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Infection Control and Oral Management of the Elderly at Home while Performing Visiting Nursing by Dental Hygienists

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Abstract

Objective: This study analyzes infection control and oral management of the elderly at home while performing visiting nursing by dental hygienists. By seeking ways to improve infection control and oral care for the elderly at home, it is intended to be used as basic data for visiting oral care for dental hygienists in the future and to increase the efficiency of the work of visiting oral dental hygienists.

Methods: This study conducted a survey on dental hygienist's performance of visiting oral care for the elderly at home111 dental hygienists working at Y Dental Clinic, I Dental Clinic, and S Dental Hospital H Dental Clinic in Gyeonggi Province from May 1 to June 30, 2022. Participants in the survey agreed to understand the purpose of the study and participate in the study, and conducted the survey in a self-written manner. When 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 111. 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. The data collected in this study were analyzed using the SPSS 21.0 program. In order to understand the general characteristics of dental hygienists, gender, age, daily nursing patient number, infection control education experience, infection control knowledge awareness, recognition of dental hygienist transmission media, importance of infection control, frequency, percentage, and average standard deviation were calculated. In the correlation analysis of the dental hygienist's performance of visiting oral care for the elderly at home, the two-sided test was conducted at 0.01 level for the elderly at home, chlorhexidine disinfection for the elderly at home, and treatment of consumables for the elderly at home. The regression analysis of the number of nursing patients per day and the recognition of infectious diseases of nursing dental hygienists for the elderly at home was analyzed at the significance level of .05. Cross-analysis was conducted on the age of home-aged patients * age of home-aged people and the simple regression analysis was analyzed at the significance level of .05 for dental hygienists, wearing home-aged nursing personal protective equipment, food for home-aged people, whole-body diseases, home-aged people.

Conclusion: In the regression analysis of the number of nursing patients per day and the prevalence of nursing hygienists in home care, the F statistic was .985, and the probability of significance was .000. The number of nursing patients per day was significantly explained at the significance level of .05 (t=16.634, p=.000), and the total change in nursing patients per day was 83% (74% according to the correction factor).F = 30.260, in simple regression analysis of infection control education and home-based nursing care personal protective equipment, home-based dental disease, home-based dental plaque removal experience for home-based patients, home-based dental plaque removal experience (t=.346, p=).000) Written by the Elderly at Home (t= -5.745, p=.000), systemic disease of the elderly at home (t=3.975p=).000), wearing personal protective gear for human protection (t=.632p=).The significance probability of 000) is .000, which is significantly explained at the significance level of .05, and 63% of the total change (according to the correction coefficient) is explained. The probability of infection control education for dental hygienists, wearing personal protective equipment for nursing for the elderly at home, author able food for the elderly at home, systemic diseases for the elderly at home, sterilization management of the elderly at home, and work for the elderly at .05.

Discussion: The dental hygienist's experience in infection control education was 0.9 percent for one person at a time, 14.4 percent for two times, 27.0 percent for three times, 24.3 percent for four times, and 33.3 percent for five times for 37 people. In terms of infection management knowledge, 0.9 percent of those who are "very not" are "very not", 15.3 percent of those who are "not", 27.0 percent of those who are "normal", 27 people who are "yes" and 24.3 percent of 36 people who are "very yes, 32.4 percent. In the medium of transmission of dental hygienists among nursing elderly people in home care, 2 are 1.8%, 16 are not, 13.5%, 30 are "normal", 27.0%, 27 are "yes", 24.3% are "very so" 36.4% are "very so". The importance of infection control for the elderly at home is 13.5% for 15 people who are "not", 27.0% for 30 people who are "normal", and 24.3% for 27 people who are "yes" and 35.1% for 39 people who are "very so". The degree of knowledge of infection control for the elderly at home is 12.6% of 14 people who are "not", 25.2% of 28 people who are "normal", 26.1% of 29 people who are "yes", and 36.0% of 40 people who are "very so". Infection control education of dental hygienists, wearing personal protective equipment for nursing at home, authorable food for at- home elderly patients, whole-body disease of at-home elderly patients, disinfection management of at-home environment, and simple regression analysis of at-home work (t = 4.346, p =000) Written by the Elderly at Home t= -5.745, p=.000), systemic disease of the elderly at home (t=3.975p=).000), wearing personal protective gear for human protection (t=.632p=).000) has a significance probability of .000, which is significantly explained at a significance level of .05 and is explained as 63% of the total change (correction coefficient) (61%).

