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Infection Control by Dental Hygienists: A Comparative Study on the Performance of Standard

Ja Na H*

Department of Dental Hygiene, Honan University, Korea

***Corresponding author:** Ja Na H, Department of Dental Hygiene, Honan University, Kwangju, 62399, Korea; artnahee@hanmail.net

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Abstract

Objective: In this study, knowledge of standard management guidelines for dental hygienists who have a lot of direct and indirect contact with patients and have a high risk of infection exposure and spread of infection due to aerosols, by grasping the safety environment and performance capabilities, it was intended to prepare measures for the improvement of knowledge and performance of standards guidelines and efficient dental infection management.

Methods: This study targets dental workers at Y Dental Clinic, I Dental Clinic, and S Dental Hospital in Gwangju from May 1 to May 10, 2022 a survey was conducted on a total of 200 people in the experimental group and 100 in the control group. The survey participants understood the purpose of the study and agreed to participate in the study a self-entering survey was conducted. If t-test analysis is selected based on the general significance level of .05 and effect size of 0.3 power of 0.95, using the G-power 3.1 program, the appropriate number of samples is 200. The questionnaire was measured on a Likert 5-point scale Likert's 5 points for "very important" and 5 points for "not important at all" One point is given, and the higher the score, the higher the degree of practice. The mean and standard deviation were calculated to analyse the generalities the t-test of the standard knowledge, standard education method, and standard guidance performance was analysed at the significance level of .05. Cross-analysis test of gender controls and mask wearing controls, cross-analysis test of gender controls and protective gear wearing, Gender and surface disinfection experiments Glove exchange experimental group before and after blood fluid mucosa treatment, results of regression analysis of the isolation gown wearing experimental group and regression analysis of the age control group and the employee safety control group were analysed at the significance level of .05.

Conclusion: In the standard teaching method control group, 16 students 54.6%, The theoretical practice is 38.0% for 28 people, and the simulation is 92.6% for 56 people, The mean and standard deviation of the control group are 2.400±.752 and t=25.263, p=.000. The mean and standard deviation of the standard knowledge experiment group were 54.6% for 59 people with "yes" and 38.0% for 41 people with "no" and 41 people with "no" were 4.100±.494, t=18.409, p=.000. The mean and standard deviation of the standard knowledge control group are 60.2% of 65 people with "yes" and 32.4% of 35 people with "no" and 1.350±.479 to t=17.732, p=.000. Experimental group for performing standard knowledge protective gear wear in response sample analysis (p=.000), Standard training methods Mask wearing experimental group (p=.000), Perform standard instructions Injector treatment experimental group (p=.000), It was statistically significant as an experimental group (p=.000) for performing standard knowledge protective equipment wear. In addition, cross-analysis was conducted to determine whether there was a significant difference between the gender control group and the mask wearing control group. x^2 = 10.670, The significance probability is .031, which is the significance level. In 2005, it can be said that there is a significant difference between the gender control group and the mask wearing control group. Subsequently, cross-analysis was conducted to find out whether there was a significant difference between the gender control group and the control group performing protective gear wearing. x^2=10.592, p=It can be said that there is a significant difference at the significance level of .05 as 032. Results of regression analysis of the gender experimental group, surface disinfection experimental group, gloves exchange experimental group before and after blood fluid mucosa treatment, and quarantine gown wearing experimental group. F statistic is

7.690, significance probability. At the significance level of the gender experimental group of .05 as 000. Surface disinfection experimental group (t=-4.483, p=.000). Glove exchange experimental group before and after blood fluid mucosa treatment (t=3.851, p=.000). Isolation gown wearing experimental group (t=2.589, p=).000) is a significant description of .194% of the total change in the gender experimental group (according to the correction factor).169%). In the regression analysis of the age control group and the employee safety control group, the F statistic value is 12.953, and the probability of significance. At the age control significance level of .05 with 000. Employee safety control (t=3.599, p=.000) appeared .117% of the total change in the age group (according to the correction factor).342%).

Discussion: 1. Standard knowledge Protective gear wearing experiment group (p=.000), Standard education method Mask wearing experiment group (p=.000), Standard instruction performance Injection processing experiment group (p=.000), Standard knowledge Protective gear wearing experiment group (p=.000).

