

# Relationships between Experiencing Verbal Violence and the Emotional Responses and Coping Behaviors of Dental Hygienists

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This study investigated the relationships between experiencing verbal violence and the emotional responses and coping behaviors of dental hygienists who worked in Jeonju between February 24 and March 18, 2017 to prepare strategies for managing verbal violence and establish a healthy working environment for dental hygienists. The following findings were obtained in this study. The dental hygienists primarily experienced verbal violence from patients and guardians (1.67 points). The most common verbal violence type was, "Someone treated me impolitely." The most common emotional response to verbal violence was "anger" (3.52 points). The coping style of most dental hygienists was problem-focused coping (3.28 points), followed by emotion-focused coping (2.75 points). Most hygienists with the problem-focused coping style stated that they resolve the problem through dialogue (3.51 points), while most hygienists with the emotion-focused coping style responded that they just ignore the situation (3.78 points). The relationship between experiencing verbal violence and the emotional responses and coping behaviors of dental hygienists showed a statistically significant positive correlation ( $p < 0.05$ ) with emotional responses and problem- and emotion-focused coping associated with experiencing verbal violence from dentists, patients, and guardians. These findings confirm the need to reduce verbal violence, control emotional responses after exposure to verbal violence, and use more problem-focused coping measures. Dental hygienists must develop interpersonal skills and communication techniques and promote professionalism in their workplace to protect themselves from verbal violence at work.

**Key Words:** Coping behavior, Dental hygienists, Expressed emotion, Violence

## Introduction

In healthcare institutions, there is a combination of interactions between members, hierarchical organizational systems, and division of work. Consequently, conflicts among various parties, including patients, patient guardians, and medical staff, constantly occur<sup>1</sup>. There have been recent changes in the healthcare environment, such as increased demand for high-quality dental hygiene care services due to improved living standards, intensifying competition among healthcare institutions, and population aging. As a result, dental clinics and hospitals are required to actively implement various measures for not only treatment approaches but also responding to patient-

centric needs and demands<sup>2</sup>, just to survive the competition. The above changes have necessitated a paradigm shift in healthcare services from provider-centric to consumer-centric, resulting in greater managerial focus on satisfying individual customers' requirements<sup>3</sup>. Accordingly, healthcare institutions are making efforts to provide responsive services to patients and guardians, ultimately resulting in controlling the emotional expressions of healthcare workers, which has led to the recent increase in verbal violence due to the ensuing conflict factors<sup>4,5</sup>.

Verbal violence refers to the act of exerting force through the use of unfair and violent speech and to insulting and denigrating someone without justification<sup>6</sup>,

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as well as the use of verbal expressions that debase the other person's self-esteem with authoritative and disparaging speech<sup>1)</sup>. Healthcare workers are generally required in their profession to constantly communicate with doctors, patients, and guardians, and verbal violence may occur during this process. Studies on healthcare workers' experiences of verbal violence have reported that more than 90% of nurses have experienced verbal violence from patients, doctors, and/or colleagues<sup>7,8)</sup>. Moreover, 96.4% of nurses in the United States<sup>9)</sup> and 91.5% of nurses in Turkey have experienced verbal violence<sup>10)</sup>. Meanwhile, studies on dental hygienists reported that verbal violence was experienced by 61.2%<sup>11)</sup> and 80.5%<sup>12)</sup> of participants, respectively.

Dental hygienists, due to the nature of their job, are constantly in face-to-face contact with dentists, patients, guardians, and dental hygienist colleagues and they may experience verbal violence within such relationships<sup>12)</sup>. Verbal violence causes the victim to experience tension every time he or she encounters the perpetrator, and the stress from such tension can decrease job efficiency, morale, and treatment quality, which can lead to employee turnover and career termination<sup>13,14)</sup>.

Dental hygienists consider their specialized knowledge and skills as a tool for providing healthcare service to those who need dental hygiene care. Therefore, because job satisfaction in dental hygienists affects the quality of healthcare service<sup>15)</sup>, studies on verbal violence, which is detrimental to job satisfaction, have important implications. Although verbal violence in dental clinics and hospitals is a serious issue that needs to be resolved, very few studies have examined verbal violence experienced by dental hygienists, indicating a serious problem. Therefore, it is necessary to conduct in-depth research on the experiences and contents of verbal violence suffered by dental hygienists in their workplace, as well as to elucidate who the perpetrators are and the hygienists' emotional responses and coping behavior after experiencing such verbal violence. Accordingly, the present study aims to provide basic data by shedding light on the relationships among verbal violence and emotional responses and coping. The results can inform the development of countermeasures to protect the emotional health of dental hygi-

enists, preventing job turnover and loss of self-esteem, and to create a healthy working environment for them.

