3 days per week. Converting this to hours per week was 47.83 hours, which exceeded the statutory working hours of 40 hours. Since working hours are associated with musculoskeletal symptoms, job stress, and turnover intentions<sup>19,20)</sup>, it is believed that regulations regarding adequate working hours are necessary to protect the health of dental professionals and to create a working environment in which they can provide quality dental care. In addition, according to this study, 64.4% of dental practices either have flexible working hours, but they are difficult to use or do not have flexible working hours at all, so dental practice owners need to establish policies for flexible working hours, such as flexitime, and create a work environment atmosphere and human resource management system that allows employees to utilize these systems if they want to.

In this study, dental hygienists considered holiday support and welfare, interpersonal relationships, and personal development to be more important than dentists, and the difference in importance of these items was somewhat greater than the other items (Table 2). According to Oh and Hwang (2008)<sup>18)</sup>, 60.5%, 63.9%, and 43.1% of dental clinics reported that they had annual leave, monthly leave, and vacation in their job advertisements for dental hygienists, respectively, and 23.4% reported that they had employee training, suggesting that the conditions considered important by dental hygienists as employees were not well reflected in the working environment. Choi et al.<sup>21)</sup> found that annual and monthly leave systems, maternity and paternity leave systems, the provision of opportunities to participate in self-development, and hierarchical culture in dental practices were associated with dental hygienists' turnover intentions. Since frequent employee turnover and leave are factors that reduce the productivity and efficiency of the organization, employers of dental practices should be concerned about the job quality that dental hygienists value from a dental management perspective and consider specifying these items in the work policies.

In this study, 60.6% of the participants reported having access to parental leave (Table 3), which was higher than the 46.8 percent reported in Kang et al.<sup>22)</sup>, indicating a

positive change from the past. Also, dental hygienists had statistically significantly higher job satisfaction when parental leave was available (2.57 points) than when it was not ( $p < 0.05$ ) (Table 4). This was in line with a previous study<sup>22)</sup> reporting lower turnover among dental hygienists with access to maternity and parental leave programs. Given the nature of the job, it is important for employers to support work-family balance, so employers should support dental hygienists' maternity and paternity leave, as well as the ease of returning to work and the environment enabling the balance of work and childcare after returning to work.

## 2. Limitations and suggestions for further studies

This study was limited in representativeness as the participants were selected by convenience sampling, and the number of participants per dental practice was not limited, so there might be some bias due to participants from the same work environment. In addition, to investigate the perception of quality jobs, the importance of each condition was identified, but the desired level of each condition was not further identified. Future studies should limit the number of participants per organization, recruit similar numbers of participants by job and workplace types, and further disaggregate by quality job conditions.

## Notes

### Conflict of interest

No potential conflict of interest relevant to this article was reported.

### Ethical approval

The study was approved by the Institutional Review Board of Shinhan University (SHIRB-202303-HR-182-02).

### Author contributions

Conceptualization: Bo-Young Park and Mi-Sook Yoon. Data acquisition: Mi-Sook Yoon. Formal analysis: Bo-Young Park. Supervision: Bo-Young Park. Writing-original draft: Bo-Young Park and Mi-Sook Yoon. Writing-review & editing: Bo-Young Park and Mi-Sook Yoon.



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**Data availability**

The datasets used and/or analyzed during the current study available from the corresponding author on reasonable request.

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