

The Performance of Grit and Patient Safety Culture and Standardism of Dental Hygienists in Some Dental Hospitals and Clinics

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Abstract

Objective: This study aims to analyze dental hygienists' grit, infection prevention environment, and standard performance, provide basic data on strategies to enhance standard performance of dental hygienists, and provide them as academic basic data.

Methods: A study was conducted on 112 dental workers working at dental clinics in Gwangju Metropolitan City from March 1 to March 30, 2023. The number of participants in the study was G. power 3.1 program, and 112 people were calculated with an effect size of 0.3, a significance level of 0.05, and a power of 0.95. The survey participants understood the purpose of the study and agreed to participate in the study, and the survey was conducted in a self-written manner. The frequency analysis and mean and standard deviation of general matters were conducted, and two independent samples t-test according to gender, infection control education * cross-analysis of chlorhexidine toothpaste use, oral management correlation for the elderly, infection control education, and chlorhexidine toothpaste use were analyzed by setting a 95% confidence interval.

Results: In general, 120 people of age, 1.783 (.945), 120 people of gender, 1.125 (.332), 120 people of marriage, 1.666 (1.473), 120 people of work experience, 2.491 (1.216), and 120 people of infection control education and 1.125 (1.332). In the regression analysis of hand washing in case of marriage, blood and body fluid infection, and hand washing in case of isolation and desorption, the F statistics for hand washing in case of blood and body fluid infection are 9.832, which is a significant level. It is significantly described in 05 ($t=-4.400$, $p=.000$), the total change amount is 14% (13% according to the modification coefficient) described.

Conclusion: In the correlation analysis of infection prevention environment and standard practices, all employees' exposure to infection, compliance with protective equipment, and hand washing are well performed ($p<.001^{**}$).

Keywords: Dental clinic; Dental hygienist; Grit; Infection; Prevention; Hand washing; Protective

Introduction

The Medical Service Act revised in 2012 emphasized the importance of managing medical-related infections and established them as an essential obligation, not an option [1]. Although the occurrence of medical-related infections varies depending on the characteristics of the patient group, hospital characteristics, and type of infection, it is estimated that 5-10% of hospitalized and treated patients occur, and the incidence rate is reported in the order of urinary tract infection, blood flow infection, and pneumonia [2]. Standard is an infection control guideline designed to prevent infection caused by skin damage caused by needles or sharp instruments, expanding the general created by the Center for Disease Control and Prevention (CDC) to prevent exposure of a wide range of secretions such as blood, body fluids, sweat, phlegm, and runny nose. Medical-related infections can be prevented by increasing the performance of standard in hospitals [3,4]. Research to increase the performance of standard by dental hygienists, which plays an important role in preventing the occurrence of medical-related infections, is essential. Grit is defined as patience and passion for achieving long-term

goals, and refers to maintaining, challenging, and engrossing in the face of failure and adversity in progress [5]. Grit was mainly conducted for students in Korea, and research on dental hygienists is insufficient. In a study conducted on high school students [6], it was confirmed that the higher the Grit, the higher the academic achievement. Dental hygienists with Grit continue to accumulate professional knowledge and skills, make plans to treat patients, and achieve them, demonstrating teamwork and striving without stopping [7]. Research is needed to increase the performance of standard by confirming the effect of Grit, an internal characteristic of an individual, on the performance of standard. For the prevention and management of medical-related infections, it is very important for medical workers to practice infection prevention and prevention actions. In the dentist's office, a lot of saliva or blood-mixed secretions are generated by high-speed rotational instruments and drinking water. Dust generation, including various pathogenic microorganisms, is at risk of causing a variety of pathogenic infections, ranging from colds, pneumonia, tuberculosis, hepatitis, and acquired immunodeficiency (AIDS). Developed countries have recognized the importance of infection control in hospitals and are actively conducting research and activities on infection control. The transmission of hepatitis B between dentists and patients was reported [8] and the transmission of the Human Immunodeficiency Virus (HIV) through dental treatment [9]. In the 1990s, Korea began systematic infection control activities in earnest. Since then, the Korean Dental Association has published a guideline titled "Infectious Practice Recommended for Dentistry" in 1993 to prepare overall clinical guidelines for infection control [10]. The study said that an accurate understanding and compliance with medical-related infection management guidelines is absolutely necessary, and through this, the incidence of infection in the hospital can be reduced by 1 out of 3 minutes [11]. Standard includes hand hygiene, personal protective gear, respiratory etiquette, patient placement, patient care instruments and supplies, environmental management, cleanliness, safe injection, infection control, staff safety, and applicable regulations to protect outsiders and other patients from visiting medical institutions prior to diagnosis of infectious disease [12,13]. Dental workers, who have the most contact outside the patient among dental workers, can reduce the risk of infection by performing appropriate infection control, but on the contrary, it can be a channel for spreading infection. Therefore, it should play an important role in the prevention and management of medical-related infections for dental workers themselves as well as patients and guardians [14]. The infection prevention environment is a concept that includes all facilities, equipment, and administrative support for medical workers to protect themselves from infection during treatment and examination [15] patient care. Operating systems, education, environmental management, and facilities for infection prevention and management at the medical institution level are emphasized as essential conditions [16]. Research is needed to increase the performance of standard by confirming the effect of the infection prevention environment,