Keywords: Visiting nursing; Elderly; Dental care; Scaling; Infection control; Infectious disease; Disinfection

Introduction

In South Korea, long-term care insurance for the elderly has been implemented since July 2008 due to the changing nuclear family-oriented family type, accelerated aging of the elderly, and expanded women's social advancement. It refers to long-term home care benefits in which nurses and dental hygienists provide medical assistance, counseling on nursing care, and oral hygiene under the direction of doctors, oriental doctors, and dentists [1]. The role of visiting nurses at health centers in changing disease patterns due to the improvement of income levels and the development of medical technology is increasing in demand to provide high-quality services in various ways [2]. The purpose of infection management in visiting oral care is to prevent and protect medical-related infections from people exposed to the hospital environment, such as patients, medical institution workers, guardians, and visitors [3]. The standard revised in 2007 has seven areas, including hand hygiene, personal protection equipment, patient placement, treatment equipment and supplies, environmental management, linen management, and employee safety, with respiratory etiquette and safe injection behavior infection control [4]. Standards are the most effective way to prevent tooth-related infections between patients and medical personnel [5], studies on standard performance have been conducted on hospital workers, and it has been confirmed that repeated training programs are needed for standards and activation [6]. In addition, effective 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 critical [7,8]. Factors affecting oral health of the elderly were said to be related to whether dentures are installed, the condition of chewing, the symptoms of self-awareness in the oral cavity, and the social relationship with the subjective oral health status. In addition, it was reported that the evaluation criteria for the health status of the elderly were more important to the subjective health perception felt by each elderly person than the objective health status [9,10]. The elderly need visiting oral care even if they are nutritious due to their nasogastric tubes or landscapes. If you can't write with your mouth, saliva secretion is reduced, making the mucous membrane vulnerable to inflammation, dry mouth, and bacteria in the mouth can cause aspiration pneumonia, promote saliva secretion with oral care, and adults with brain diseases can help activate the brain. Items that require oral care include toothbrushes, toothpaste, water cups, granules, tongue presses, lukewarm water, gargles, mobile inhalers, and suction tips. Oral care agent gargle solutions include Betadine solution, Tantum gargle solution, hydrogen peroxide water, saline solution, chlorhexidine, etc., which destroys bacteria, but it is difficult to regenerate epidermal cells and granulated tissues, and hydrogen peroxide is effective in removing residue but may cause superficial burns [11,12]. Physiological saline is safe, aids in formation of granulomatous tissue and promotes healing Chlorhexidine has been reported as an effective formulation for dental plaque and gingivitis in a number of clinical trials since its development in 1953[13]. Although it was said to be effective for aerobic bacteria, studies verifying the effect of oral nursing on hospital infection in visiting oral nursing are insufficient. Currently, the visiting oral health project for the vulnerable or the elderly in the blind spot of medical support does not provide a wide range of services to the subjects compared to its necessity, and dental hygienists are not actively engaged in preventive projects in an independent form [12-16]. Therefore, by expanding the recruitment of dental hygienists, who are specialized in oral health prevention, systematic and effective oral health education and oral disease prevention measures should be implemented to reduce medical expenses and to have a positive impact on the lives of the elderly. This study attempted to improve the

efficiency of dental hygienists' visiting oral care work by identifying the experience of visiting nursing services in the Korean community as follows and using them as basic data for finding effective dental hygienists' infection control. To achieve the purpose of the study, the study is conducted as follows. Check the general characteristics of dental hygienists, importance of infection control, education, knowledge, and transmission media during visiting oral nursing, and correlation analysis of dental hygienists' home visiting oral nursing performance for the number of nursing patients per day, and dental care. Disinfection of equipment, consumable treatment, investigation of infectious diseases, and identification of transmission media are checked. Next, we would like to find out the relationship between the number of nursing patients per day and the infectious disease of the elderly at home, the natural age of the elderly at home, infection control education of the elderly at home, wearing personal protective equipment, food for the elderly at home.

