

# Survey on Knowledge Level, Perception, and Attitudes of Dental Hygiene Students Toward Mental Disorders in Korea

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## Abstract

**Objectives:** The present study was conducted to investigate the educational experience, knowledge levels, and attitudes of dental hygiene students with respect to mental disorders. **Methods/Statistical Analysis:** The subjects were dental hygiene students who had experienced clinical practice and the survey items consisted of 13 questions for knowledge level, 15 questions for perception, and 10 questions for attitude. The questionnaire included items regarding the experience of managing a patient with a mental disorder and the educational experience regarding mental disorders. A total of 650 questionnaires were computerized for analysis using SPSS 20.0. **Findings:** The results of the present study showed that the percentage of dental hygiene students who have experienced an educational course related to mental disorders was about 70%, their knowledge level score was 74.2 points, and the percentage of students who demanded education in this area was 85.7%. These findings indicate that the relevant education is insufficient in South Korea, because the information regarding mental disorders is partly considered in oral medicine, clinical dental hygiene, and dentistry for the disabled, not in a separate educational course on mental disorders. In addition, the students who had received education regarding mental disorders or who had experience in managing patients with a mental disorder showed higher levels of positive attitude, consideration, and concern, and low levels of negative exclusion and avoidance. Therefore, providing an appropriate educational opportunity with regard to mental disorders may effectively improve the knowledge level and attitudes of dental hygiene students. **Improvements/Applications:** The results of this study may be used as fundamental data for the development of an educational program to improve the perception and attitudes about mental disorders.

**Keywords:** Attitude, Dental Hygiene Students, Knowledge Level, Mental Disorders, Perception

## 1. Introduction

The Epidemiological Survey of Mental disorders performed in 2011 in South Korea revealed that 16% of the total population of adults aged 18 years or older stated that they had experienced a mental disorder at least once within the last year. The lifetime prevalence of mental disorder excluding alcohol and nicotine use disorder increased by 14.3%, from 12.6% in 2006 to 14.4% in 2011<sup>1</sup>. The report also showed that both the lifetime prevalence and the one-year prevalence of mood disorder and anxiety disorder have continuously increased, stating that the increased prevalence of the two disorder is likely

due to changes in society<sup>1</sup>. Based on such a trend, it is also presumed that there is an increasing possibility that a patient with a mental disorder may visit a dental clinic for diagnosis and treatment, and thus a dental hygienist may assist in the diagnosis and treatment as well as performing oral health management for a patient with a mental disorder.

Providing high-quality dental service to patients with a mental disorder requires that dental hygienists play appropriate roles that should include expert knowledge of and a positive attitude toward mental disorders. However, if a dental hygienist has insufficient knowledge regarding mental disorders or a negative preconception or attitude,

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the dental hygienist may have difficulties in communicating with the patient, which may lead to poor cooperation on the part of the patient and treatment failure. Therefore, it is necessary for dental hygienists to acquire sufficient knowledge of mental disorders and maintain a positive attitude toward this disorder. Fostering such qualified dental hygienists requires preparation of appropriate educational procedures and proper learning on the level of the college major. A study on the knowledge and attitudes of the students majoring in dental hygiene with respect to mental disorders is also required.

However, most previous studies in relation to mental disorders have been conducted among college students in teachers college<sup>2</sup>, the department of social welfare<sup>3-6</sup>, and the department of nursing science<sup>7,8</sup>, or among medical students in the areas related to mental disorders<sup>9-12</sup>, while almost no studies have been conducted among college students majoring in dental hygiene. The present study was conducted with the goal of providing fundamental data that may be utilized in improvement of the curriculum of dental hygienists, by means of investigation of the educational experience, knowledge levels, and attitudes of dental hygiene students with respect to mental disorders, and through verification of the necessity of relevant education.

## 2. Methodology

### 2.1 Study Subjects

In this study, a self-report survey was conducted from September to November of 2015. The study subjects were dental hygiene students who had experienced clinical practice and who agreed to participate in the survey. A total of 650 returned questionnaires were used in the data analysis.