which is a basic condition for preventing such infection, on the performance of standard. Looking at previous studies related to standard the recognition of standard and the environment for infection prevention were identified as factors influencing standard performance [17]. In previous studies examining the relationship between standard and patient safety culture, moral sensitivity and standard were found to have a positive correlation with standard performance [18]. This study identifies differences in Grit, infection prevention environment, and standard performance according to the general characteristics of the study subjects. Therefore, we would like to analyze the dental hygienist grit, infection prevention environment, and standard performance of dental hygienists, and provide basic data on strategy construction to increase the standard performance of dental hygienists.

Materials and Methods

From March 1 to March 30, 2023, a study was conducted on 120 dental workers working at 10 dental clinics in Gwangju Metropolitan City. The number of students participating in the study was calculated as 120 students with a G. power 3.1 program with an effect size of 0.3, a significant level of 0.05 and a power of 0.95. Participants understood the purpose of the study and agreed to participate in the study, and a survey was conducted in a self-written manner. This study was conducted with the consent of IRB (NO 1041223-201912-HR-18) at Honam University's Bio-Science Ethics Committee. The questionnaire was measured on a Likert 5-point scale, and 5 points were given to the Likert 5-point scale "Very Yes" and 1 point to "Very Not" which means that the higher the score, the higher the degree of practice.

Research Tool

Grit

Grit refers to self-awareness and self-regulation that constantly strive and motivate to achieve goals with patience, effort, and passion for achieving long-term goals. In this study, the items of the Original Grit Scale (Grit-O) developed by Duckworth et al. [5] were modified and supplemented [19]. It was measured on a Likert 5-point scale, and Cronbach's alpha was 0.74 with a total of 5 questions.

Infection prevention environment and standard practice

The infection prevention environment refers to administrative support that can induce facilities, equipment, and defense activities related to infection exposure. In this study, it refers to the score measured using a tool that modified and supplemented the tool developed [20]. It was measured on a Likert 5-point scale, with a total of 4 terms, Cronbach's alpha was 0.74. Standard performance refers to the degree to which standard guidelines are performed as recommend. In this study, the CDC's 2007 revised Standard Guidelines Siegel et al. [12] It refers to the score measured using the modified standard attention performance measurement tool [12]. It was measured on a Likert 5-point scale, and Cronbach's alpha was 0.929 with a total of 3 terms.

Analysis method

The collected data are SPSS (version 21.0, SPSS Inc, Chicago, IL, USA) It was analyzed using a statistical analysis program. Frequency analysis and mean and standard deviation were conducted, and t-test of marriage and grit, infection work enthusiastic, blood and body soap washing were conducted over the years, cross-analysis of all employees' infection exposure interest and compliance with protective equipment, cross-analysis of all employees' infection exposure before and after hand washing treatment, and preventive age. Regression analysis of hand washing in case of marriage, blood, and body fluid infection, and hand washing in case of isolation and desorption is significant. It was analyzed in 05.