Materials and Methods

This study conducted a survey on 111 dental hygienists working at Y Dental Clinic, I Dental Clinic, and S Dental Hospital H Dental Clinic in Gyeonggi Province from May 1 to June 30, 2022. Participants in the survey agreed to understand the purpose of the study and participate in the study, and conducted the survey in a self-written manner. This study was conducted with the consent of IRB (NO1041223-HR-04) at Honam University's BioScience Ethics Committee. When 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 111. 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.

Research Tool

Infection Control Education Experience of Dental Hygienists and Oral Nursing the dental hygienist's infection control education experience questionnaire was measured using a tool developed by Askarian [17]. The dental hygienist's experience in infection control education consisted of three questions. The question score is based on a 5-point Likert scale of 1 point from "not very" to "very much", and a high score means that the dental hygienist has a high experience in infection control education. In this study, the reliability Cronbach's alpha was .834. Oral nursing is a nursing performed by a nurse or dental hygienist to keep the oral cavity clean in patients who cannot brush their teeth on their own. It means disinfecting the oral cavity twice a day using 0.1% chlorhexidine and physiological saline solution [18].

Importance of infection control in visiting nursing and oral care for the elderly at home the importance of visiting nursing infection control and oral management questionnaire for the elderly at home were used tools developed by Byun & others. It consisted of 6 questions on the importance of visiting nursing infection control and oral care for the elderly at home. The question score is based on a 5-point Likert scale of 1 point from "not very" to "very much", and a high score means that the dental hygienist has a high experience in infection control education. In this study, the reliability Cronbach's alpha was .923 [19-21].

Infection Control and Oral Conditions of the Elderly in Home The infection control and oral condition questionnaire of the elderly in-home was measured with a tool developed by Sarella and others. The infection control and oral condition of the elderly at home is nine questions, and the score is on the 5-point Likert scale of "very much not" to "very much so", and a high score means that the dental hygienist has a high experience in infection control education. In this study, the reliability Cronbach's alpha was .777 [22,23].

Analysis Method

The data collected in this study were analyzed using the SPSS 21.0 program. In order to understand the general characteristics of dental hygienists, gender, age, daily nursing patient number, infection control education experience, infection control knowledge awareness, recognition of dental hygienist transmission media, importance of infection control, frequency, percentage, and average standard deviation were calculated. In the correlation analysis, the number and gender of nursing patients per day were related to the elderly's dental care, the elderly's chlorohexidine disinfection, the elderly's chlorohexidine disinfection, the elderly's consumption, and the elderly's medical care. The regression analysis of the number of nursing patients per day and the recognition of infectious diseases of nursing dental hygienists for the elderly at home was analyzed at the significance level of .05. The cross-analysis of the age of home-based elderly patients and the experience of removing tartar from home-based elderly was conducted Infection control education for dental hygienists, wearing personal protective equipment for nursing for the elderly, food that can be authored by the elderly, systemic diseases of the elderly, experience of removing plaque for the elderly, disinfection management of the home environment for the elderly, and simple regression analysis were analyzed at level.05. In general terms of dental hygienists, 86 females, 77.5% males, 25.5% males, 36.9% aged 24 years, 32.8% aged 25 years, 17.1% aged 30 years, 13.7% aged 35 years, and 5.4% aged 40 years. The number of nursing patients per day was 3.6%; the number of nursing patients per day was 44.8%; the number of nursing patients per day was 45.0%; the number of nursing patients per day was 8.2%; the number of nursing patients