2. There is a significant difference between the gender control group and the mask wearing control group (p=.031).

3. In the gender control group and the protective gear wearing control group (p=.032) There is a significant difference.

4. Results of regression analysis of gender experimental group, surface disinfection experimental group, gloves exchange experimental group before and after blood fluid mucosa treatment, and quarantine gown wearing experimental group F statistic is 7.690, significance probability. At the significance level of the gender experimental group of .05 as 000, Surface disinfection experimental group (t=-4.483, p=.000), Glove exchange experimental group before and after blood fluid mucosa treatment (t=3.851, p=.000), Isolation gown wearing experimental group (t=2.589, p=).000) is described significantly.

5. In the regression analysis of the age control group and the employee safety control group, the F statistic is 12.953, p=.000, Employee safety control at age control significance level .05 (t=3.599, p=.000).

Keywords: Dental hygienist; Infection control; Standard precautions; Infection control Performance ability

Introduction

The hospital environment can cause infections to dental consumers and dental hygienists through several transmission paths by pathogens. Accordingly, blood-borne infections caused by exposure to blood or body fluids are higher in medical personnel than other infections [1]. The main route of infection is often due to an accident in which the patient's contaminated blood comes into contact with mucous membranes or wounds, or is stabbed by needles or various sharp instruments used in the patient [2]. The reason why infection control activities are important in the dental treatment process is that blood and saliva components are easily diffused into the air in the form of aerosol and dust due to the operation of the hand piece, water, and air injector It can be easily mediated by various secretions that occur during the treatment process, and infections occur frequently through wounds caused by sharp dental instruments or equipment [3]. The purpose of infection control is to protect people exposed to the hospital environment, such as patients, medical institution workers, guardians, and visitors from developing medical-related infections [4]. The standard revised in 2007 has seven areas of respiratory etiquette and safe injection behaviour infection control in existing hand hygiene, personal protective equipment, patient placement, treatment equipment and supplies, environmental management, linen management, and employee safety [5]. Standard is the most effective way to prevent dental-related infections between patients and medical personnel [6], Studies on standard performance were conducted on hospital workers, and it was confirmed that repetitive education programs were needed to promote standard performance [7]. In addition, efficient response to COVID-19 infection control can significantly reduce the incidence of medical-related infections, and active infection control activities for the prevention and management of medical-related infections are very important [8]. In previous studies, the most basic of management activities for infection prevention Standard was first published in 1996 by the Centre for Disease Control and Prevention (CDC) the patient's blood to prevent the spread of pathogens, all secretions from the patient, including body fluids, are considered potential sources of infection by avoiding exposure, it is recommended to comply with the disease regardless of infection even before the disease is diagnosed [5]. The Korea Centres for Disease Control and Prevention uses the standard guidelines for medical infections, not only patients and medical workers in medical institutions, Infection control education is recommended for visitors entering and leaving the hospital, as well as dental workers, dental college, and dental hygiene college trainees [9]. The Centre for Disease Control and Prevention (CDC) and From the Hospital Infection Control Practice Advisory Committee (HICPAC), It is recommended that all patients comply with standard guidelines when dealing with body fluids or blood as a result of compliance with standards, it has been reported that the average number of Exposure to blood by medical institution workers in one year was lowered from 35.8 to 18.1 [10]. As a result, it was reorganized into a medical institution certification system in Korea the infection control sector was importantly reflected. Apply standards guidelines to each medical institution an infection control system is established and improvements are expressed to satisfy the infection control

evaluation criteria [11]. Standard guidelines are applied to all patients' blood and body fluids (excluding sweat), secretions, excrement, mucous membranes, and damaged skin, which are the criteria for infection control evaluation, and are likely to spread in hospitals. Therefore, it is very important for all medical institution workers to comply with the standards guidelines. However, for dental care workers, knowledge of infection control and A Study on the Performance of Standard in the Half-Century of Korea. It is no exaggeration to say that it has just begun. Therefore, in this study, there are many direct and indirect contacts with patients among dental institution workers Knowledge of standard management guidelines for dental hygienists who are at high risk of infection and infection spread due to sharp instrument use and aerosol by grasping the safety environment and performance capabilities, it was intended to prepare measures for the improvement of knowledge and performance of standards guidelines and efficient dental infection management.