Result

(Table 1), In general, age 120 people, 1 is in their 20s, 2 is in their 30s, 3 is in their 40s, 4 is in their 50s, 5 is in their 60s, average and standard deviation 1.783 (.945), gender 120 is a woman, 2 is a man, married 120 is a yes, 2 is an average and standard deviation of 1 to 5 years, and 1 to 5 years and 1 to 5 years is a standard deviation is 1 to 4 years and 1 to 5 years. Whether or not marriage and grit are achieved over the years, infection control enthusiastic, blood and fluid soap washing independent samples t-test over the years, target achievement and marriage 'yes' are 40 people, average and

standard deviation is 2.775 (1.250), marriage 'no' is 80 people, average and standard deviation is 2.275(1.158). The t statistics on whether there is a difference in goal achievement, infection control work enthusiastic, blood, and body soap washing over the years were 2.171, and the significance probability was .032, indicating a significant difference over the years depending on whether or not marriage was achieved. The t-statistic value of the infection control task enthusiastic is 2.237, and the significance probability is .027, which is significant according to the presence or absence of marriage at the significance level of 0.05. The t-statistic value of recessive blood fluid soap washing is 2.726 and significance probability.007, and the blood fluid soap washing doctor is significantly shown according to the presence or absence of marriage at the significance level 0.05 (Table 2). In the cross-analysis of all employees' interest in infection exposure and compliance with protective gear, "not at all" 18 people and 85.7%, "no" 16 people and 80.0%, and "be average" 15 people, 78.9%, "That's right" 12 people, 46.2%, and "It's quite so" 20 people and 58.8%. As a result of x² test to find out a significant difference in the cross-analysis of exposure interest and compliance with protective gear, the significance level was 194.7 as a significance probability of .000. In 05. It can be said that there is a significant difference between the interest in exposure to infections of all employees and the compliance with wearing protective equipment (Table 3).

Table 1: General information----- (n=120).

Technical Statistics					
	N	Minimum	Maximum	Mean	Sd
Age	120	1.00	5.00	1.783	0.945
Gender	120	1.00	2.00	1.125	0.332
Marriage status	120	1.00	2.00	1.666	0.473
Work experience	120	1.00	5.00	2.491	1.216
Infection control education	120	1.00	2.00	1.125	.332
Valid N (by list)	120				

Table 2: Whether or not to marry and to achieve goals over many years, enthusiastic, blood, and body fluid soap washing t -test----- (n=120).

Collective Statistics						
	Marriage Status	N	Mean	Sd	t	p
Grit Achieved Target Over the Years Yes	yes	40	2.775	1.25	2.171	.032
	no	80	2.275	1.158		
Grit Infection Control Work Grit Passionate	yes	40	3.675	1.227	2.237	.027
	no	80	3.075	1.456		
Blood Fluid Soap Washing Yes	yes	40	3.8	1.505	2.726	.007

Table 3: Cross-analysis of interest in exposure to infections of all employees and compliance with wearing protective gear----(n=120)x2=194.7 (df=16, p=.000).

Cross Analysis								
			Comply with Protective Equipment					Total
			Not At All	No	Be Average	That's Right	It's Quite So	
All employees are interested in exposure to infection.	Not at all	Frequency	18	1	0	2	3	24
		Comply with protective equipment%	85.7%	5.0%	0.0%	7.7%	8.8%	20.0%
	No	Frequency	0	16	1	4	2	23
		Comply with protective equipment%	0.0%	80.0%	5.3%	15.4%	5.9%	19.2%
	Be average	Frequency	0	2	15	4	1	22
		Comply with protective equipment%	0.0%	10.0%	78.9%	15.4%	2.9%	18.3%
	That's right	Frequency	2	0	0	12	8	22
		Comply with protective equipment%	9.5%	0.0%	0.0%	46.2%	23.5%	18.3%
	It's quite so	Frequency	1	1	3	4	20	29
		Comply with protective equipment%	4.8%	5.0%	15.8%	15.4%	58.8%	24.2%
	Total	Frequency	21	20	19	26	34	120
		Comply with protective equipment%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

In the cross-analysis of all employees' exposure to infection and hand washing before and after treatment, "not at all" was the most common with 18 and 94.7%, and "no" 17 and 100.0%, and "be average" 14 and 93.4%, "That's right" 14 and 56.0%, and "It's quite so" 25 and 56.8%. As a result of χ^2 test to find out a significant difference in hand washing cross-analysis before and after treatment, χ^2 statistical value 246.886, Significance level as .000 significance probability. It can be said that there is a significant difference between all employees' interest in exposure to infection and hand washing before and after treatment (Table 4). All employees' interest in exposure to infection * In the cross-analysis of hand washing during isolation, 'not at all' 19 people and 90.5%, 'no' 17 people and 73.9%, 'be average' 14 people, 77.8%, 'That's right' 12 people, 57.1%, and 'It's quite so' 19, 51.4%. All employees are interested in exposure to infection * To find out a significant difference in cross-analysis of hand washing during isolation, χ^2 test result χ^2 statistical value 246.886, significance probability .000, significance level. Interest in exposing all employees' infections in 05 * There is a significant difference in hand washing when quarantine is easy to detach (Table 5). In the correlation analysis of age, infection prevention environment, and standard practice,