## Materials and Methods

### 1. Subjects

The subjects in this study were dental hygienists working in Jeonju between February 24 and March 18, 2017. After hearing an explanation of the study objectives, 130 persons who consented to the study were included as subjects. The study was approved by the Jeonju University Institutional Review Board (jjIRB-170213-HR-2017-0205). Of the 130 total questionnaires, six questionnaires with unclear responses were excluded, and 124 were included in the final analysis.

### 2. Methods

We used a self-reported questionnaire to collect the data. To measure the verbal violence experienced by dental hygienists, the researchers adapted and supplemented questions developed by Nam et al.<sup>16)</sup> to fit the study aims. Experience with verbal violence was measured using 13 questions relating to dentists, colleagues, patients, and guardians in the last year and had a Cronbach's  $\alpha$  of 0.938. To examine the emotional response after verbal violence, we used the instrument adapted and supplemented by Yun<sup>17)</sup> from the Assault Response Questionnaire. This was composed of 18 items scored on a five-point scale of 1 ("definitely not") to 5 ("definitely"), where higher scores indicated a higher level of emotional response. Cronbach's  $\alpha$  was 0.989. To examine coping behaviors after verbal violence, we used a partially adapted version of the instrument used by Bae<sup>18)</sup>, which had a Cronbach's  $\alpha$  of 0.868.

### 3. Data analysis

The collected data were analyzed using SPSS Windows 12.0 (SPSS Inc., Chicago, IL, USA), and a statistical significance level ( $\alpha$ ) of 0.05 was used for all tests. We used means and standard deviations to analyze experience with verbal violence, emotional response, and coping behaviors for each subject. We used the independent t-test and one-way analysis of variance to analyze the relation-

ships between experiencing verbal violence and emotional responses and coping behaviors and subjects' general characteristics and used Scheffé's test to perform the post-hoc analysis.

The correlations between verbal violence, emotional response, and coping behaviors for each subject were analyzed using Pearson's correlation coefficients.

## Results

### 1. Experience with verbal violence of each subject

Verbal violence from patients/guardians was the most common at  $1.67 \pm 0.85$ , followed by dentists at  $1.55 \pm 0.89$ , and other dental hygienists at  $1.41 \pm 0.74$ . Among the types of verbal violence, "talking to me in an impolite way" was most common, followed by "talking to me in an oppressive, imperative tone" and "talking impolitely or aggressively to my senior or junior colleagues in front of me" (Table 1).

### 2. Emotional response after verbal violence by subject

Among the emotional responses after verbal violence by dentists, the highest score was for "anger" at  $3.52 \pm 1.53$ ;

after verbal violence by dental hygienists, the highest score was for "anger" at  $3.16 \pm 1.44$ ; likewise, after verbal violence by patients/guardians, the highest score was for "anger" at  $3.68 \pm 1.40$  (Table 2).

### 3. Coping behaviors after verbal violence

Among the coping behavior subdomains, problem-focused coping had a score of  $3.28 \pm 1.13$ , while emotion-focused coping had a score of  $2.75 \pm 1.15$ .

For problem-focused coping, the highest score was  $3.51 \pm 1.13$  for "explain the current situation and resolve through dialogue," followed by "try to calm down the other party," and "act calmly."

For emotion-focused coping, the highest score was  $3.78 \pm 0.94$  for "suppress my emotions," followed by "do or think about something else and forget about the incident" and "there's nothing that can be done in that situation." (Table 3).

### 4. Relationships of subjects' general characteristics with verbal violence experience, emotional response, and coping behaviors