Materials and Methods

This study was conducted from May 1st to May 10th, 2022 at Y Dental Clinic, I Dental Clinic, and S Dental Hospital in Gwangju,100 people in the experimental group, 100 people in the control group, 200 people in total I conducted a survey conducted survey. The experimental group and the control group in this study were randomly participated in the experiment. The survey participants understood the purpose of the study and agreed to participate in the study a self-entering survey was conducted. This study was conducted with the consent of IRB (NO1041223-HR-04) at Honan University's Bioscience Ethics Committee. If t-test analysis is selected based on the general significance level of .05 and effect size of 0.3 power of 0.95, using the G-power 3.1 program, the appropriate number of samples is 200. The questionnaire was measured on a 5-point scale of Likert, and the 5-point scale of Likert gave 5 points to 'very important' and 1 point to 'not important at all', meaning that the higher the score, the higher the practice.

Questionnaire Tool

A general characteristic

The age, gender, standard education method, and standard education knowledge of the study subjects were investigated using a self-written questionnaire.

Standard Guidance Experimental Group

Standard knowledge measurement is based on standard (Siegel et al., 2007) [5] A tool supplemented by Oh et al. (2016) [6] was used. This tool has a total of 14 questions, including 3 questions for hand hygiene, 5 questions for personal protective equipment, 2 questions for safe injection, 2 questions for employee safety, and 2 questions for respiratory etiquette, and the composition questionnaire was measured on a 5-point scale of Likert the 5-point scale of Likert gives 5 points to 'very important' and 1 point to 'not important at all', meaning that the higher the score, the higher the practicality. The tool reliability Cronbach's α value was .677.

Standard Guidelines Control

Standard knowledge measurement is based on standard (Siegel et al., 2007) [5] A tool modified and supplemented by Oh et al. (2016) was used. This tool consists of 14 questions, including 3 questions for hand hygiene, 5 questions for personal protective equipment, 2 questions for safe injection, 2 questions for employee safety, and 2 questions for respiratory etiquette the questionnaire was measured on the Likert 5-point scale. The 5-point scale of likert gives 5 points to 'very important' and 1 point to 'not important at all', meaning that the higher the score, the higher the practicality. The tool reliability Cronbach's α value was .636.

Ability to perform infection control

The ability to perform infection control was revised in 2007 (Siegel et al) [5] Korea Centres for Disease Control and Prevention's standard prevention guidelines for medical-related infections (Yoo et al) and [12] Care guidelines (Disease Management Headquarters, 2017) as [6] It was measured using a tool developed by the researcher according to the scenario situation. The contents of the questions consisted of 14 questions in total: 3 questions for hand hygiene, 5 questions for personal protective equipment, 2 questions for safe injection, 2 questions for employee safety, and 2 questions for respiratory etiquette The configuration questionnaire was measured on a Likert 5-point scale The 5-point scale of likert gives 5 points to 'very important' and 1 point to 'not important at all', meaning that the higher the score, the higher the practicality. The tool reliability Cronbach's α value was .736.

Analysis Method

The data collected in this study were analysed using the SPSS 21.0 program. A total of 200 participants in this district were 100 in the experimental group and 100 in the group, and the average and standard deviation were calculated to analysed the general information, The t-test of the standard knowledge, standard education method, and standard guidance performance was analysed at the significance level of .05. Cross-analysis test of gender controls and mask wearing controls, performing gender controls and protective gear wear Cross-analysis of controls test, Gender and surface disinfection experiments, Glove exchange experimental group before and after the blood fluid mucosa

treatment, Regression analysis of isolated wearing experimental groups, the regression analysis results of the age control group and the employee safety control group were analysed at a significance level of .05

Results

General information

In the gender test group, 35 men were 32.4%, there are 65 women, 60.2%, and the average and standard deviation of the experimental group are 1.650±.479. Also, in the gender control group, there are 20 men 18.5%, and 80 women 74.1% the average and standard deviation of the control group were 1.800±.402. In the experimental group of age, 1 person was 20 years old, 4 people were 21 years old, 4 people were 21 years old, 41 people were 22 years old, 35 people were 23 years old, 35 people were 32.4%, 13 people were 24 years old, 4 people were 25 years old, 3.7%, 26 years old, and 1 person was 27 years old. In the age control group, 2 people aged 21 were 1.9%, 15 people aged 22 were 13.9%, 19 people aged 23 were 17.6%, 28 people aged 24 were 25.9%, 17 people aged 25 were 15.7%, 11 people aged 26, 10.6%, 4 people aged 27 were 3.7%, and 4 people aged 28 were 3.7%. In the standard teaching method experimental group, 15 people, 13.9 percent. The theoretical practice is 28.9%, and the simulation is 57.5 52.8%, the mean and standard deviation of the experimental group are 2.420±.741, t=25.911, p=.000.