work experience and age.313, grit diligence and all employees' infection exposure.475, protective equipment compliance and infection protocol preparation.410 infection protocol preparation and hand washing before and after hand washing treatment. 449, infection protocol preparation and isolation.422, significant at the significance level .001. But the correlation was low. All employees are exposed to infection and comply with protective equipment.660, before and after all employees' infection exposure and hand washing treatment.749, all employees' interest in infection exposure and easy isolation of hand washing.643, Compliance with wearing protective equipment, Detachable hand washing.768, Before and after hand washing treatment, Detachable hand washing.844, and a significant high correlation was found at the significance level of .001 (Table 6). In the regression analysis of hand washing in case of marriage, blood and body fluid infection, and hand washing in case of isolation and desorption, the F statistics for hand washing in case of blood and body fluid infection are 9.832, which is a significant level. It is significantly described in 05 (t=-4.400, p=.000), the total change amount is 14% (13% according to the modification coefficient) described (Table 7).

Table 4: Cross-analysis of interest in all employees’ infection exposure and before and after hand washing treatment---(n=120)x2=246.886 (df=16, p=.000).

Cross Analysis								
			Hand Wash Before and After Consultation					Total
			Not At All	No	Be Average	That’s Right	It’s Quite So	
All Employees Are Interested in Exposure to Infection.	Not At All	Frequency	18	0	1	1	4	24
		Comply With Protective Equipment%	94.7%	0.0%	6.7%	4.0%	9.1%	20.0%
	No	Frequency	0	17	0	3	3	23
		Comply With Protective Equipment%	0.0%	100.0%	0.0%	12.0%	6.8%	19.2%
	Be Average	Frequency	1	0	14	3	4	22
		Comply With Protective Equipment%	5.3%	0.0%	93.3%	12.0%	9.1%	18.3%
	That’s Right	Frequency	0	0	0	14	8	22
		Comply With Protective Equipment%	0.0%	0.0%	0.0%	56.0%	18.2%	18.3%
	It’s Quite So	Frequency	0	0	0	4	25	29
		Comply With Protective Equipment%	0.0%	0.0%	0.0%	16.0%	56.8%	24.2%
	Total	Frequency	19	17	15	25	44	120
		Comply With Protective Equipment%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 5: Interest in exposure to all employees’ infections * Cross-analysis of hand washing during isolation and detachment----(n=120)x2=192.879 (df=16, p=.000).

Cross Analysis								
			Hand Wash When Detachable from Isolation Gown					Total
			Not At All	No	Be Average	That’s Right	It’s Quite So	
All Employees Are Interested in Exposure to Infection	Not At All	Frequency	19	1	0	0	4	24
		Comply With Protective Equipment%	90.50025%		0.0%	0.0%	10.8%	20.0%
	No	Frequency	0	17	1	2	3	23
		Comply With Protective Equipment%	0.0%	73.9%	5.6%	9.5%	8.1%	19.2%
	Be Average	Frequency	1	0	14	2	5	22
		Comply With Protective Equipment%	4.8%	0.0%	77.8%	9.5%	13.5%	18.3%
	That’s Right	Frequency	1	2	1	12	6	22
		Comply With Protective Equipment%	4.8%	8.7%	5.6%	57.1%	16.2%	18.3%
	It’s Quite So	Frequency	0	3	2	5	19	29
		Comply With Protective Equipment%	0.0%	13.0%	11.1%	23.8%	51.4%	24.2%

Total	Frequency	21	23	18	21	37	120
	Comply With Protective Equipment%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6: Correlation analysis of age, infection prevention environment, and standard practice----- (n=120).

Correlation								
	Age	Work experience	Grit diligent	All employees are interested in infectious diseases	Preparing for infection protocols	Wearing protective equipment	Compliance with hand washing Before and after treatment	Isolated easy Detachable hand washing
Age	1							
Work experience	.313**	1						
Grit diligent			1					
All employees are interested in infectious diseases			.252**	1				
Preparing for infection protocols				.475**	1			
Wearing protective equipment				.660**	.410**	1		
Compliance with hand washing Before and after treatment				.749**	.449**	.782**	1	
Isolated easy Detachable hand washing				.643**	.422**	.768**	.844**	1

**Correlation is significant at 0.01 level (both sides)

Table 7: Hand washing in case of marriage, blood, or body fluid infection, and hand washing in case of isolation Regression--- (n=120) R2 (adj, R2) = .144 (.129), F=9.832.