Experience with verbal violence by dentists was

**Table 1.** The Verbal Violence Experience from Different Subjects

| Questionnaire  | From dentists |         | From dental hygienists |         | From patients or guardian |         |
|--|---------------|---------|------------------------|---------|---------------------------|---------|
|  | Mean±SD       | Ranking | Mean±SD                | Ranking | Mean±SD                   | Ranking |
| Someone has cursed or swore at me  | 1.16±0.59     | 10      | 1.10±0.53              | 10      | 1.82±1.03                 | 5       |
| Someone treated me impolitely  | 3.27±1.75     | 1       | 3.11±1.68              | 1       | 3.23±1.31                 | 1       |
| Someone has disrespected my profession   | 1.50±0.96     | 4       | 1.13±0.46              | 9       | 1.84±1.08                 | 4       |
| Someone has told me in a coercive way  | 2.09±1.49     | 2       | 1.83±1.28              | 2       | 1.97±1.11                 | 2       |
| Someone has told me in a threatening or aggressive way                                       | 1.13±0.42     | 11      | 1.14±0.59              | 8       | 1.53±0.93                 | 9       |
| Someone has sexual insult at me  | 1.19±0.59     | 9       | 1.00±0.00              | 12      | 1.15±0.44                 | 11      |
| Someone has sexual harassed at me  | 1.48±0.99     | 5       | 1.13±0.46              | 9       | 1.10±0.30                 | 12      |
| Someone has run me down  | 1.35±0.84     | 7       | 1.22±0.68              | 7       | 1.15±0.40                 | 11      |
| Someone has disrespected my ability  | 1.48±0.89     | 5       | 1.25±0.62              | 6       | 1.63±0.94                 | 6       |
| Someone has despised my origin or academic background  | 1.16±0.44     | 10      | 1.05±0.28              | 11      | 1.23±0.68                 | 10      |
| Someone has threaten me  | 1.25±0.59     | 8       | 1.38±1.00              | 5       | 1.58±0.96                 | 7       |
| Someone has spoken ill of other people (senior or colleague dental hygienist) in front of me | 1.45±0.89     | 6       | 1.48±0.96              | 4       | 1.56±0.80                 | 8       |
| I've seen people using abusive language to other co-workers                                  | 1.67±1.08     | 3       | 1.51±1.13              | 3       | 1.87±1.06                 | 3       |
| Total  | 1.55±0.89     |         | 1.41±0.74              |         | 1.67±0.85                 |         |

SD: standard deviation.

**Table 2.** Emotional Response after Verbal Violence Experience according to Subjects

| Item   | From dentists |         | From dental hygienists |         | From patients or guardian |         |
|--|---------------|---------|------------------------|---------|---------------------------|---------|
|  | Mean±SD       | Ranking | Mean±SD                | Ranking | Mean±SD                   | Ranking |
| Sad  | 3.05±1.45     | 5       | 2.88±1.40              | 5       | 3.10±1.39                 | 5       |
| Depressed  | 3.22±1.45     | 2       | 2.95±1.47              | 3       | 3.37±1.39                 | 2       |
| Anger  | 3.52±1.53     | 1       | 3.16±1.44              | 1       | 3.68±1.40                 | 1       |
| Anxious  | 2.81±1.44     | 10      | 2.54±1.42              | 11      | 2.95±1.45                 | 8       |
| Shocking   | 2.88±1.52     | 9       | 2.70±1.50              | 8       | 3.14±1.54                 | 4       |
| Disgraceful  | 3.21±1.51     | 3       | 2.68±1.53              | 9       | 2.97±1.55                 | 7       |
| Increased irritability                                     | 2.74±1.48     | 12      | 2.55±1.49              | 10      | 2.57±1.55                 | 13      |
| Helpless   | 2.78±1.50     | 11      | 2.39±1.33              | 12      | 2.76±1.53                 | 11      |
| Feel out of control.                                       | 2.36±1.40     | 14      | 2.19±1.32              | 14      | 2.31±1.39                 | 15      |
| Feel like I've lost something                              | 2.03±1.38     | 16      | 2.04±1.30              | 16      | 2.26±1.31                 | 16      |
| Feel fear for being alone                                  | 2.93±1.59     | 8       | 2.73±1.50              | 7       | 2.92±1.51                 | 10      |
| Come up with scene of verbal violence is scary.            | 2.17±1.40     | 15      | 2.09±1.33              | 15      | 2.49±1.45                 | 14      |
| Feel guilty  | 2.52±1.49     | 13      | 2.33±1.46              | 13      | 2.93±1.59                 | 9       |
| Blame myself   | 3.17±1.46     | 4       | 2.98±1.52              | 2       | 3.32±1.50                 | 3       |
| Feel I should've done something to prevent verbal violence | 2.52±1.46     | 13      | 2.39±1.40              | 12      | 2.67±1.56                 | 12      |
| Be intimidated   | 1.84±1.28     | 17      | 1.84±1.19              | 17      | 2.20±1.43                 | 17      |
| Question my value of presence                              | 3.00±1.59     | 7       | 2.91±1.54              | 4       | 3.14±1.52                 | 4       |
| Want to resign   | 3.03±1.54     | 6       | 2.82±1.53              | 6       | 3.05±1.57                 | 6       |
| Total  | 2.77±1.47     |         | 2.57±1.43              |         | 2.88±1.48                 |         |

SD: standard deviation.