### 2.2 Research Variables

The questionnaire included items regarding the experience of managing a patient with a mental disorder during the actual site clinical practices, and the educational experience regarding mental disorders. The survey items related to knowledge, perception, and attitude with respect to mental disorders consisted of 13 questions for knowledge level, 15 questions for perception level, and 10 questions for attitude.

The knowledge level of the subjects regarding mental disorders was evaluated using a questionnaire that was originally developed by<sup>13</sup>, and that was revised and

complemented according to the present study design. The questionnaire on knowledge level included 13 questions about the causes, symptoms, treatment, and recurrence of mental disorder. The scores for individual questions were converted to a full score of 100 points. The reliability of the questionnaire used for knowledge level was 0.719 in the present study.

The perception and attitude with respect to those having a mental disorder were evaluated using a questionnaire that was originally developed by<sup>14</sup>, and that was revised and complemented according to the present study design. The questionnaire on perception included five questions about abnormal outer appearance and behavior, abnormal personality, and abnormally outstanding ability, respectively. The questionnaire on attitude included five questions about consideration and attention and exclusion and avoidance of those having a mental disorder. The questions about perception and attitude were to be answered according to a five-point Likert scale from 0 (“Disagree very strongly”) to 4 (“Agree very strongly”), and the sum of the points from each item was presented. The reliability of the questionnaire used for perception and attitude levels was 0.805 in the present study.

### 2.3 Data Analysis

Data were computerized for analysis using SPSS 20.0 (SPSS Inc., Chicago, IL, USA). A frequency analysis about the demographic characteristics of the subjects and educational experiences regarding mental disorders was performed. An independent samples t-test was performed to test the differences in knowledge, perception, and attitude levels among subject characteristics. The significance level was 0.05.

## 3. Findings

### 3.1 Demographic Characteristics and Educational Experiences of Subjects

The percentage of subjects who responded that they had experienced a patient with a mental disorder during the actual site clinical practices was 48.9% as shown in Table 1. The percentage of subjects who had an experience of receiving theoretical education about mental disorders was 32.3%. The percentage of subjects who responded that education regarding mental disorders is necessary was as high as 85.7%.

**Table 1.** Demographic characteristics and educational experiences of subjects

	n	%
<b>Total</b>	<b>650</b>	<b>100.0</b>
Experience of managing a patient with a MD		
Yes	318	48.9
No	332	51.1
Education Experience about MD		
Yes	210	32.3
No	236	36.3
I don't know	204	31.4
Necessity of education regarding MD		
Necessary	557	85.7
Unnecessary	20	3.1
I don't know	73	11.2

\*MD=mental disorders

**Table 2.** Knowledge level of subjects

	Mean ± SD*	p**
<b>Total</b>	<b>74.21 ± 17.34</b>	
Experience of managing a patient with a MD		0.012
Yes	75.96 ± 15.13	
No	72.54 ± 19.09	
Education Experience about MD		<0.001
Yes	77.91 ± 13.39	
No	72.07 ± 18.44	
Educational system		<0.001
3 year diploma course	71.10 ± 19.66	
4 year bachelor degree course	77.01 ± 14.42	

\*Higher score denotes higher level of knowledge regarding mental disorder

\*\*By independent samples t-test

SD, standard deviation

\*\*\* MD=mental disorders

### 3.2. Knowledge Level of Subjects

The knowledge level score of four-year-course college students was 77.01 points, which was higher than that of three-year-course college students, 71.10 ( $p < 0.0001$ ). The knowledge level scores were also higher in the group of subjects who had received relevant education and in the group of subjects who had experienced the management of patients with a mental disorder as shown in Table 2.

### 3.3. Perception of Subjects

The survey results suggest that the group of educational necessity perceive more strongly individuals with a mental disorder may have an abnormal personality or abnormal ability than the group of educational unnecessary as shown in Table 3 ( $p < 0.05$ ).