In the standard teaching method control group, 16 students 54.6%, 28 students 38.0%, and 56 students 92.6% were simulated. The mean and standard deviation of the control group are 2.400±.752 and t=25.263, p=.000. The mean and standard deviation of the standard knowledge experiment group were 54.6% for 59 people with "yes" and 38.0% for 41 people with "no" and 41 people with "no" were 4.100±.494, t=18.409, p=.000. In the standard knowledge control group, the mean and standard deviation of the experimental group were 60.2% of 65 people with "Yes" and 32.4% of 35 people with "No".479 to t=17.732, p=.000 (Table 1).

Table 1: *General information (n=200).*

item	subitem	N	%	experimental group M±SD	a control group M±SD	t	p
gender experimental group	Man	35	32.4	1.650±.479	1.800±.402	23.990	.000
	woman	65	60.2				
gender control group	Man	20	18.5	1.800±.402	1.650±.479	32.337	.000
	woman	80	74.1				
Age experimental group	20years old	1	.9	22.760± 1..074	24.1200±1.609	207.221`	.000
	21years old	4	3.7				
	22years old	41	38.0				
	23years old	35	32.4				
	24years old	13	12.0				
	25years old	4	3.7				
	26years old	1	.9				
	27years old	1	.9				
Age control group	21years old	2	1.9	24.120± 1.609	22.760 ±1.074	146.725	.000
	22years old	15	13.9				
	23years old	19	17.6				
	24years old	28	25.9				
	25years old	17	15.7				
	26years old	11	10.2				
	27years old	4	3.7				

	28years old	4	3.7				
Standard Education Methodology Experimental Group	Theory	15	13.9	2.420±.741	2.400±.752	25.911	.000
	Theoretical practice	28	25.9				
	Simulation	57	52.8				
Standard Education Methodology control group	Theory	16	54.6	2.400±.752	2.420±.741	25.263	.000
	Theoretical practice	28	38.0				
	Simulation	56	92.6				
Standard Knowledge Experiment Group	yes	59	54.6	4100±.494	1.350 ± .479	18.409	.000
	no	41	38.0				
Standard Knowledge Control	yes	65	60.2	1.350± .479	4.100± .494	17.732	.000
	no	35	32.4				

***Table 2**: Results of t-test on standard knowledge, standard education methods, and standard guidelines (n=200).*

item	**subitem**	**mean**	**sd**	**Response 1, 2, 3, 4 m±sd**	**t**	**p**
Response 1	Standard knowledge	1.410	.494	-2.430± 1.233	-19.708	.000
	Protective Equipment Wear Experimental Group	3.840	1.178			
Response2	Standard teaching methods	2.420	.741	-1.620±1.032	-15.689	.000
	Mask wearing experiment group	4.040	1.109			
Response3	Implementation of standard guidelines	1.180	.386	-2.330±1.484	-15.698	.000
	Injection treatment experimental group	3.510	1.473			
Response4	Standard New Content Failure	3.110	1.455	-.250 ±1.908	-1.310	.193

	Experimental Group					
	Staff Safety Experiment Group	3.360	1.446			

Table 3: *Results of cross-analysis of gender control and mask wearing control (n=200).*

Gender control * Cross-analysis table of control groups wearing masks								
			mask-wearing control group					total
			It is not very much so	I don't think so.	general	That's right.	Very much so	
Gender control	Man	Frequency	3	2	7	4	4	20
		Percentage of control group wearing mask	60.0%	25.0%	35.0%	12.5%	11.4%	20.0%
	Woman	Frequency	2	6	13	28	31	80
		Percentage of control group wearing mask	40.0%	75.0%	65.0%	87.5%	88.6%	80.0%
total		Frequency	5	8	20	32	35	100
		Percentage of control group wearing mask	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4*: Cross-analysis of gender controls and protective gear wearing controls (n=200).*