**Table 3.** The Coping Method after Verbal Violence

| Item   | Mean±SD   |
|--|-----------|
| Problem-focused coping   |           |
| Act calmly   | 3.44±0.97 |
| Try to calm down the other party                               | 3.49±1.13 |
| Explain the current situation and resolve through dialogue     | 3.51±1.13 |
| Try to understand them   | 3.27±1.06 |
| Find out the reason of verbal violence                         | 3.39±1.12 |
| Receive apology or apologize                                   | 3.12±1.15 |
| Report to senior or boss                                       | 3.32±1.30 |
| Be patient and talk about it later                             | 2.71±1.13 |
| Get help from others (senior or colleague dental hygienists)   | 3.22±1.20 |
| Total  | 3.28±1.13 |
| Emotion-focused coping   |           |
| Suppress my emotions   | 3.78±0.94 |
| Ignore   | 2.61±1.11 |
| Avoid  | 2.78±1.11 |
| Drink alcohol  | 2.10±1.22 |
| Overcome by faith  | 2.03±1.35 |
| There's nothing that can be done in that situation             | 2.92±1.23 |
| Do or think about something else and forget about the incident | 3.00±1.08 |
| Total  | 2.75±1.15 |

SD: standard deviation.

significantly higher in subjects who were religious or currently working as a “general dental hygienist” ( $p < 0.05$ ). Experience with verbal violence by other dental hygienists differed significantly by marital status, religious status, current job position, and monthly income ( $p < 0.05$ ). Specifically, experience with verbal violence by other dental hygienists was significantly more common for subjects who were unmarried, religious, currently working as a “general dental hygienist,” or had a monthly income of “less than 2 million Korean won (KRW).” There were no significant differences in experience with verbal violence by patients/guardians ( $p > 0.05$ ).

Emotional response after verbal violence by dentists was significantly more common among subjects with the highest educational qualification of “technical college,” a total work experience of “8 ~ 10 years,” and a mean “25 patients or fewer” per day ( $p < 0.05$ ).

Emotional response after verbal violence by other dental hygienists differed significantly based on age, marital status, religious status, and total work experience ( $p < 0.05$ ). Specifically, an emotional response was signi-

**Table 4.** The Verbal Violence Experience, Emotional Response and Coping Methods according to the General Characteristics of the Subjects