per day was 2.7%; the number of nursing patients per day was 2.8%. Dental hygienists with one infection control education experience of dental hygienists were 0.9%, 16 patients 14.4% twice, 27.0% for 30 patients for the third time, 24.3% for 27 patients for the fourth time, and 33.3% for the fifth time. In terms of infection control knowledge, 0.9 percent said "very much not," 15.3 percent said "not," 27.0 percent said "normal," 27 said "yes," 24.3 percent said, and 32.4 percent said "very much." Among the elderly in-home nursing, 1.8 percent of those who are "very not" are "very not" and 13.5 percent of those who are "not" and 27.0 percent of those who are "normal" and 27.3 percent of those who are "very much" and 32.4 percent. The importance of infection control for the elderly at home is 13.5% for 15 people who are "not", 27.0% for 30 people who are "normal", and 24.3% for 27 people who are "yes" and 35.1% for 39 people who are "very so". The importance of infection management knowledge for the elderly at home is 12.6% for 14 people who are "not", 25.2% for 28 people who are "normal", 26.1% for 29 people who are "yes", and 36.0% for 40 people who are "very so" (Table 1). The number and gender of nursing patients per day are .259**, denture management for the elderly at home and .216** for the gender, chlorhexidine disinfection for the elderly at home and denture management for the elderly at home.551**, disinfection of chlorhexidine for the elderly at home and disinfection of supplies for the nursing equipment for the elderly at home.739**, disinfection of chlorhexidine for the elderly at home and handling consumables for the elderly at home.606**, the investigation of chlorhexidine disinfection in the elderly and infectious diseases in the elderly in the home.806**, the recognition of chlorhexidine disinfection in the elderly in the home and the transmission medium of nursing dental hygienists in the elderly in the home.625**, home-aged denture management and home-aged nursing equipment disinfection.547**, home-aged denture management and consumables treatment.580**, home-aged denture management and home-aged infectious diseases survey.668**, home-aged denture management and home-aged care dental hygienists.790**, Disinfection of supplies and handling of consumables for the elderly at home.764**, Disinfection of supplies and investigation of infectious diseases for the elderly at home.708**, Disinfection of supplies for the elderly at home.448**, Handling of consumables for the elderly at home and investigating infectious diseases for the elderly at home.534**, the medium of handling consumables for the elderly at home and transmission of nursing dental hygienists for the elderly at home.417**, Investigation of infectious diseases in the elderly at home and transmission of nursing dental hygienists in the elderly at home.It shows a correlation of 630** (Table 2). R2(adj, R2) = .83(.74), F=.985 (Table 3). In the regression analysis of the number of nursing patients per day and the at-home nursing dental hygienist epidemic, the F statistic is .985, the significance is .000. The number of nursing patients per day is significantly explained at the significance level of .05 (t=16.634, p=.000), and the total change in the number of nursing patients per day is 83% (74%). x^2 = 27.186a (df = 16, p = .039) Age of home-based elderly patients * Experience in removing tartar from home-based elderly patients In the cross-analysis, five people were "yes" and "very yes" over the age of 50, 4.5% For those 55-64 years old, six people are "normal," "yes," and "very, very, very, very, At 65-74, four people were 12.1%, and nine people were 8.1% "normal," "yes," and "very." 75-84 years old, 37.5% of those who are "very not," 60.6% of those who are "not," and 64 57.7% of those who are "very not." For those over 85 years of age, "normal," "yes," and "very yes" represent 55.0% of 13 people. As a result of cross-analysis to find out whether there is a significant difference in the age of home-based elderly patients * The probability of significance x^2 = 27.186a was .039, showing a significant difference at the significance level of .05 (Tables 4,5). Infection control education of dental hygienists, wearing personal protective equipment for nursing at home, authorable food for the elderly at home, whole-body disease of the elderly at home, experience of removing plaque from the elderly at home, and simple regression analysis of the copyright of the elderly at home (n=111) R2 (adj, R2) = .635(.614), F = 30.260 Infection control education of dental hygienists, wearing home care personal protective equipment, home workable food, whole-body disease of home care patients, home care for dental plaque removal, home environmental disinfection management, homework simple regression analysis F = 30.260, home care removal experience (t=4.346, p=).000) Written by the Elderly at Home (t= -5.745, p=.000), systemic disease of the elderly at home (t=3.975p=).000), wearing personal protective gear for home care elderly (t=.632p=).The significance probability of 000) is .000, which is significantly explained at the significance level of .05, and 63% of the total change (according to the correction coefficient) (Table 5).