Coefficient ^A						
Model	Non-Standardized Coefficient		Standardized Coefficient	T	P	
	B	Standardization Error	Beta			
1	(Constant)	1.790	.104	17.205	0	
	Hand Wash in Case of Blood Fluid Infection	-0.161	.037	-4.4	0	
	Detachable Hand Wash	0.125	.037	0.397	3.401	0.001

A. Dependent Variable: Marital Status

Discussion

This study was conducted to improve infection control and technical skills of dental hygienists by identifying hospital nurses' grit, patient safety culture, infection prevention environment, and standard stocks. According to previous studies, the dental hygienist grit said that it is difficult to maintain interest in having one goal, making consistent efforts, being interested in the same goal, and being interested in it consistently [21]. In addition, in the previous study of grit, the grit practice was lower than the average in the studies conducted on nurses at university hospitals in Korea, and the grit practice was higher than the average in the studies conducted on nurses in the United States [22]. In this study, marital status and grit achieve infection control standards over several years, are

enthusiastic in handling infection tasks, and marriage "yes" is 40 people, average and standard deviation is 2.775 (1.250), marriage "no" is 80 people, and average and standard deviation is 2.275 (1.158). The t-statistics of whether there is a difference in soap washing in case of infection control criteria achievement, infection control task processing enthusiastic, blood, and body infection over the years were 2.171, and the significance probability was .032, indicating a significant difference over the years at the significance level of 0.05. The statistics of "enthusiastic in infection control work" are 2.237, and the probability of significance is .027, which is significant according to the presence or absence of marriage at the significance level of 0.05. The t-statistic value of "Enthusiastic Blood Body Soap Washing" is 2.726 and the significance probability

is .007, and blood body soap washing is significant depending on the presence or absence of marriage at the significance level of 0.05. In other words, unmarried people achieve infection control standards over the years and are enthusiastic about handling infection tasks, and in the independent sample t-test of washing with soap in case of infection of blood and body fluids, Table 2. showed higher achievement of infection control standards. Patient safety culture recognition and standard performance were found to have a positive correlation, and a study on the relationship between patient safety climate and standard compliance for hospital nurses [23] also found that the higher the standard compliance, the more positive the patient safety response. In this study, 'not at all' was the most common with 18 and 85.7% in the cross-analysis of all employees' interest in infection and compliance with protective gear, and 'no' 16 and 80.0%, and 'be average' 15 and 78.9%, 'That's right' 12 and 46.2%, and 'It's quite so' 20 and 58.8%. As a result of χ^2 test to find out a significant difference in the cross-analysis of all employees' interest in infection exposure and compliance with protective gear, the significance level was 194.7 as a significance probability of .000. It can be said that there is a significant difference between the interest in exposure to infections of all employees and the compliance with wearing protective equipment in 05. In other words, although they are interested in infection control education, the actual compliance with protective equipment was low (Table 3). The evaluation of patient safety culture showed a higher pattern with certification experience, so it is important for medical institutions to feel the importance of patient safety culture by motivating medical workers, sharing values, utilizing internal hospital resources, and establishing a cooperative system with external institutions [24]. In this study, 'not at all' was the most common with 18 and 94.7% in cross-analysis before and after all infection exposure and hand washing treatment, and 'no' 17 and 100.0%, and 'be average' 14 and 93.4%, 'That's right' 14, 56.0%, and 'It's quite so' 258%. As a result of χ^2 test to find out a significant difference in the cross-analysis before and after all-invasive interest and hand washing treatment, χ^2 statistical value 246.886, significance probability.000, significance level. In 05. It can be said that there is a significant difference between the interest in exposure to all infections and before and after hand washing treatment (Table 4). It was followed by "not at all" 19 people and 90.5% in the cross-analysis of quarantine-free handwashing, followed by "no" 17 people and 73.9%, and "be average" 14 people, 77.8%, "That's right" 12 people, 57.1%, and "It's quite so" 19 people, 51%. Interest in exposure to all employees * As a result of χ^2 test to find out a significant difference in the cross-analysis of detachable hand washing, χ^2 statistical value 246.886, significance probability.000, significance level. Interest in exposure to infection for all employees in 05 * There is a significant difference in detachable hand washing that is quarantined (Table 5) Since 2010, medical institutions have become mandatory to provide protective equipment as part of infection control in medical institution evaluation, and overall infection prevention facilities have become essential conditions, but there is a problem with accessibility in the actual field. In a previous study conducted on nurses in general hospitals [25], the implementation of standard guidelines was found to have