| Item                                    | n   | Verbal violence from dentists | Verbal violence from dental hygienists | Verbal violence from patients or guardian | Emotional response after verbal violence experience by dentists | Emotional response after verbal violence experience by dental hygienists | Emotional response after verbal violence experience by patients or guardian | Problem-focused coping | Emotion-focused coping  |
|---|-----|-------------------------------|--|---|---|--|---|------------------------|-------------------------|
| <b>Age (y)</b>                          |     |                               |  |   |   |  |   |                        |                         |
| Total                                   | 124 | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| 20 ~ 25                                 | 36  | 1.58±0.64 <sup>a</sup>        | 1.55±0.54 <sup>a</sup>                 | 1.55±0.65 <sup>a</sup>                    | 2.65±1.17 <sup>a</sup>  | 2.35±1.14 <sup>a</sup>   | 2.29±1.11 <sup>a</sup>  | 3.19±0.67 <sup>a</sup> | 2.79±0.46 <sup>a</sup>  |
| 26 ~ 30                                 | 50  | 1.55±0.55 <sup>a</sup>        | 1.42±0.55 <sup>a</sup>                 | 1.77±0.74 <sup>a</sup>                    | 2.57±1.31 <sup>a</sup>  | 2.43±1.40 <sup>ab</sup>  | 2.84±1.37 <sup>ab</sup>   | 3.21±0.90 <sup>a</sup> | 2.71±0.85 <sup>a</sup>  |
| 31 ~ 35                                 | 24  | 1.65±0.61 <sup>a</sup>        | 1.31±0.37 <sup>a</sup>                 | 1.83±0.47 <sup>a</sup>                    | 3.22±1.00 <sup>a</sup>  | 2.89±1.01 <sup>b</sup>   | 3.24±0.76 <sup>b</sup>  | 3.41±0.94 <sup>a</sup> | 2.83±0.66 <sup>a</sup>  |
| ≥ 36                                    | 14  | 1.36±0.46 <sup>a</sup>        | 1.21±0.25 <sup>a</sup>                 | 1.45±0.28 <sup>a</sup>                    | 3.20±1.38 <sup>a</sup>  | 3.74±0.83 <sup>b</sup>   | 3.55±1.04 <sup>b</sup>  | 3.52±0.22 <sup>a</sup> | 2.65±0.43 <sup>a</sup>  |
| p-value                                 |     | 0.533                         | 0.094                                  | 0.137                                     | 0.139   | 0.022  | 0.003   | 0.432                  | 0.840                   |
| <b>Marital state</b>                    |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| No                                      | 94  | 1.55±0.59                     | 1.47±0.54                              | 1.69±0.70                                 | 2.67±1.20   | 2.44±1.26  | 2.64±1.25   | 3.25±0.77              | 2.73±0.68               |
| Yes                                     | 30  | 1.57±0.56                     | 1.24±0.30                              | 1.62±0.37                                 | 3.09±1.32   | 3.08±1.21  | 3.37±1.06   | 3.34±0.85              | 2.80±0.62               |
| p-value                                 |     | 0.843                         | 0.030                                  | 0.570                                     | 0.128   | 0.033  | 0.008   | 0.607                  | 0.652                   |
| <b>Religion</b>                         |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| Yes                                     | 54  | 1.82±0.63                     | 1.53±0.48                              | 1.74±0.63                                 | 2.95±1.23   | 2.87±1.16  | 2.93±1.24   | 3.40±0.70              | 3.02±0.54               |
| No                                      | 70  | 1.36±0.45                     | 1.33±0.50                              | 1.63±0.64                                 | 2.60±1.23   | 2.32±1.31  | 2.70±1.25   | 3.17±0.85              | 2.51±0.68               |
| p-value                                 |     | < 0.001                       | 0.025                                  | 0.361                                     | 0.137   | 0.027  | 0.336   | 0.124                  | < 0.001                 |
| <b>Education</b>                        |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| College                                 | 96  | 1.59±0.60                     | 1.43±0.53                              | 1.68±0.67                                 | 2.91±1.24   | 2.64±1.31  | 2.88±1.27   | 3.29±0.80              | 2.84±0.66               |
| ≥ University                            | 28  | 1.44±0.47                     | 1.34±0.35                              | 1.67±0.51                                 | 2.24±1.09   | 2.29±1.08  | 2.57±1.70   | 3.22±0.78              | 1.89±0.48               |
| p-value                                 |     | 0.226                         | 0.389                                  | 0.960                                     | 0.017   | 0.273  | 0.285   | 0.707                  | 0.006                   |
| <b>Employment history (y)</b>           |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27 <sup>a</sup>   | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| ≤ 3                                     | 34  | 1.52±0.55 <sup>a</sup>        | 1.49±0.48 <sup>a</sup>                 | 1.48±0.58 <sup>a</sup>                    | 2.48±1.06 <sup>a</sup>  | 2.23±1.08 <sup>a</sup>   | 2.13±0.96 <sup>a</sup>  | 3.01±0.79 <sup>a</sup> | 2.66±0.63 <sup>a</sup>  |
| 4 ~ 7                                   | 48  | 1.60±0.62 <sup>a</sup>        | 1.49±0.61 <sup>a</sup>                 | 1.81±0.79 <sup>a</sup>                    | 2.51±1.27 <sup>a</sup>  | 2.48±1.43 <sup>a</sup>   | 2.85±1.38 <sup>ab</sup>   | 3.29±0.79 <sup>a</sup> | 2.73±0.70 <sup>ab</sup> |
| 8 ~ 10                                  | 20  | 1.65±0.57 <sup>a</sup>        | 1.23±0.33 <sup>a</sup>                 | 1.79±0.32 <sup>a</sup>                    | 3.79±1.09 <sup>b</sup>  | 3.14±1.12 <sup>a</sup>   | 3.58±0.98 <sup>b</sup>  | 3.88±0.50 <sup>b</sup> | 3.20±0.63 <sup>b</sup>  |
| ≥ 11                                    | 22  | 1.43±0.54 <sup>a</sup>        | 1.29±0.32 <sup>a</sup>                 | 1.60±0.49 <sup>a</sup>                    | 3.02±1.11 <sup>ab</sup>   | 3.11±1.03 <sup>a</sup>   | 3.34±0.94 <sup>b</sup>  | 3.22±0.76 <sup>a</sup> | 2.58±0.57 <sup>a</sup>  |
| p-value                                 |     | 0.573                         | 0.118                                  | 0.091                                     | 0.001   | 0.043  | < 0.001   | 0.003                  | 0.025                   |
| <b>Position</b>                         |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| Dental hygienists                       | 84  | 1.63±0.63                     | 1.48±0.56                              | 1.68±0.68                                 | 2.72±1.22   | 2.50±1.28  | 2.64±1.27   | 3.16±0.80              | 2.74±0.62               |
| ≥ Team leader                           | 40  | 1.40±0.43                     | 1.28±0.29                              | 1.68±0.54                                 | 2.86±1.29   | 2.73±1.25  | 3.21±1.08   | 3.50±0.74              | 2.77±0.77               |
| p-value                                 |     | 0.042                         | 0.041                                  | 0.988                                     | 0.578   | 0.410  | 0.025   | 0.029                  | 0.814                   |
| <b>Monthly income (KRW)</b>             |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| < 2 million                             | 72  | 1.62±0.62                     | 1.53±0.58                              | 1.74±0.76                                 | 2.79±1.20   | 2.68±1.27  | 2.63±1.37   | 3.26±0.77              | 2.80±0.65               |
| ≥ 2 million                             | 52  | 1.48±0.51                     | 1.26±0.29                              | 1.59±0.41                                 | 2.73±1.30   | 2.38±1.27  | 3.07±0.99   | 3.29±0.83              | 2.66±0.69               |
| p-value                                 |     | 0.191                         | 0.003                                  | 0.208                                     | 0.783   | 0.240  | 0.069   | 0.840                  | 0.254                   |
| <b>Average daily number of patients</b> |     |                               |  |   |   |  |   |                        |                         |
| Total                                   |     | 1.56±0.58                     | 1.41±0.50                              | 1.68±0.64                                 | 2.77±1.24   | 2.57±1.27  | 2.81±1.24   | 3.27±0.79              | 2.75±0.67               |
| ≤ 25                                    | 20  | 1.72±0.59                     | 1.22±0.25                              | 1.72±0.54                                 | 3.33±1.14   | 3.04±1.03  | 3.50±0.91   | 3.66±0.59              | 3.34±0.52               |
| ≥ 26                                    | 104 | 1.52±0.58                     | 1.45±0.52                              | 1.67±0.65                                 | 2.64±1.23   | 2.47±1.30  | 2.68±1.26   | 3.19±0.81              | 2.62±0.63               |
| p-value                                 |     | 0.180                         | 0.080                                  | 0.761                                     | 0.024   | 0.084  | 0.009   | 0.017                  | < 0.001                 |

