

Oral health awareness of college students in some areas of Gangwon province.

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Abstract

The purpose of this study was to identify and use the oral health knowledge of some college students as basic data in order to set a direction and improve the content and method of oral health education program for the college students.

This study was conducted from March to early April of 2016 on students who were attending Kangwon National University. A total of 130 questionnaires were selected for the final analysis and the following conclusions were obtained.

The analysis result for the oral health awareness showed that the oral health information was most commonly obtained from the ‘dental clinic’ (43.8%) and more than half of the respondents (50.8%) had an ‘average’ interest in oral health. The most common response to the subjective oral health status was also ‘average’ (46.9%). With regard to the regular checkup period, 58.5% answered ‘every year’.

In terms of brushing education, 28.5% of the males and 35.4% of the females have brushing education experience, thereby showing that the proportion of females was higher than the males. As for the grade level with brushing education experience, 22.3% were in 1st year college, 17.7% were in 2nd year college, 15.4% were in 3rd year college and 8.5% were in 4th year college. The difference was statistically significant ($p < 0.05$). The result implies that brushing education is given in the lower grade levels, but it is not given in the higher grade levels.

As the awareness on oral health care and education opportunities have been gradually reduced, oral health education programs must be developed based on this study for more effective oral health care and maintenance in college students, and efforts should be made in delivering proper oral health knowledge. Moreover, basic research should be conducted regularly.

Keywords: College students, Oral health, Awareness, Oral health education.

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Introduction

Oral health refers to the healthy status of the oral tissues and organs that do not interfere with sound mental functions and social life. It does not simply mean that the oral cavity is not diseased, but instead, it refers to the proper maintenance of the condition of the oral tissues and organs with which people can live comfortably with others both mentally and socially [1]. Over the past three decades, the Koreans’ average life expectancy has been steadily prolonged. However, the oral health level of the Koreans has not yet reached the level of developed countries. In

recent years, the adults’ oral health awareness has been improved due to the economic growth and development of the dental healthcare industry and mass media; however, the degree is not yet sufficient. In terms of the developmental stage, the physical development of college students, who are in the early years of adulthood, is in the complete stage. Their health is a very important issue in the social and national dimensions because they are invaluable talented persons, who are considered as the intellectual property of the country with an important role as future social leaders. Therefore, oral health is an important factor that affects a person’s general health, and it is recognized as part of the

physical, mental, and social well-being of a person [2]. Moreover, it is important for them to form proper oral health care habits and behaviors for the college students, who are in young adulthood, as this may greatly influence their lives in the future. Korean college students live in an instructional and protective environment until high school, and once they go to college, they can live an autonomous and open life. College students are accustomed to drinking, smoking, and irregular lifestyle rather than a healthy one because they are in a stage where their health habits are not firmly established [3]. Since college students are unaware of their oral health condition, they need regular oral health checkup and appropriate individual oral health education. Education on proper oral care habits is necessary [4]. Perception regarding their current health status, as well as their oral health after reaching middle age must be managed properly and they needed to be reminded of this, so that they will become responsible for their oral health. Although college students are considered as adults, they are still students, and they are not employees working at a company. However, they are excluded from the subjects of school oral health education [5]. In this regard, providing oral health care education to college students, who are entering adulthood, is significant, and it is important to motivate them through regular oral health education [6,7].

In order to improve their oral health awareness, this study aims to identify the oral health status of college students and the factors that are affecting this; plan an oral health education that is appropriate for the college students, as this may affect their oral health interest, attitude and behavior based on the factors; and establish a framework that will improve their oral health awareness, so that the college students can have a healthy behavioral pattern.

System Model and Methods

Study Subjects and Methods

A survey was conducted on students at a college located in the Gangwon province with a self-administering method via Google from March to early April of 2016. A total of 135 questionnaires were collected and 130 questionnaires were selected for the final analysis, excluding 5 questionnaires that were not completely answered.

Study Instrument

The questionnaire was reconstructed according to the purpose of the study by referring to a study instrument that was previously used with regard to the oral health status and by revising and supplementing it. The questionnaire of this study included the general characteristics of the study subjects, subjective oral health status and oral health awareness.

Analysis Method

For the data analysis, the SPSS statistical program (ver.19.0) was used and the frequency analysis and other statistical analyses were performed.

