



RESEARCH ARTICLE

# Organizational Member Attitudes According to Workplace Type of Dental Hygienist

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**Background:** This study aimed to investigate whether there is a difference in organizational member attitudes by workplace environment and workplace types in dental hygienists working at dental health centers.

**Methods:** A face-to-face survey or online survey was administered to dental hygienists working at dental health centers, and a total of 95 subjects were included. The survey includes 13 items to ask factors affecting employee's job satisfaction. Also, some questions were included to assess perception of organizational member attitude: five about organizational citizenship behavior, two about innovative behavior, and four about organizational commitment.

Results: Dental hygienists working at dental clinics were more satisfied with their incomes and numbers of working days, while those from dental university hospitals and general hospitals were more satisfied with education support. In addition, hygienists working at dental hospitals were more satisfied with job autonomy, individual work capability, safe working environment, personal relation, potential for personal development, and positive labor-management relations, compared to those working at general and university hospitals (p < 0.05). Among the items about perception of organizational member attitudes, the scores of items about organizational citizenship behaviors were higher, whereas the scores of items about innovative behaviors were relatively lower. Individuals working at dental hospitals than those working at general and university hospitals, chiefs and team and department leaders than team members, and those with increased satisfaction with current workplace had more positive perception of organizational member attitudes.

**Conclusion:** For dental hygienists to have positive attitudes as organizational members, working environment should be improved, and executives of dental healthcare centers should pay attention to improving job satisfaction of organizational members. Moreover, since dental hygienists need to improve their perception of innovative behaviors and citizenship behaviors to strengthen specialty of dental hygienists in a changing dental healthcare, relevant training should be addressed in refresher courses or school programs.

Key Words: Awareness, Dental clinics, Dental hygienists, Organizations, Working Conditions

### Introduction

### 1. Background

When each organizational member voluntarily displays his/her ability to achieve organizational goals and cooperates with other members, organizational development is achieved<sup>1)</sup>. A common behavioral pattern and favorable organizational culture is formed when particular organizational members work together, facilitating mutual communication and increasing organizational commitment<sup>2)</sup>.

Organizational commitment refers to understanding of organizational goals and values and an effort and willingness to achieve organizational development<sup>3)</sup>. High organizational commitment is associated with active organizational citizenship behavior, defined as behaviors that a member voluntarily engages in organization<sup>4)</sup>. Furthermore, since organizational citizenship behavior reinforces innovative behavior, referring to the introduction and application of new and informative idea for performance improvement of individual and organization<sup>5)</sup>. Therefore, organizational

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commitment, organizational citizenship behavior, and innovative behavior are required by organizational members for organizational development.

In dental care, there is a persistent interest in behaviors of organizational members. Especially, high turnover intention and burnout of hygienists, key workers in the dental care system, have negative impacts on development of dental organization and efficient dental care service<sup>6)</sup>. In other words, we need to show more concern for positive attitudes and awareness of organizational members. A previous study<sup>7)</sup> has reported that as organizational commitment level of dental hygienist increased, turnover intention decreased.

A recent study by Choi and Min<sup>8</sup> investigated organizational commitment and organizational behaviors of dental hygienists and reported that emotional intelligence and self-efficacy are associated with innovative behavior. Another study<sup>9</sup> reported an association between job embeddedness and organizational citizenship behavior. However, since behaviors as organizational members are affected by workplace environment and forms of employment<sup>10</sup>, it is necessary to investigate what are the factors affecting organizational member attitudes in workplace environment of dental hygienist. Especially, dental health centers have differences in workplace environment depending on workplace type. Thus, a difference in workplace environment and organizational member attitudes by group should be closely investigated by grouping dental health centers.

### 2. Objectives

This study aimed to investigate perception of dental hygienists working at dental health centers regarding workplace environment and organizational member attitudes and to demonstrate whether workplace environment and workplace types affect perception of organizational member attitudes.

# Materials and Methods

### 1. Ethics statement

The study was approved by the Institutional Review Board of the the Institutional Review Board of Shinhan University (IRB no. SHIRB-202303-HR-182-02). Written informed consent was obtained from all participants.