Values are presented as number only or mean ± standard deviation.

KRW: Korean won.

<sup>a,b</sup>The same characters was not significant by Scheffe's test at α=0.05.

ificantly more common for subjects aged “36 years or older,” who were married, subjects who were religious, and with “8 ~ 10 years” of total work experience.

An emotional response after verbal violence by patients/guardians was significantly more common in subjects aged “36 years or older,” who were married, with “8 ~ 10 years” of total work experience, currently working as “team leader or higher,” and with a mean “25 patients or fewer” per day ( $p < 0.05$ ). When we examined coping behaviors according to the dental hygienists’ general characteristics, problem-focused coping differed significantly in subjects with “8 ~ 10 years” of total work experience, currently working as “team leader or higher,” and with a mean “25 patients or fewer” per day ( $p < 0.05$ ). Emotion-focused coping showed significant differences in subjects who were religious, with a highest educational qualification of “technical college,” with “8 ~ 10 years” of total work experience, and with a mean “25 patients or fewer” per day ( $p < 0.05$ ; Table 4).

#### 5. Correlations between verbal violence experience, emotional response, and coping behaviors

Verbal violence by dentists was significantly positively correlated with emotional response, problem-focused coping, and emotion-focused coping ( $p < 0.05$ ); verbal violence by other dental hygienists showed a significantly positive correlation with emotional response ( $p < 0.05$ ), and verbal violence by patients/guardians showed significantly positive correlations with emotional response, problem-focused coping, and emotion-focused coping ( $p < 0.05$ ; Table 5).

## Discussion

Verbal violence experienced by healthcare personnel can affect work satisfaction and cause depression or a

passive attitude. When verbal violence is not controlled, it can eventually lead to decreased quality of medical services, which negatively affects patients. The problem of customers wielding superiority over service providers has been recognized as a social issue, and studies have actively investigated the structure of violence, including verbal and physical violence toward emotional laborers. Numerous recent studies have examined the state of violence experienced by nurses, leading to efforts to explore different methods to protect them. Despite this, the only studies on verbal violence experienced by dental hygienists in the treatment room are studies by Moon et al.<sup>11)</sup> and Lee et al.<sup>12)</sup>, and there are currently no measures in place to protect dental hygienists from verbal and physical violence. Therefore, this study aimed to provide basic data to enable dental hygienists to work in an emotionally and physically healthy environment, by examining the state of verbal violence experienced by dental hygienists, and studying emotional responses and coping behaviors after experience of violence.