Conclusion

Due to the improvement of the standard of national living and the development of medical technology, it is rapidly entering an aging society due to the extension of average life expectancy. Dental caries in the elderly are a disease with higher discomfort in writing compared to periodontal diseases. In the correlation between the need for dentures according to the subjective oral health condition, the need for dentures was high in the elderly who were uncomfortable to chew and talk. It was found that the elderly have a high demand for dentures that can rehabilitate the function of their teeth when they are uncomfortable to chew and speak. Dental care workers should be thoroughly aware of infection prevention and make efforts to control and cope with infection Preventive measures against infectious diseases by

conducting a medical examination and checking the overall health status of all patients visiting the dentist [24]. In addition, each patient must wear personal protective equipment such as hand washing, gloves, masks, and goggles, and proper management such as disinfection, sterilization, and extraction is required [25,26].

Table 1: *General Characteristics of Dental Hygienists Performing Visiting Oral Nursing - (n-=111).*

item	subitem	Frequency	Percentage	Mean	SD
	Woman	86	77.5		
gender	Man	25	22.5	1.225	0.419
	24	41	36.9		
	25	32	28.8		
	30	19	17.1		
	35	13	11.7		
age	40	6	40세 6명	27.468	4.757
	3	4	3.6		
	5	42	37.8		
	6	50	45		
	7	8	7.2		
	10	2	1.8		
Number of nursing patients per day	15	3	2.7	6.081	2.256
	16	2	1.8		
Infection control	1time	1	0.9	3.747	1.099
education experience	2 time	16	14.4		
	3 time	30	27		
	4 time	27	24.3		
	5 time	37	33.3		
	It is not very much so	1	0.9		
	I don't think so.	17	15.3		
	general	30	27		
Infection control knowledge	That’s right.	27	24.3	3.72	1.105
	Very much so	36	32.4		
	It is not very much so	2	1.8		
	I don't think so.	16	13.5		

Transmission of dental hygienists during home care for the elderly	general	30	27		
	That's right.	27	24.3	3.882	1.076
	Very much so	36	32.4		
	I don't think so.	15	13.5		
Importance of infection control for elderly people living in home	general	30	27		
	That's right.	27	24.3	3.81	1.066
	Very much so	39	35.1		
	I don't think so.	14	12.6		
Knowledge of infection control for elderly people living in home	general	28	25.2		
	That's right.	29	26.1	3.855	1.051
	Very much so	40	36		

Table 2: *Correlation Analysis of Dental Hygienists' Performance of Visiting Oral Nursing for the Elderly at Home (n=111).*

	Gender	**Number of nursing patients per day**	**Disinfection of chlorohexidine in elderly people at home**	**Dental care for elderly people at home**	**Disinfection of nursing equipment for elderly people at home**	**Disposal of consumables for the elderly at home**	**Investigation of Infectious Diseases in the Elderly at Home**	**Pre- wave recognition of home-based nursing dental hygiene**
Gender	1	.259**		.216**				
Number of nursing patients per day	.259**	1						

Disinfection of chlorohex idine in elderly people at home			1	0.551**	.739**	0.606**	.806**	.625**
Dental care for elderly people at home	0.216**		.551**	1	.547**	.580**	.668**	.790**
Disinfection of nursing equipment for elderly people at home			.739**	0.547**	1	.764**	.708**	.448**
Disposal of consumables for the elderly at home			.606**	0.58**	.764**	1	.534**	.417**
Investigation of Infectious Diseases in the Elderly at Home			.806**	0.668**	.708**	.534**	1	.630**
Pre- wave recognition of home-based nursing dental hygiene			.625**	0.79**	.448**	.417**	.630**	1
** Correlation is significant at level 0.01 (both sides)								