Cross-analysis								
			protective gear wearing controls					total
			It is not very much so	I don't think so.	general	That's right.	Very much so	
Gender control	Man	Frequency	3	4	1	6	6	20
		Percentage of controls performed by wearing protective gear	75.0%	25.0%	5.3%	22.2%	17.6%	20.0%
	Woman	Frequency	1	12	18	21	28	80
		Percentage of controls performed by wearing protective gear	25.0%	75.0%	94.7%	77.8%	82.4%	80.0%
total		Frequency	4	16	19	27	34	100
		Percentage of controls performed by wearing protective gear	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Results of t-test on standard knowledge, standard education methods, and standard guidelines

Table 2 shows the results of the t-test test for standard knowledge, standard education methods, and standard guidance. The average and standard deviation of the standard knowledge in response 1 are 1.410±.494. The mean and standard deviation of the experimental group performing the wearing of protective gear is 3.840±1.178. Standard Caution Knowledge the average and standard deviation of wearing protective gear –2.430±1.233 and t=-19.708, p=.000. The average and standard deviation of the standardized education method of response 2 are 2.420±.386, the mean and standard deviation of the mask wearing experiment group is 4.040±1.109. Standard teaching methods the mean and standard deviation of wearing a mask are –1.620±1.032 and t=-15.689, p=.000. The average and standard deviation of the standard guidance in response 3 are 1.80±.386, the mean and standard deviation of the syringe treatment experimental group are 3.510±1.473. Performance of standard caution instructions the mean and standard deviation of injection treatment are –2.330±1.484 and t=-15.698, p=.000. New content of standard in response 4 the mean and standard deviation of the failure experimental group are 3.110±1.455, the mean and standard deviation of the employee safety experiment group is 3.360±1.446. Standard New Content Failure the mean and standard deviation of employee safety is -.250±1.908 and t=-1.310, p=.000.

Results of cross-analysis of gender control and mask wearing control x^2=10.670a (df=4, p=.031)

According to the cross-analysis results of the gender control group and the mask wearing control group in Table 3, the gender male mask wearing control group was 'Yes and Very Yes' The frequency was 33.9% with eight people, and the frequency of "Not and Very Not" was 85.5% with five people. In the control group wearing a gender mask, the frequency of "yes" is 87.5% for 28 people there were 30 people who said "Very Yes" and 88.6% the frequency of "Not so" is 75.6% with 6 people the frequency is 40.0% with two people. To find out if there is a significant difference between the gender control and the mask wearing control, as a result of cross-analysis, x2 = 10.670a, the significance probability is .031, which is the significance level From .05. It can be said that there is a significant difference between the gender control group and the mask wearing control group.

Cross-analysis of gender controls and protective gear wearing controls x^2=10.592a (df=4, p=.032)

In the cross-analysis of the gender control group and the control group performing protective gear wear in Table 4, Gender control The number of men in the control wearing protective gear "yes" and "very yes" were 12 people, showing 39.8% The frequency of "yes" for women in the control group wearing gender controls protective gear is 77.8% for 21 people, and the frequency of "very yes" is 82.4% for 28 people. As a result of conducting cross-analysis to find out whether there is a significant difference between the gender control group and the control group performing protective gear wearing It can be said that there is a significant difference at the significance level of .05 as x2=10.592a and p=.032.

Regression analysis of gender experimental group, surface disinfection experimental group, glove exchange experimental group before and after blood fluid mucosa treatment, and isolation gown wearing experimental group R2 (adj, R2=.194(.169), F=7.690

In Table 5, gender experimental groups and surface disinfection experimental groups, Glove exchange experimental group before and after blood fluid mucosa treatment, As a result of regression analysis of the isolation operation experiment group, the F statistic is 7.690, Experimental group performing surface disinfection at a significance level of .05 in the gender chamber group with a significance probability of .000 (t=-4.483,p=.000), Glove exchange experimental group before and after the blood fluid mucosa treatment(t=3.851, p=.000), Isolation Wear Experimental Group(t=2.589, p=.000) is a significant description of .194% of the total change in the gender experimental group (according to the correction factor).169%).

Regression Analysis of Age Control and Employee Safety Control R2 (adj, R2=.117(.342), F=12.953

In Table 6, in the regression analysis of the age control group and the employee safety control group, the F statistic value is 12.953, and the significance probability by .000, Age control Employee safety control at significance level .05 (t=3.599, p=.000) appeared .117% of the total change in the age group (according to the correction factor).342%). If we conclude by the zero hypothesis of the regression coefficient and the coefficient of determination, At significance level .05, the regression coefficient is not zero‘ Or 'At significance level .05, the coefficient of determination is not zero'.