Our results showed that, among the sources of verbal violence experienced by dental hygienists in the past year, verbal violence by patients/guardians scored highest at  $1.67 \pm 0.85$ , followed by dentists and then other dental hygienists. This is consistent with the results of Moon et al.<sup>11)</sup> and Lee et al.<sup>12)</sup> who reported that the most common perpetrators of verbal violence were patients, followed by dentists and then other dental hygienists. Meanwhile, a study by Kang and Park<sup>19)</sup> on types of violence experienced by nurses at a general hospital also found that patients and guardians were the most common source of verbal violence. This is thought to be due to the nature of work of dental hygienists and nurses, who are the first points of contact for patients and caregivers, as well as the fact that they are perceived as weak because they are commonly female and considered an easy target for

**Table 5.** The Correlations between Verbal Violence, Emotional Response and Coping Methods

|   | Emotional response | Coping methods         |                        |
|---|--------------------|------------------------|------------------------|
|   |                    | Problem-focused coping | Emotion-focused coping |
| Verbal violence from dentists             | 0.563              | 0.241                  | 0.286                  |
| Verbal violence from dental hygienists    | 0.425              | -0.042                 | 0.080                  |
| Verbal violence from patients or guardian | 0.588              | 0.301                  | 0.226                  |

patients to relieve their own anger or discomfort. Meanwhile, the second most common source of violence was dentists, which seems to be the result of the discrepancy between the expertise and positions of dentists who have high standing within the organization and dental hygienists who are staff members. In a study by the Korean Institute of Criminology on the structure of violence culture in Korean society<sup>20)</sup>, violence was also frequently observed within the ranks of workers, such as doctors and colleagues.

Among the types of verbal violence, "talking to me in an impolite way" scored highest. This is consistent with the findings of Moon et al.<sup>11)</sup> and Lee et al.<sup>12)</sup>, who also reported that speaking in an impolite way was the most frequent form of verbal violence. To prevent verbal violence toward dental hygienists, mutual respect and trust is essential, and various educational programs and management measures must be prepared to enable dental hygienists to work with pride.

In terms of the emotional response after experiencing verbal violence, "anger" scored highest at 3.78. For coping behaviors after experiencing verbal violence, problem-focused coping scored 3.28, and emotion-focused coping scored 2.75. Among methods of problem-focused coping, "explain the current situation and resolve through dialogue" was the highest-scoring response; among methods of emotion-focused coping, "suppress my emotions" was the highest-scoring response. This is consistent with the findings of Moon et al.<sup>11)</sup> and Lee et al.<sup>12)</sup> that the most common coping behavior after experiencing verbal violence was "suppressing emotions," a finding that supports those of Kang and Park<sup>19)</sup>, who reported that nurses at a general hospital coped after experiencing violence by continuing to work as if nothing had happened. Our results showed that the majority of dental hygienists adopt passive coping behaviors after experiencing violence, which suggests the need for educational programs that can reduce emotional anxiety such as by teaching methods of coping with verbal violence. When we analyzed verbal violence, emotional response, and coping behaviors according to the general characteristics of dental hygienists, we observed significant differences in verbal violence by dentists and other dental hygienists based on

religion and current job position. Religion is thought to have an effect because religious subjects are perceived as more positive and understanding, which makes the other party think that verbal violence toward them is acceptable. A lack of experience and less proficient work appears to expose more novice dental hygienists to verbal violence from senior dental hygienists.

Emotional responses after verbal violence by dentists and other dental hygienists were significantly more common in subjects with "8~10 years" of total work experience and subjects with a mean "25 patients or fewer" per day ( $p < 0.05$ ). Emotional responses after verbal violence by patients/guardians were significantly more common in subjects "36 years or older," who were married, with "8~10 years" of total work experience, whose current position was "team leader or higher," and with a mean "25 patients or fewer" per day ( $p < 0.05$ ). These results are thought to be because dental hygienists with less work experience are still adapting to the work and do not directly receive patients and guardians and that subjects with more work experience are better adapted to the work and actively receive patients. Subjects with fewer patients, those with more work experience, and those with a higher job position are thought to respond more emotionally because they are more attached to their workplace and are more concerned about and interested in its operations. It is believed that the basic emotional response of married subjects to stress at home also affected stress at work.

When we looked at how coping behaviors were associated with dental hygienists' general characteristics, problem-focused coping was significantly higher in subjects with "8~10 years" of work experience, a current position of "team leader or higher," and a mean "25 patients or fewer" per day ( $p < 0.05$ ). Emotion-focused coping was significantly higher in subjects who were religious, had a highest educational achievement of technical college, had "8~10 years" of work experience, and a mean "25 patients or fewer" per day ( $p < 0.05$ ). This shows that subjects with more work experience tended to make logical judgments rather than cope emotionally by identifying causes of problems and attempting to resolve them.