a significant correlation with standard awareness and safety environment and to be an influencing factor. In this study, in the correlation analysis of age, infection prevention environment, and standard practice, working experience and age.313, grit diligence and exposure to all employees' infections.475, Compliance with wearing protective equipment and preparation of infection control protocol. 410 Preparation of infection protocol and hand washing before and after treatment.449, Prepare infection control protocol and wash detachable hands that are easy to isolate.422, significant at the significance level .001. But the correlation was low. All employees' infection exposure and compliance with protective equipment.660, all employees' infection exposure and hand washing before and after treatment.749, all employees' infection exposure interest and isolation are easy to wash hands.643, Compliance with wearing protective equipment, easy isolation hand washing.768, before and after hand washing treatment, and easy isolation hand washing.844, and a significant high correlation was found at the significance level of .001 (Table 6). Increasing standard performance in this study requires an improvement in knowledge of factors that may affect standard performance in dental hygienists [26]. In addition, the level of knowledge is closely related to the activities of the infection control department and the guidelines for infection control [27]. In this study, in the regression analysis of hand washing in case of marriage, blood and body fluid infection, and hand washing in case of isolation and desorption, the F statistics for hand washing in case of blood and body fluid infection were 9.832, which is a significant level. It is significantly described in 05 ($t=-4.400, p=$).000), the total change amount is 14% (13% according to the modification coefficient) described (Table 7). It is also important to have knowledge of standard compliance in the clinical field, but practice-oriented training and appropriate feedback are also required [28]. In this study, the limitations are that the infection control department needs practical education and appropriate feedback education based on infection control guidelines to raise awareness of standard, and it is necessary to test its effectiveness. In addition, this study confirmed the performance of standard as a self-evaluation questionnaire. Therefore, it is considered necessary to conduct research using direct observation methods by trained observers in the future and compare the results.

Conclusion

From March 1 to March 30, 2023, a study was conducted on 120 dental workers working at dental clinics in Gwangju Metropolitan City. Participation in the study is G. power 3.1 program, 120 people were calculated with an effect size of 0.3, a significance level of 0.05, and a power of 0.95. Participants understood the purpose of the study and agreed to participate in the study, and a survey was conducted in a self-fill manner. Frequency analysis and mean and standard deviation were performed, and the t-test of marriage and grit, infection processing enthusiastic, blood, and body soap washing was conducted over the years, cross-analysis of all employees' infection exposure and compliance with protective equipment, cross-analysis of all employees' infection exposure before and hand washing. Regression analysis of hand washing in case of marriage, blood, and body fluid infection, and hand washing

in case of isolation and desorption is significant. It was analyzed in 05.

a. In general, 120 people of age, average and standard deviation 1.783 (.945), average and standard deviation 1.125 (.332), 120 people of marriage, average and standard deviation 1.666 (1.473), 120 people of work experience, average and standard deviation 1.491 (1.216), and 120 people of infection control education and standard deviation 1.125 (1.332).

b. In the independent sample, infection control and hand washing are significant depending on the presence or absence of marriage in the Grit classification.

c. It can be said that there is a significant difference between the interest in exposure to infections of all employees and the compliance with wearing protective equipment (Table 3).

d. In the analysis before and after all employee infection exposure and hand washing treatment as a result of conducting the x2 test, there is a significant difference between the interest in exposure to all infections and the interest before and after hand washing treatment.

e. Interest in all-employee exposure * Shows significant differences in cross-analysis of detachable handwashing.

f. All employees' infection exposure and compliance with protective equipment.660, all employees' infection exposure and hand washing before and after treatment.749, all employees' infection exposure interest and isolation are easy to wash hands.643, Compliance with wearing protective equipment, Detachable hand washing.768, Before and after hand washing treatment, Detachable hand washing.844, and a significant and high correlation was found at the significance level of .001.

g. In the regression analysis of hand washing in case of marriage, blood and body infection, and hand washing in case of isolation and desorption, the F statistics for hand washing in case of blood and body infection are 9.832, which is a significant probability of .000. It is significantly described in 05 ($t=-4.400$, $p=.000$), the total change amount is 14% (13% according to the modification coefficient) described (Table 7).

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