Discussion

The data collected in this study were analysed using the SPSS 21.0 program. From May 1st to May 10th, 2022 at Y Dental Clinic, I Dental Clinic, and S Dental Hospital in Gwangju Metropolitan City, 100 people in the experimental group, 100 people in the control group, 200 people in total I conducted a survey conducted survey. The survey participants understood the purpose of the study and agreed to participate in the study a self-entering survey was conducted. The questionnaire was measured on a Likert 5-point scale Likert scored 5 points for "very important" and 1 point for "not important at all" The higher the score given, the higher the degree of practice. The mean and standard deviation were calculated to analyse the generalities Standard Knowledge, Standard Education Method, and Response Sample to Standard Guidelines the t-test was analysed at the significance level of .05. Cross-analysis of gender controls and mask wearing controls, Cross-analysis of gender controls and protective gear wearing controls, Gender and surface disinfection experiments Glove exchange experimental group before and after blood fluid mucosa treatment, the regression analysis of the quarantine gown wearing experiment group, the regression analysis results of the age control group and the employee safety control group were analysed at a significance level of .05.

1. In the gender experiment group, 35 men were 32.4%, there are 65 women, 60.2 percent the mean and standard deviation of the experimental group are 1.650±.479. Also, in the gender control group, men are 18.5% and women are 74.1% the average and standard deviation of the control group were 1.800±.402. In the standard teaching method experimental group, 15 people, 13.9 percent, 28 students, 25.9 percent the simulation is 52.8% of 57 people The mean and standard deviation of the experimental group are 2.420±.741, t=25.911, p=.000. In the standard teaching method control group, 16 students 54.6%, 28 students, 38.0

percent the simulation is 92.6% of 56 people The mean and standard deviation of the control group are 2.400±.752 and t=25.263, p=.000. In the standard knowledge experiment group, "Yes" was 54.6 percent of 59 people The mean and standard deviation of the 38.0% experimental group of 41 people with "none" is 4.100±.494, t=18.409, p=.000. In the standard knowledge control group, 65.2% said "yes" and 32.4% said "no" The mean and standard deviation of the control group are 1.350±.479 to t=17.732, p=.000 (Table 1).

2. Table 2 shows the results of the t-test test for standard knowledge, standard education methods, and standard guidance The mean and standard deviation of the standard attention knowledge of corresponding 1 are 1.410±.494, The mean and standard deviation of the experimental group performing the wearing of protective gear is 3.840±1.178. The mean and standard deviation of the experimental group performing the wearing of standard care protective gear is –2.430±1.233, t=-19.708, p=.000. The average and standard deviation of the standard teaching methods in response 2 are 2.420±.386, The mean and standard deviation of the mask wearing experiment group is 4.040±1.109, Standard training method The mean and standard deviation of the mask wearing experiment group are –1.620±1.032 and t=-15.689, p=.000. The mean and standard deviation of performing the standard instruction in response 3 are 1.80±.386, The mean and standard deviation of the syringe treatment experiment group are 3.510±1.473, Performing standard guidelines Injector treatment experimental group The mean and standard deviation are –2.330±1.484 and t=-15.698, p=.000. New content of standard in response 4 the mean and standard deviation of the failure experimental group are 3.110±1.455, the mean and standard deviation of the employee safety experiment group is 3.360±1.446. Standard New Content Failure Experimental group the mean and standard deviation of the employee safety experimental group are -.250±1.908 t=-1.310, p=.000. In other words, the experimental group performing standard knowledge protective gear wearing (p=.000), Standard training methods Mask wearing experimental group (p=.000), Perform standard instructions Injector treatment experimental group (p=.000), It was statistically significant as an experimental group (p=.000) for performing standard knowledge protective equipment wear.

3. According to the cross-analysis results of the gender control group and the mask wearing control group in Table 3, the gender male mask wearing control group is "Yes and Very Yes" The frequency was 8 people, 33.9% The frequency of "Not and Very Not" is 85.5% with five people. In the control group wearing a gender mask, the frequency of "yes" is 87.5% for 28 people There were 30 people who said "Very Yes" and 88.6% The frequency of "No" is 75.6% with 6 people The frequency of "very not" is 40.0% with two people. As a result of conducting cross-analysis to find out whether there is a significant difference between the gender control group and the mask wearing control group x2 = 10.670a, significance probability is .031. It can be said that there is a significant difference between the gender control group and the mask wearing control group at the significance level of .05.