### 2. Study design

A face-to-face survey or online survey using Google Form (Google; Mountain View, CA, USA) was administered between 23 May, and 25 June, 2023. The survey includes questions about participants' general characteristics (sex, position, number of working days per week, and income), workplace type, job satisfaction, and perception of organizational member attitudes. The survey includes 13 items to ask factors affecting employee's job satisfaction of organizational member attitude: five about organizational citizenship behavior, two about innovative behavior, and four about organizational commitment 13,14).

### 3. Sample size

Convenience sampling was used to select dental hygienists working at dental health centers, and only those who understood the study purposes and consented participation in survey were included as study participants. The sample size was calculated using G\*Power software (latest ver. 3.1.9.7; Heinrich-Heine-Universität Düsseldorf, Düsseldorf, Germany; http://www.gpower.hhu.de/). With a significance level of 0.05, effect size of 0.15, Power of 0.8, and 5 predictors, the minimum sample size required for linear multiple regression was 92. Considering a dropout rate of approximately 10%, we recruited 101 participants as subjects. A total of 95 subjects were finally included after excluding six subjects who have multiple missing values from their answers.

### 4. Intervention

The general characteristics include sex, position, number of working days per week, and income. Workplace types include general hospitals, university hospitals, dental hospitals, and dental clinics. For analysis, the workplace types classified further into dental university hospitals, dental hospitals, and dental clinics. Job satisfaction and perception of organizational member attitudes were assessed on a scale from 0 (very unlikely) to 4 (very likely) and were converted to a 5-point scale. For a linear multiple regression, the average score of 13 questions about workplace satisfaction were calculated to measure current job satisfaction. The average score of 11 questions about perception

of organizational member attitudes (a dependent variable) was calculated.

### 5. Statistical methods

Frequency analysis was performed to assess the subjects' general characteristics. One-way analysis of variance (ANOVA) was performed to demonstrate a difference in job satisfaction and perception of organizational member attitudes by workplace types. Multiple comparisons were conducted using Scheffé's method to investigate differences between the groups. Linear multiple regression was performed to identify the factors affecting perception of organizational member attitudes. Dummy variables were used to represent categorical variables. Dental university hospital was set as a reference group for workplace types,  $\leq 4$  days for working days per week, and  $\leq 3,000,000$  won for income. Statistical analysis was performed using the IBM SPSS 26.0 program (IBM Corp., Armonk, NY, USA). A p-value of 0.05 was considered statistically significant.

### Results

#### General characteristics

Regarding workplace types of the subjects, 38.9%, 31.6%, and 29.5% hygienists were working at dental university

hospitals, dental hospitals, and dental clinics, respectively. In all workplace types, the position of the most hygienists was team member. However, dental clinics had the relatively highest ratio of chiefs (25.0%) compared to other groups. The proportion of hygienists working 4 days or less per week was 35.7% in dental clinics, whereas no hygienists were working 4 hours or less in dental university hospitals (Table 1).

# Difference in job satisfaction by workplace types

Most of the responses to questions about job satisfaction demonstrated a difference in satisfaction by workplace types. Dental hygienists working at dental clinics were more satisfied with their incomes and numbers of working days, while those working at dental university hospitals were more satisfied with education support. Hygienists working at dental hospitals were more satisfied with job autonomy, individual work capability, safe working environment, personal relation, potential for personal development, and positive labor-management relations, compared to those working at dental university hospitals (Table 2).