Results

General Characteristics

As shown in Table 1, the age distributions among the female students were 19 years old with a frequency of 0.8%, 20 years old with a frequency of 36.9%, 21 years old with a frequency of 13.1%, 22 years old with a frequency of 19.2%, 23 years old with a frequency of 7.7%, 24 years old with a frequency of 10.8%, 25 years old with a frequency of 8.5%, and over 26 years old with a frequency of 3.0%. The result revealed that '20 years old' was the most common age (36.9%) among the female students. In terms of gender, there were 45.4% of males and 54.6% of females, thereby showing that the frequency of the females was slightly higher than that of the males. As for the grade level, 1st year college students showed a frequency of 42.3%, which was the most common, followed by the 2nd year college students with a frequency of 20.8%, 3rd year college students with a frequency of 23.8% and 4th year college students with a frequency of 13.1%. With regard to the type of residence, 'dormitory' showed a frequency of 76.9%, which was the most common, followed by 'self-residence' with a frequency of 18.5% and 'home' with a frequency of 4.6%.

Oral Health Awareness

As shown in Table 2, in terms of oral health information source, 'dental clinic' was 43.8%, 'none' was 23.1%, 'internet' was 11.5%, 'family' was 8.5%, 'other' was 7.7%, 'community health center' was 3.1%, and TV was 2.3%. As for the degree of oral health interest, 'very much' was 2.3%, 'relatively much' was 30.0%, 'average' was 50.8%, and 'no interest' was 16.9%. The result showed that 'average' was the most common (50.8%). In terms of the subjective oral health status, 'very healthy'

Table 1. General characteristics

Characteristics	Classification	Frequency (%)
Age	19	1 (0.8)
	20	48 (36.9)
	21	17 (13.1)
	22	25 (19.2)
	23	10 (7.7)
	24	14 (10.8)
	25	11 (8.5)
Gender	26+	4 (3.0)
	Male	59 (45.4)
	Female	71 (54.6)
Grade	1 st Year	55 (42.3)
	2 nd Year	27 (20.8)
	3 rd Year	31 (23.8)
	4 th Year	17 (13.1)
Type of Residence	Dormitory	100 (76.9)
	Self-Residence	24 (18.5)
	Home	6 (4.6)

Table 2. Oral health awareness

Characteristics	Classification	Frequency (%)
Oral Health Information Source	None	30 (23.1)
	Family	11 (8.5)
	Internet	15 (11.5)
	Television	3 (2.3)
	Dental Clinic	57 (43.8)
	Community Health Center	4 (3.1)
	Other	10 (7.7)
Oral Health Care Degree	Very Much	3 (2.3)
	Relatively Much	39 (30.0)
	Average	66 (50.8)
	No Interest	22 (16.9)
Subjective Oral Health Status	Very Healthy	6 (4.6)
	Slightly Healthy	49 (37.7)
	Average	61 (46.9)
	Slightly Bad	13 (10.0)
	Very Bad	1 (0.8)
Regular Checkup Period	Every 3 Months	16 (12.3)
	Every 6 Months	38 (29.2)
	Every Year	76 (58.5)

was 4.6%, 'slightly healthy' was 37.7%, 'average' was 46.9%, 'slightly bad' was 10.0% and 'very bad' was 0.8%. The result showed that 'average' was the most common (46.9%). The regular checkup period was 'every year' with 58.5%, '6 months' with 29.2% and '3 months' with 12.3%.

Brushing Education Experience of the Study Subjects

As shown in Table 3, 28.5% of males and 35.4% of females have brushing education experience, thereby revealing that more females received brushing education than the males. As for the grade level with a brushing education experience, 22.3% of the subjects were in 1st year college, 17.7% of the subjects were in 2nd year college, 15.4% of the subjects were in 3rd year college and 8.5% of the subjects were in 4th year college. The difference was statistically significant ($p < 0.05$).

Discussion

Recently, the average life expectancy of the people has been greatly extended due to the development of the living medicine technology according to the economic growth. Moreover, the standard of living of the people has improved and enjoying a healthy life without any disease has become an important concern. In particular, interest in oral health, which has been relatively neglected and the demand for oral health care are increasing [8].