When we looked at correlations between experience of verbal violence, emotional response, and coping behaviors in dental hygienists, we found that verbal violence by dentists, other dental hygienists, and patients/guardians all showed statistically significant positive correlations with emotional response and coping behaviors. However, problem-focused coping was negatively correlated with verbal violence from other dental hygienists. When dental hygienists experienced verbal violence by dentists or patients/guardians, after an immediate emotional response, they showed strong problem-focused coping behaviors, questioned why they had suffered verbal violence, and sought methods to resolve the reasons. However, after experiencing verbal violence from other dental hygienists, they thought of the other hygienist as a colleague and showed a reduced emotional response while showing more passive coping skills by suppressing their emotions rather than seeking problem-focused resolution. Because this study examined dental hygienists in a restricted area, the results cannot be generalized to all dental hygienists. Although verbal violence frequently occurs in dental treatment rooms, the lack of previous studies made qualifying our results difficult. We hope that our results will lead to continual studies in the future. Moreover, it will be important to improve school education in interpersonal skills and communication, which can help protect dental hygienists from verbal violence and provide education that strengthens the identity of dental hygienists as specialists.

## References

1. Lee SH, Chung SE: Nurses's experience of verbal violence in hospital setting. *J Korean Nurs Admin Acad Soc* 13: 526-536, 2007.
2. Lee BH, Kim JS: The effect of internal marketing on customer orientation of dental hygienists. *J Dent Hyg Sci* 16: 37-44, 2016.
3. Kim SJ, Choi YJ: Customer loyalty to health services according to hospital type. *Korean J Health Serv Manag* 10: 13-23, 2016.
4. Kim SY, Eom MR, Oh HY, Ahn HY: Violence episodes and responses of emergency room nurses. *J Fundam Nurs* 14: 446-456, 2007.
5. Pompeii LA, Schoenfisch AL, Lipscomb HJ, Dement JM, Smith CD, Upadhyaya M: Physical assault, physical threat, and verbal abuse perpetrated against hospital workers by patients or visitors in six U.S. hospitals. *Am J Ind Med* 58: 1194-1204, 2015.
6. Nam KD, Yoon KS, Chung HS, Park SA, Jang BY, Sung YH: Verbal abuse of operating nurses by physicians and other nurses. *J Korean Nurs Admin Acad Soc* 12: 343-354, 2006.
7. Cho YH, Hong YR, Lee AM, et al.: Experience of verbal abuse, emotional response, and ways to deal with verbal abuse against nurses in hospital. *Korean J Occup Health Nurs* 20: 270-278, 2011.
8. Kwon HJ, Kim HS, Choe KS, Lee KS, Sung YH: A study on verbal abuse experienced at medical centers. *J Korean Clin Nurs Res* 13: 113-124, 2007.
9. Rowe MM, Sherlock H: Stress and verbal abuse in nursing: do burned out nurses eat their young? *J Nurs Manag* 13: 242-248, 2005.
10. Celik SS, Celik Y, Ağırbaş I, Uğurluoğlu O: Verbal and physical abuse against nurses in Turkey. *Int Nurs Rev* 54: 359-366, 2007.
11. Moon HJ, Han YS, Cho YS, Lim SR: A study on verbal abuse experience and coping strategies of dental hygienist. *J Dent Hyg Sci* 15: 348-354, 2015.
12. Lee JH, Choi JM, Lee YA: The help of experienced dental hygienists turnover verbal abuse and emotional reaction and the resulting relationship. *J Dent Hyg Sci* 14: 563-570, 2014.
13. Ryan J, Poster EC: When a patient hits you. *Can Nurse* 87: 23-25, 1991.
14. Cox H: Verbal abuse nationwide, part II: impact and modifications. *Nurs Manage* 22: 66-69, 1991.
15. Kwon JY, Lee SY: Relationship of between task performance, job satisfaction and organizational contribution of dental hygienists. *J Dent Hyg Sci* 16: 302-309, 2016.
16. Nam KD, Yoon KS, Chung HS, et al.: A study on the development of verbal abuse scale for operating room nurses. *J Korean Nurs Admin Acad Soc* 11: 159-172, 2005.
17. Yun JS: A study of violence experience from patients and their families and job satisfaction of emergency department nurses. Unpublished master's thesis, University of Ulsan, Ulsan, 2004.
18. Bae AR: The relationships among verbal abuse experience,



- emotional response, coping and emotional intelligence in hospital nurses. Unpublished master's thesis, Gyeongsang National University, Jinju, 2012.
19. Kang MJ, Park IS: Types of violence and coping methods experienced by general hospital nurses. *J Korean Clin Nurs Res* 21: 92-104, 2015.
20. Yeon SJ, Kim YB, Won YS, Rhee KY, Hong YO: The structure and culture of violence in school sports, hospital and workplaces of foreign employees. *Korean Institute of Criminology*, Seoul, pp.191-229, 2008.