In this study, it was also shown as follows. The dental hygienist's experience in infection control education was 0.9 percent for one person at a time, 14.4 percent for two times, 27.0 percent for three times, 24.3 percent for four times, and 33.3 percent for five times for 37 people. In terms of infection management knowledge, 0.9 percent of those who are "very not" are "very not", 15.3 percent of those who are "not", 27.0 percent of those who are "normal", 27 people who are "yes" and 24.3 percent of 36 people who are "very yes, 32.4 percent. In the medium of transmission of dental hygienists among nursing elderly people in home care, 2 are 1.8%, 16 are not, 13.5%, 30 are "normal", 27.0%, 27 are "yes", 24.3% are "very so" 36.4% are "very so". The importance of infection control for the elderly at home is 13.5% for 15 people who are "not", 27.0% for 30 people who are "normal", and 24.3% for 27 people who are "yes" and 35.1% for 39 people who are "very so". In (Table 1), the importance of infection control for the elderly is 12.6% "not" and 25.2% "normal" and 26.1% "very so" and 36.0% "Table 1". In the regression analysis of the number of nursing patients, the F statistic is .985, the probability is 74% and the number of nursing patients per day is significant. In the cross-analysis of home- aged patients and natural age*, 4.5 percent of those aged 50 or older were "yes" and "very" and 6.4 percent were "normal" and "yes" and 6.4 percent were "yes" and 12.1 percent "yes" and 9.8 percent "yes" and "very" and "very" were "very" 37.7 percent and 85.5 percent. As a result of cross-analysis to find out whether there is a significant difference in the experience of removing tartar for the elderly at home, the probability of significance x^2 = 27.186a was .039, showing a significant difference at the significance level of .05 (Table 4). Dental hygienist's infection control education, wearing home care personal protective equipment, home care worker's authorable food, whole-body disease, home care management, home environment disinfection management, and home care worker's work (t = 4.346, p =000) Written by the Elderly at Home (t= -5.745, p=.000), systemic disease of the elderly at home (t=3.975p=).000), wearing personal protective gear for human protection (t=.632p=).The significance probability of 000) is .000, which is explained significantly at the significance level of .05 and 63% of the total change (correction coefficient is explained as 61% <Table 5>. Jung conducted oral care using saline solution and chlorhexidine solution in adult critically ill patients, and 0.12% chlorhexidine solution was used as an oral care agent for pediatric open-heart patients. Although it was not statistically significant in the study examined (Pedreiraet) Staphylococcus aureus was said to have the most significant reduction in chlorhexidine solution [27-29]. In this study, chlorohexidine disinfection and denture management for the elderly at home .551**, Disinfection of chlorohexidine for the aged at home and disinfection of supplies for the aged at home .739**, Disinfection of chlorohexidine for the aged at home and handling consumption for the aged at home .606**, Disinfection of chlorohexidine in the elderly and the investigation of infectious diseases in the elderly

in the home .806**, Recognition of chlorohexidine disinfection for the elderly at home and transmission of nursing dental hygienists for the elderly at home .625**, home-aged denture management and home-aged nursing equipment disinfection .547**, home-aged denture management and consumables treatment .580**, home- aged denture management and home-aged infectious diseases survey .668**, home-aged denture management and home-aged care dental hygienists .790**, Disinfection of supplies of nursing equipment for the elderly at home and disposal of consumables for the elderly at home .764**, Disinfection of nursing equipment for the elderly at home and investigation of infectious diseases for the elderly at home .708**, Disinfection of nursing equipment for the elderly at home and transmission of dental hygienists for the elderly at home .448**, Handling of consumables for the elderly at home and investigating infectious diseases for the elderly at home .534**, the medium of handling consumables for the elderly at home and transmission of nursing dental hygienists for the elderly at home .417**, Investigation of infectious diseases in the elderly at home and transmission of nursing dental hygienists in the elderly at home. It shows a correlation of 630** (Table 2). In visiting oral care, there is more tooth loss in the elderly who do not use oral hygiene supplements due to the use of oral hygiene products, the presence or absence of dental treatment, and the elderly who do not receive dental treatment. However, unlike the recognition of the importance of infection control, it can be seen that the recognition of oral health management methods and efforts for oral hygiene management are low. In terms of visiting oral care infection control, the infection control system and implementation of dental hygienists should be monitored through gender, age, daily nursing care education, importance of infection control for the elderly, wearing personal protective equipment, food for the elderly, dental hygienists.