Table 1. General Characteristics

Variable	Number (%)	Dental university hospital	Dental hospital	Dental clinic	
Sex					
Male	3 (3.2)	-	1 (3.3)	2 (7.1)	
Female	92 (96.8)	37 (100)	29 (96.7)	26 (92.9)	
Position					
Chief	17 (17.9)	6 (16.2)	4 (13.3)	7 (25.0)	
Leader of team or department	22 (23.2)	8 (21.6)	10 (33.3)	4 (14.3)	
Team member	56 (58.9)	23 (62.2)	16 (53.3)	17 (60.7)	
Number of working days per week					
≤4 days	11 (11.6)	-	1 (3.3)	10 (35.7)	
≥5 days	84 (88.4)	37 (100)	29 (96.7)	18 (64.3)	
Income					
<3,000,000 won	47 (49.5)	13 (35.1)	18 (60.0)	16 (57.1)	
$\geq$ 3,000,000 $\sim$ <4,000,000 won	34 (35.8)	17 (45.9)	6 (20.0)	11 (39.3)	
$\geq$ 4,000,000 won	14 (14.7)	7 (18.9)	6 (20.0)	1 (3.6)	
Total	95 (100)	37 (38.9)	30 (31.6)	28 (29.5)	

Values are presented as number (%).

Table 2. Difference in Job Satisfaction by Workplace Types

	Total	Dental university hospital	Dental hospital	Dental clinic	p-value
Income	2.14±0.94	$2.08\pm0.89^{a}$	1.73±0.91 <sup>a</sup>	$2.64\pm0.83^{b}$	0.001
Job security	$2.86 \pm 0.78$	$2.68\pm0.91$	$3.03 \pm 0.61$	$2.93\pm0.72$	0.153
Work hours	$2.61\pm0.82$	$2.62\pm0.86^{a,b}$	$2.30\pm0.70^{a}$	$2.92\pm0.77^{b}$	0.012
Education support	$2.19\pm0.96$	$2.41\pm0.83^{b}$	$2.30\pm1.02^{a,b}$	$1.79\pm0.96^{a}$	0.025
Leave	$2.39 \pm 0.97$	$2.16\pm0.96$	$2.60 \pm 1.04$	$2.46 \pm 0.88$	0.165
Employment insurance (4 insurances)	$3.26 \pm 0.84$	$2.95\pm9.41^{a}$	$3.70\pm0.60^{b}$	$3.21 \pm 0.74^{a,b}$	0.001
Social perception	$2.53\pm0.93$	$2.57 \pm 0.96$	$2.70 \pm 1.06$	$2.29\pm0.71$	0.227
Autonomy	$2.36\pm0.87$	$2.08\pm0.95^{a}$	$2.60\pm0.81^{b}$	$2.46\pm0.74^{a,b}$	0.038
Individual work capability	$2.36\pm0.99$	$1.92\pm0.95^{a}$	$2.90\pm0.76^{b}$	$2.36{\pm}0.99^{a,b}$	< 0.001
Pleasant ad safe working environment	$2.52\pm0.98$	$2.00\pm1.00^{a}$	$3.17\pm0.59^{b}$	$2.50\pm0.88^{a}$	< 0.001
Personal relation	$2.74\pm0.92$	$2.32{\pm}1.00^{a}$	$3.20\pm0.66^{b}$	$2.79\pm0.83^{a,b}$	< 0.001
Potential for personal development	$2.40\pm0.96$	$1.97 \pm 1.01^{a}$	$3.13\pm0.68^{b}$	$2.18\pm0.67^{a}$	< 0.001
Positive labor-management relations	$2.48 \pm 0.85$	$2.24\pm0.76^{a}$	$2.77\pm0.82^{b}$	$2.50\pm0.92^{a,b}$	0.041
Total	$2.45 \pm 0.83$	$2.46 \pm 0.84$	$2.40{\pm}0.77$	$2.50\pm0.92$	0.901

Values are presented as mean±standard deviation.

# 3. Perception of organizational member attitudes

Among the items about perception of organizational member attitudes, the item asking 'organizational members should comply with guidelines and polices' had the highest score (3.13 points), followed by items about 'organizational members should help supervisors and colleagues well even if it is not their obligation (3.05 points)' and 'organizational members should make effort to understand decisions made by other members (3.01 points).' Among the 11 items about organizational member attitudes, the dental hospital group had the highest scores in 10 items compared to the dental university hospital group. Especially, regarding an item about 'organizational members should feel a strong sense of belonging to hospitals,' there was the highest score gap between the scores of dental hospital group and dental university hospital group (p < 0.05; Table 3).