4. In Table 4, gender controls and protective gear wear performance control cross-analysis test Gender control The number of men in the control wearing protective gear "yes" and "very yes" were 12 people, showing 39.8% The frequency of "yes" for women in the control group wearing gender controls protective gear is 77.8% for 21 people, and the frequency of "very yes" is 82.4% for 28 people. as a result of conducting cross-analysis to find out whether there is a significant difference between the gender control group and the control group performing protective gear wearing It can be said that there is a significant difference at the significance level of .05 as x2=10.592a and p=.032.

5. In Table 5, gender experimental groups and surface disinfection experimental groups, Glove exchange experimental group before and after blood fluid mucosa treatment, the results of regression analysis of the wearing experiment group in isolation F statistic 7.690, significance probability.by 000. experimental group performing surface disinfection at a significance level of .05 in the gender chamber group (t=-4.483, p=.000) Glove exchange experimental group before and after blood fluid mucosa treatment (t=3.851, p=.000) Experimental group on wearing quarantine gowns (t=2.589, p=.000) is significantly described and the gender experimental group .194% of the total change (according to the correction factor).169%).

6. In Table 6, the regression analysis of the age control and employee safety control groups The F statistic is 12.953, p=.000, at age control significance level .05. Employee safety control (t=3.599, p=).000) appeared. .117% of the total change in the age group (according to the correction factor).342%). By the zero hypothesis of the regression coefficient and the coefficient of determination, the conclusion is that at significance level .05, the regression coefficient is not zero or, at the significance level of .05, the coefficient of determination is not zero.

Conclusion

The world is in a difficult situation due to Covid, and dental medical institutions are also required to implement systematic infection control through responsibility and empowerment of infection managers and professional infection control education. Most hospital infections can be reduced by practice through accurate knowledge. Workers at dental institutions are thoroughly aware of infection prevention and require efforts to control and cope with infection [13] all patients visiting the dentist are likely to be infected, and preventive measures against infectious diseases should be taken by examining the patient's medical history and checking the overall health status [14]. In addition,