**Table 3.** Perception of subjects

	Abnormal behavior		Abnormal personality		Abnormal ability	
	M ± SD*	p**	M ± SD*	p**	M ± SD*	p**
<b>Total</b>	<b>8.86 ± 3.34</b>		<b>10.11 ± 3.28</b>		<b>10.42 ± 3.55</b>	
Experience of managing a patient with a MD						
Yes	8.80 ± 3.34	0.640	10.04 ± 3.50	0.612	10.31 ± 3.48	0.458
No	8.92 ± 3.34		10.17 ± 3.06		10.52 ± 3.61	
Education Experience about MD						
Yes	8.73 ± 3.59	0.124	9.99 ± 3.31	0.496	10.40 ± 3.58	0.302
No	9.23 ± 3.15		10.19 ± 3.29		10.04 ± 3.79	
Necessity of education regarding MD						
Necessary	8.90 ± 3.39	0.944	10.20 ± 3.25	0.013	10.64 ± 3.50	0.021
Unnecessary	8.95 ± 3.52		8.35 ± 3.79		8.80 ± 3.52	

\*Higher score denotes a strong tendency in each perception of mental disorder

\*\*By independent samples t-test

M, mean; SD, standard deviation

\*\*\* MD=mental disorders

### 3.4. Attitudes of Subjects

The Table 4 shows the attitude of the subjects toward mental disorders. The four-year-course college students showed a higher level of positive attitude (consideration and concern) ( $p = 0.002$ ) and a lower level of negative attitude (exclusion and avoidance) ( $p = 0.040$ ) than the three-year-course college students. In addition, a positive attitude was found in the group of subjects who had received relevant education ( $p = 0.050$ ).

**Table 4.** Attitude type of subjects toward mental disorder

	Consideration and attention		Exclusion and avoidance	
	M ± SD*	p <sup>†</sup>	M ± SD*	p <sup>†</sup>
<b>Total</b>	<b>14.93±2.60</b>		<b>8.52±2.82</b>	
Experience of managing a patient with a MD				
Yes	15.21±2.46	0.007	8.32±2.84	0.074
No	14.66±2.70		8.71±2.80	
Education Experience about MD				
Yes	15.39±2.61	0.010	8.17±2.93	0.005
No	14.73±2.69		8.92±2.74	
Necessity of education regarding MD				
Necessary	15.14±2.47	0.545	8.48±2.81	0.557
Unnecessary	14.80±2.82		8.85±2.41	

\*Higher score denotes greater improvement in each attitude regarding mental disorder

<sup>†</sup>By independent samples t-test

M, mean; SD, standard deviation

<sup>‡</sup> MD=mental disorders

## 4 Discussion

Mental disorders are increasing as society becomes more complicated and the struggle for existence becomes more severe due to the economic instability<sup>5</sup>. People in general have various types of social prejudice, and a negative attitude toward mental disease is common<sup>6,9</sup>, even among those in medical service fields, as indicated by many research reports<sup>10-12</sup>. Because negative attitudes toward mental disorders on the part of health care experts may result in adverse effects on both patient management and social attitudes, improvement of the curriculum by means of a survey of relevant knowledge, awareness, and attitudes is critical<sup>9,12</sup>.

The results of the present study showed that the percentage of dental hygiene students who have experienced an educational course related to mental disorders was about 70%, their knowledge level score was 74.2 points, and the percentage of students who demanded education in this area was 85.7%. These findings indicate that the relevant education is insufficient in South Korea, because the information regarding mental disorders is partly considered in oral medicine, clinical dental hygiene, and dentistry for the disabled, not in a separate educational course on mental disorders. In addition, the students who had received education regarding mental disorders or who had experience in managing patients with a mental disorder showed higher levels of positive attitude, consideration, and concern, and low levels of negative exclusion and avoidance. Therefore, providing an appropriate educational opportunity with regard to mental disorders may effectively improve the knowledge level and attitudes of dental hygiene students.

The present study has limited generalizability because the subjects were students majoring in dental hygiene in some colleges and universities. However, the present study is significant as the first study revealing the perception and attitudes of students majoring in dental hygiene with respect to patients with mental disorder. The results of this study may be used as fundamental data for the development of an educational program to improve the perception and attitudes about mental disorders.

## 5. Acknowledgement

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