# 4. Factors affecting perception of organizational member attitudes

We investigated the factors affecting perception of organizational member attitudes, and found that individuals working at dental hospitals than those working at dental university hospitals and chiefs and team and department leaders than team members had more positive perception

of organizational member attitudes. Furthermore, when satisfaction with current workplace was higher, perception of organizational member attitudes was more positive (p < 0.05; Table 4).

### Discussion

### 1. Key results

This study aimed to investigate whether workplace types of dental hygienists affect perception of organizational member attitudes. The findings showed that workplace types, position, and satisfaction with current workplace are associated with organizational member attitudes.

In most of the items consisting of job satisfaction, there was a difference in satisfaction by workplace type. Satisfaction with income and work hours was highest in those working at dental clinics, while satisfaction with education support was highest in the dental university hospital group. Hygienists working at dental hospitals were more satisfied with job autonomy, individual work capability, safe working environment, personal relation, potential for personal development, and positive labor-management relations, compared to those working at dental university hospitals. According to the findings of differences in satisfaction observed in each item by workplace type may, we believe that there is

By one-way ANOVA.

a,b,cDifferent letter indicates are significant difference at a=0.05 by Scheffé test.

Table 3. Perception of Organizational Member Attitudes

	Total mean	Dental university hospital	Dental hospital	Dental clinic	p-value
Organizational citizenship behavior					
Organizational members should help supervisors and colleagues well even if it is not their obligation.	3.05±0.61	2.95±0.70	3.20±0.55	3.04±0.51	0.234
Organizational members should comply with guidelines and polices.	3.13±0.57	$2.97\pm0.60^{a}$	$3.37\pm0.49^{b}$	$3.07\pm0.54^{a,b}$	0.014
Organizational members should make effort to understand decisions made by other members.	$3.01 \pm 0.66$	$2.81\pm0.66^{a}$	$3.20\pm0.66^{b}$	$3.07\pm0.60^{a,b}$	0.046
Organizational members should try to avoid complaining of work.	$2.28\pm0.72$	2.41±0.69	2.13±0.82	2.29±0.66	0.314
Organizational members should be actively involved in promoting a change and innovation in hospitals and working improvement.	2.61±0.80	2.35±0.633 <sup>a</sup>	2.90±0.84 <sup>b</sup>	2.64±0.67 <sup>a,b</sup>	0.019
Innovative behavior					
Organizational members should make an effort to create/apply a way of performing new and creative task performance.	2.46±0.86	2.16±0.65 <sup>a</sup>	2.73±0.91 <sup>b</sup>	2.57±0.96 <sup>a,b</sup>	0.017
Organizational members should develop a new idea to solve problems occurring during the course of their duties.	2.51±0.82	2.49±0.56	2.63±0.99	2.39±0.92	0.536
Organizational commitment					
Organizational members should feel a strong sense of belonging to hospitals.	2.66±0.88	2.30±0.78 <sup>a</sup>	2.93±0.94 <sup>b</sup>	$2.86\pm0.80^{b}$	0.004
Organizational members should have intention to perform duties for hospitals.	$2.83 \pm 0.77$	2.49±773 <sup>a</sup>	$3.06\pm0.83^{b}$	$3.03\pm0.58^{b}$	0.002
There should be a general concordance between organizational members' values and hospitals' values.	2.55±0.90	2.32±0.85	2.77±0.94	2.61±0.88	0.121
Organizational members should have intention to make an above-average effort to develop hospitals.	$2.69 \pm 0.88$	$2.46{\pm}0.80$	2.93±0.91	2.75±0.89	0.081
Total	2.71±0.51	2.52±0.46 <sup>a</sup>	$2.90{\pm}0.55^{b}$	$2.76 \pm 0.45^{a,b}$	0.007

Values are presented as mean±standard deviation.

By one-way ANOVA.

a difference in working environment by workplace size. Especially, the dental university hospital group had a lower satisfaction with individual work capability and potential for personal development compared to the dental hospital group, and its gap was comparatively large. Oh and Hwang 15) reported that dental health centers with four to seven dental hygienists had a higher proportion of providing self-development expenses and supporting seminars compared to dental health centers with eight dental hygienists. A meaning should be imparted to work performance of dental hygienists to increase their job satisfaction, and opportunities should be expanded for dental hygienists to exert their influence 16). Moreover, these are determined to decrease turnover intention of dental hygienists and help them to

commit their duties<sup>17)</sup>.