personal protective equipment such as hand washing, gloves, masks, and goggles must be worn during each patient's treatment, and proper management such as disinfection, sterilization, and extract is required [15]. Therefore, in this study, knowledge of the standard guidelines for infection control of dental hygienists engaged in dental institutions, the purpose was to prepare specific measures to improve dental infection management by grasping the safety environment and performance. According to the previous study, there was a study by Park et al. (16), which showed that the larger the size of the working institution, the higher the knowledge score on the standardization guidelines According to the general characteristics of this study, the results of analysing the knowledge of the standard guidelines were found in the standard knowledge experiment group There are 59 people who said "Yes" 54.6% said "None" The average and standard deviation of the 38% experimental group of 41 people were 4.100±.494, t=18.409, p=.000. In the standard knowledge control group, "Yes" means 65 people, 60.2 percent the average and standard deviation of 35 people and 32.4% of the experimental group said, "None." 1.350± .479 to t=17.732, p=.000<Table 1>. Result, it is believed that a systematic infection control program should be established in dental hospitals and dentists to improve the level of knowledge on standard guidelines. As a result of analysing the performance of standardization guidelines according to the general characteristics of previous studies, In the performance chart of standards guidelines according to age and work experience, the age is high or he more work experience, the higher the performance on the standard guidelines [17, 18, 19, 20, 21]. In this study, the results of the t-test test for standard knowledge, standard education methods, and standard guidelines were also used of the standard knowledge of correspondence 1 the mean and standard deviation are 1.410±.494, the mean and standard deviation of the experimental group performing the wearing of protective gear is 3.840±1.178. Standard knowledge Protective gear wearing performance of experimental group he mean and standard deviation are –2.430±1.233, t=-19.708, p=.000. The average and standard deviation of the standardized education method of response 2 are 2.420±.386, The mean and standard deviation of the mask wearing experiment group is 4.040±1.109, Standard training method*The mean and standard deviation of the mask wearing experiment group is -1.620±1.032, t=-15.689, p=.000. The average and standard deviation of the standardized education method in response 2 are 2.420±.386, The mean and standard deviation of the mask wearing experiment group is 4.040±1.109, Standard teaching methods*Mask wearing experimental group The mean and standard deviation are -1.620±1.032 and t=-15.689, p=.000. The average and standard deviation of the standard guidance in response 3 are 1.80±.386, the mean and standard deviation of the syringe treatment experimental group are 3.510±1.473. Performing standard guidelines Injector treatment experimental group the mean and standard deviation is -2.330±1.484, t= -15.698, p=.000. Standard in Response 4 New Content Failures Experimental Group The mean and standard deviation are 3.110±1.455, the mean and standard deviation of the employee safety experiment group is 3.360±1.446. Standard New Content Failure Experimental Group*Employee Safety Experimental Group the mean and standard deviation are -.250±1.908, t=-1.310, p=.000. In other words, the experimental group performing standard knowledge* protective gear wearing (p=.000), Standard training methods Mask wearing experimental group (p=.000), Perform standard instructions Injector treatment experimental group (p=.000), It was statistically significant as an experimental group (p=.000) for performing standard knowledge protective equipment wear<Table 2>. The results of cross-analysis of the gender control group and the mask wearing control group in Table 3 show that The gender male mask wearing control group has a "Yes, Very Yes" The frequency was 8 people, 33.9% The frequency of "No, Wow, Very No" is 85.5% with five people. In the control group wearing a gender mask, the frequency of "yes" is 87.5% for 28 people There were 30 people who said "Very Yes" and 88.6% The frequency of "No" is 75.6% with 6 people The frequency of "very not" is 40.0% with two people. As a result of conducting cross-analysis to find out whether there is a significant difference between the gender control group and the mask wearing control group x2=10.670a significance probability is .031, which is the significance level from .05. It can be said that there is a significant difference between the gender control group and the mask wearing control group. It's because the infection control system is systematic It is believed to be the result of regular training through infection control personnel. As a result of analyzing the safety environment of the standardized guidelines according to infection-related characteristics in previous studies, the safety environment score was high if the standardized guidelines were trained in the case of infection control education experience, the degree of infection control practice of dental hygienists was high [21]. In this study, a cross-analysis of the gender control group and the performance control group wearing protective gear Gender control The number of men in the control wearing protective gear "yes" and "very yes" were 12 people, showing 39.8% The frequency of "yes" for women in the control group wearing gender controls protective gear is 77.8% for 21 people, and the frequency of "very yes" is 82.4% for 28 people. As a result of conducting cross-analysis to find out whether there is a significant difference between the gender control group and the control group performing protective gear wearing It can be said that there is a significant difference at the significance level of .05 as x2=10.592a and p=.032. <Table 4>. In Table 5 of this study, the gender experimental group and the surface disinfection experimental group, Glove exchange experimental group before

and after blood fluid mucosa treatment, The results of regression analysis of the wearing experiment group in isolation The F statistic is 7.690 The significance probability is .000, and the gender experimental group has a significance level of .05 Surface disinfection experimental group (t=-4.483,p=.000) Glove exchange experimental group before and after blood fluid mucosa treatment (t=3.851, p=.000) Isolation Wear Experimental Group (t=2.589, p=.000) is a significant description of .194% of the total change in the gender experimental group (according to the correction factor).169%). In addition, in Table 6 of this study, the age control group and the employee safety control group, in regression analysis, the F statistic is 12.953, Significance probability.000 at age control significance level .05. Employee safety control (t=3.599, p=).000) appeared. Therefore, in this study, it is believed that dental hygienists who have experienced infection control education can recognize the safe environment of the dental clinic and perform infection control well Since infection control education affects infection control practice, infection control practice is necessary to protect not only dental hygienists but also dental consumers It is believed that systematic infection management education and program development should be carried out for this. In order to practice infection control in accordance with standardized guidelines in dental institutions, personal knowledge and will of dental hygienists are important, but administrative and physical support of hospitals and systematic programs must be established It is believed that professional programs and institutional devices should be prepared to train responsible and authorized dental hygienists specializing in infection control. The limitations of this study are that the questionnaire, a research tool, was limited to general dentists and analysed as standardized guidelines, and there is a limit to discussing generalization because some dental hygienists in Gwangju cannot represent all dental hygienists. Therefore, in future studies, surveys should be conducted through questionnaire tools that can reflect the treatment environment of large dental hospitals among dental institutions, and it is considered necessary to expand and investigate nationwide.

Conflict of Interest

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

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