Table 3: *A Regression Analysis of the Number of Nursing Patients per Day and the Perception of Infectious Diseases of Nursing and Dental Hygienists in Home Care -- (n=111).*

Non-standardization coefficient				**Standardization factor**	t	p
mode	l	B	standardization error	Beta		
1	(constant)	4.718	0.284		16.634	0
	Number of nursing patients per day	-0.137	0.044	-0.288	-3.139	0.002
a. Dependent Variables: Perception of Home Elderly Nursing Dental Hygiene as a Transmission Medium R2 (adj, R2) = .83(.74), F=.985						

Table 4: *Age of Elderly Patients at Home * Cross-analysis of the experience of removing tartar in the elderly at home (n=111).*

Experience of removing tartar in the elderly at home								**Total**
It is not very much so the age of elderly patients at home		**I don't think so**		**general**		**That's right.**		**Very much so**
	50 years	Frequency	0	0	0	4	1	5
	of age or older	Percentage of experience in removing tartar in the elderly at home	0.00%	0.00%	0.00%	20.00%	3.80%	4.50%
	55-64 years	Frequency	0	0	3	1	2	6
		Percentage of experience in removing tartar in the elderly at home	0.00%	0.00%	12.50%	5.00%	7.70%	5.40%
	65-74 years	Frequency	0	4	1	2	2	9
		Percentage of experience in removing tartar in the elderly at home	0.00%	12.10%	4.20%	10.00%	7.70%	8.10%
	75-84 years	Frequency	3	20	15	10	16	64
the age of elderly patients at home		Percentage of experience in	37.50%	60.60%	62.50%	50.00%	61.50%	57.70%

It is suggested that system management is also necessary for facility management and safety management of dental workers. The oral hygienist should thoroughly consider visiting nursing care and dental care for elderly people at home, chlorhexidine disinfection for elderly people at home, chlorhexidine disinfection for elderly people at home, chlorhexidine disinfection for elderly people, dental hygienists at home. The elderly should pay attention to the number of nursing patients per day, the recognition of home care dental hygienists, home care dental plaque removal experience, infection control education and personal protective equipment for home care, whole body disease, home care, and dental hygiene. The limitations of this study were that domestic studies conducted on visiting oral care workers were limited to some regions, and the association of infection control status or infection control recommendations in specific areas, and the effect of education on performance. Therefore, it was limited to grasp the overall status of infection control, find specific problem areas, and take fundamental measures. In the future, follow-up studies will be conducted to prevent infection throughout infection control and dental treatment for workers in visiting oral nursing institutions nationwide.

Discussion

The data collected in this study were analyzed using the SPSS 21.0 program. From May 1 to June 30, 2022, a survey was conducted on 111 dental hygienists working at Y Dental Clinic, I Dental Clinic, and Gyeonggi High School H Dental Clinic at S Dental Hospital in Gwangju. In order to understand the general characteristics of dental hygienists, the mean and standard deviation were calculated and analyzed at the significance level of .05. Correlation analysis of dental hygienist's visit to the elderly was found at a level of 0.01 for correlation, and regression analysis of the number of nursing patients per day and the number of nursing patients per day and recognition of infectious diseases of elderly nursing hygienists was analyzed at a significance level of .05. Participants in the survey agreed to understand the purpose of the study and participate in the study, and conducted the survey in a self-written manner. When 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 111.

Table 5: *Infection control education of dental hygienists, wearing personal protective equipment for nursing at home, authorable food for the elderly at home, whole-body disease of the elderly at home, experience of removing plaque from the elderly at home, and simple regression analysis of the copyright of the elderly at home (n=111).*

		Non-standardizationcoefficient		Standardizationfactor		
model		**B**	**standardizationerror**	**Beta**	**t**	**p**
1	(constant)	1.142	.213		5.365	.000
	Experience of removing tartar inthe elderly at home	.473	.109	.557	4.346	.000
		-.004	.009	-.028	-.462	.645
	Food that can becooked by theelderly at home					
	Environmental disinfection management for elderly people athome	.169	.111	.204	1.517	.132
	the power of theelderly at home	-.858	.149	-1.026	-5.745	.000
	a systemic disease of the elderly at home	.307	.077	.356	3.975	.000
	Wearing personalprotective equipment for elderly people athome	.654	.104	.750	6.302	.000
a. Dependent variable: Infection control education experience R2 (adj, R2) = .635(.614), F = 30.260						