The level of oral health has significantly improved by rationally changing the knowledge, attitude, and behavior about oral health through education [9]. Oral health education should be implemented in order to improve the oral health awareness that can affect the oral health of each individual [10]. According to the 2012 National Health and Nutrition Examination Survey, the prevalence of dental caries in 20 to-24 year old permanent teeth was 39.2%, which was high and 44.1% of the subjects have experienced toothache for the last year, thereby showing that almost half of the college students had an oral disease [11]. Oral health education is important in improving a person's oral health status; however, major-oriented education is mainly given for college students, as they have inadequate opportunities to receive oral health education. It is necessary to more actively educate college students on oral health, so that proper oral care habits can be established in college students who are independent [12]. Many previous studies have also attempted to establish programs that will remind the college students of proper oral health awareness and realize the importance of oral health education [13-15].

Willits [16] believes that the overall and subjective health assessment can better predict a person's health than an objective score of health care providers and the self-assessed health status of adults is used as a comprehensive indicator to check a person's health [17].

The subjective oral health awareness survey result showed that 83.1% of the college students were interested in oral health; while only 42.3% of them answered that they were healthy in the subjective oral health status. Nevertheless, many college students have an interest in their oral health and they felt the necessity for health care. Since they did not receive professional and systematic oral health education, and neglected oral health care, they answered that their oral health condition was not healthy.

Noh [18] reported that the higher the inpatients' oral hygiene behavior awareness, the better their oral hygiene practices. Choi [19] reported that the higher the awareness of oral health cares of pregnant women, the better their practice. Therefore, systematic education should be given so that the college students can highly recognize the necessity for subjective oral health care and practice.

In the study of Ryu [20] 30% of high school students answered that they were interested in oral health preventive care, which was similar to 32.3% of this study. On the other hand, 23.3% of them answered that they have good oral health, which was somewhat different from 42.3% of this study. The 2006 National Oral Survey showed that more than half of the people were concerned about their oral health status.

In the section that identified the college students' oral health education status, 15.9% have received brushing education. Among them, 28.5% were males and 35.4% were females, thereby showing that the proportion of

Table 3. Brushing education experience

Category	Frequency (%)	Brushing Education Experience		P
		Yes	No	
Gender	Male (45.4)	37 (28.5)	22 (17.0)	0.806
	Female (54.6)	46 (35.4)	25 (19.2)	
Grade	1 st Year (42.3)	29 (22.3)	26 (20.0)	0.041*
	2 nd Year (20.8)	23 (17.7)	4 (3.1)	
	3 rd Year (23.8)	20 (15.4)	11 (8.5)	
	4 th Year (13.1)	11 (8.5)	6 (4.6)	
About Oral Health Care	A Lot (2.3)	2 (1.5)	1 (90.8)	0.532
	Relatively Many (30.0)	26 (20.0)	13 (10.0)	
	Average (50.8)	44 (34.0)	22 (17.0)	
	No Interest (16.9)	11 (8.5)	11 (8.5)	
Subjective Oral Health Status	Very Healthy (13.1)	13 (10.0)	4 (3.1)	0.546
	Healthy (33.1)	27 (21.0)	16 (12.3)	
	Average (43.1)	33 (25.4)	23 (18.0)	
	Unhealthy (10.8)	10 (7.7)	4 (3.1)	

*p-values are determined by the student's t-test (p<0.05)

females was higher than that of the males. In the studies of Kim et al [21] more than half of the elementary students (54.9%) have experienced oral health education. However, in the study of Ryu [20], 9.7% of the males and 12.9% of the females have experienced oral health education in high school. Similar to this study, the proportion of the females was slightly higher than the males, but the total mean response rate was lower (11.3%).

As shown above, oral health education for elementary school students is not lacking, but it is becoming lower in high school students and college students. Therefore, it is believed that the interest of the government, establishment of systematic policy and active support are required so that the students will become interested in their oral health care and make necessary efforts for the prevention of oral health problems.

The oral health awareness was higher in the students who received oral health education, which was consistent with this study result.

Oral health education is not only for passing on knowledge, but it also helps in creating a habit of proper oral health care in a person's daily life and changing their lifestyle with a positive attitude in maintaining their oral health status [22].

Conclusion

It is necessary to expand the survey area through this study and consider various factors that are affecting the oral health awareness. For this reason, appropriate oral health education programs must be developed and implemented for the college students.

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