This study investigated the perception of organizational member attitudes. The scores of items about organizational citizenship behaviors were high, whereas the scores of items about innovative behaviors were relatively low. This is because that although dental hygienists consider compliance with the organizational system and good communication with organizational members important, they consider dramatic action to improve working environment less important. Although there is a tendency to value hierarchical structure and stabilized system due to the nature of healthcare, organizations are aware of necessary of innovation during rapid change in the 4th industrial revolution era<sup>18)</sup>. Since hospitals demand that members should

<sup>&</sup>lt;sup>a,b,c</sup>Different letter indicates are significant difference at a=0.05 by Scheffé test.

Table 4. Factors Affecting Perception of Organizational Member Attitudes

Variable	В	β	t	p	VIF
Workplace type					
Dental university hospital					
Dental hospital	0.352	0.324	3.407	0.001	1.336
Dental clinic	0.197	0.177	1.670	0.099	1.666
Position					
Team member					
Chief	0.391	0.296	3.090	0.003	1.359
Team or department leader	0.291	0.243	2.748	0.007	1.157
Number of working days per week					
≤4 days					
≥5 days	-0.036	-0.023	-0.239	0.812	1.366
Income					
<3,000,000 won					
$3,000,000 \le \text{ and } < 4,000,000 \text{ won}$	-0.063	-0.060	-0.635	0.527	1.300
$\geq$ 4,000,000 won	-0.013	-0.009	-0.098	0.922	1.351
Average score of satisfaction with current workplace	0.232	0.381	4.382	< 0.001	1.119

By multiple linear regression at a=0.05. Adjusted  $R^2$ =0.363, F=7.698, p < 0.001.

have integrated thinking ability, creative thinking ability, and problem-solving ability<sup>19,20)</sup>, dental hygienists should have more positive perception of innovative behaviors. Moreover, education programs that strengthen innovative behaviors should be included in education for dental hygiene students and refresher courses for dental hygienists.

This study investigated factors affecting perception of organizational member attitudes and workers at dental hospitals had more positive perception of organizational member attitudes than workers at dental university hospitals (p < 0.05). In addition, compared to team members, chiefs and team and department leaders showed more positive perception of organizational member attitudes. This was similar with the results of a previous study that chiefs showed a higher perception of development culture than other dental hygienists<sup>21)</sup> and a higher position was associated with a higher score of organizational commitment<sup>22)</sup>. This is because as one's position increases, he/she has more work autonomy and work variety. Especially, workers at dental hospitals have more work autonomy by position than workers at dental university hospitals.

The finding of this study showed that as satisfaction with current workplace increased, perception of organizational member attitudes increased. A study by Han et al.<sup>23)</sup> has reported a positive correlation between job satisfaction

of dental hygienists and communication ability within organization. A study by Do<sup>24)</sup> demonstrated job satisfaction and organizational commitment. Organizational commitment, innovative behaviors, and citizenship behaviors of organizational members induce a positive organizational atmosphere, affecting not only organizational development but also strengthening of personal capacity. Executives of dental healthcare centers should make an effort in manpower management for successful dental management and create good-quality working environment to help organizational members to perform organizational commitment.

# Limitations and suggestions for further studies

This study has a limitation on representativeness because convenience sampling was used to select subjects. In addition, although the number of subjects distributed to each workplace type was similar, the number of centers was not considered. Thus, subjects who were working at the same institute have similar working environment, resulting in development of some biases. Nevertheless, this study has some strength. This study identified work-related factors affecting organizational member attitudes that are important for development of dental organization. In future studies, sufficient number of subjects should be secured, and the

number of institutions should be considered when selecting subjects. Moreover, it is necessary to comprehensively investigate factors affecting perception of organizational member attitudes by considering variables of individuals along with variables of various working environments that can affect the perception of organizational member attitudes.

### **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).

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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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