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.1.In general terms of dental hygienists, 86 females, 77.5% males, 25.5% males, 36.9% aged 24 years, 32.8% aged 25 years, 17.1% aged 30 years, 13.7% aged 35 years, and 5.4% aged 40 years. The number of nursing patients per day was 3.6%, the number of nursing patients per day was 44.6%, the number of nursing patients per day was 45.0%, the number of nursing patients per day was 8.%, the number of nursing patients

per day was 1.8%, the number of nursing patients per day was 3.7% and the number of nursing patients per day was 2.8%. The dental hygienist's experience in infection control education was 0.9 percent for one person at a time, 14.4 percent for two times, 27.0 percent for three times, 24.3 percent for four times, and 33.3 percent for five times for 37 people. In terms of infection management knowledge, 0.9 percent of those who are "very not" are "very not", 15.3 percent of those who are "not", 27.0 percent of those who are "normal", 27 people who are "yes" and 24.3 percent of 36 people who are "very yes, 32.4 percent. In recognition of the transmission medium of dental hygienists during home care for the elderly, 2 people were 1.8%, 16 people were 13.5% "not", 30 people were 27.0% "normal", 27 people were 24.3% "very much" and 32.4% were "very much". The importance of infection control for the elderly at home is 13.5% for 15 people who are "not", 27.0% for 30 people who are "normal", and 24.3% for 27 people who are "yes" and 35.1% for 39 people who are "very so". The degree of knowledge of infection control for the elderly at home is 12.6% for 14 people who are "not", 25.2% for 28 people who are "normal", 26.1% for 29 people who are "yes", and 36.0% for 40 people who are "very so". The number and gender of nursing patients per day are .259**, dental care and gender for elderly people at home are .216**, chlorhexidine disinfection for elderly people at home and dental care for elderly people at home .551**, chlorhexidine disinfection for the elderly at home and disinfection of supplies for the elderly at home.739**, chlorhexidine disinfection for the elderly at home and consumables for the elderly at home .606**, chlorhexidine disinfection for the elderly and infectious diseases for the elderly .625**, home-based dental care and home- based nursing equipment, home-based dental care and consumables treatment .580**, home- based dental care and home-based infectious disease survey .668**, home-based dental care and home-based nursing dental hygienist .790**, Disinfection of supplies and disposal of consumables for the elderly at home .764**, Disinfection of supplies of nursing devices for the elderly at home and investigation of infectious diseases for the elderly at home.708**, Disinfection of supplies for nursing devices for the elderly and transmission of dental hygienists for the elderly.448**, Handling of consumables for the elderly at home and investigating infectious diseases for the elderly at home .534**, whether the treatment of consumables for the elderly at home and the transmission of dental hygienists for the elderly at home .417**, investigation of infectious diseases in the elderly at home and whether it is a medium for transmission of elderly nursing dental hygienists at home. It shows a correlation of 630** (Table 2).

In the regression analysis of the number of nursing patients and the at-home dental hygienists, the F statistic is .985, the probability of significance is .000. The number of nursing patients per day is significantly explained at the significance level of .05 (t=16.634, p=.000), and the total change in the number of nursing patients per day is 83% (74%) (Table 3).

Age of At-Home Elderly * In the cross-analysis of home-based dental plaque removal experience, 4.5 percent were "yes" and "very" over 50, 5.4% were "normal" and "yes" and 6 were "yes" and 5.4% were "yes" and 9.1% were "yes" and "very" and "very" were "very" 37.7% and "very" were "very" and 85.5% "very". Age of At-Home Elderly Patients * As a result of cross-analysis to see if there is a significant difference in the experience of removing tartar in- home elderly patients, the probability of significance x^2 = 27.186a was .039, showing a significant difference at the significance level of .05 (Table 4).

Infection control education of dental hygienists and wearing home care personal protective equipment, home workable food, whole body disease of home work patients, home work experience, home environment disinfection management, homework simple regression analysis F = 30.260, homework removal experience (t=4.346, p=).000) Written by Home Seniors t= -5.745, p=.000), systemic disease of the elderly at home (t=3.975p=).000), wearing personal protective gear for home care elderly (t=.632p=).The significance probability of 000) is .000, which is significantly explained at the significance level of .05, and 63% of the total change (according to the correction coefficient) (Table 5).

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