

Cognition and Behavior of Oral Health in Preschool Parents

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Abstract

Background/Objectives: This study was conducted to investigate the oral health cognition and behavior of 83 children's parents. The results of this study were as follow. First, the questionnaire consisted of eight items on oral health behavior and three items on parental oral health cognition. Improper oral health care behavior responses resulted, and the necessity of fluoride application of oral health awareness scored lower than the necessity of oral health education and regular dental checkups.

Method/Statistical Analysis: Targeting a total 83 parents at daycare centers in the C region, September 2018-October 2018, this study distributed the home notification, questionnaire, and research consent form to each home through their children. The completed research consent forms and questionnaires were collected by the daycare centers from the children.

Findings: The three times of brushing daily, two-three minutes of brushing each time, and the '1/3, 1/2 of the toothbrush for the amount of toothpaste used received the most responses. Many respondents changed their toothbrushes every four weeks. 72.3% of respondents used fluoride toothpaste, and 72.3% of respondents were controlling food and snacks containing sugar. 73.5% of parents were receiving regular oral examination, and 30.0% of parents received it once a year. 84.3% of parents were using secondary oral hygiene products. The average oral health perception was 4.26 while the necessities of fluoride application, regular dental examination, and oral health education averaged 3.59, 4.63, and 4.63 respectively.

Improvements/Applications: It would be necessary to vitalize the oral health project and oral health education for parents and children, and also to have accurate and systematic studies on more inclusive and diverse elements.

Keywords: Oral health, Oral health cognition. Oral health behavior; Preschool parents, Oral health education.

Introduction

Korea is conducting the oral health project for pregnant women and infants under the plan of oral

health project of Article 5 (establishment of oral health project basic plan) of the Oral Health Act, and also intends to conduct oral health education at kindergartens and schools, group brushing, fluoride mouth-rinsing, oral health diagnosis, and continuous oral healthcare through the school oral health project under Article 12, Clause 3, No. 1 of the enforcement ordinance of the Oral Health Act. According to Article 16, Clause 1 of the enforcement ordinance of the Oral Health Act, the oral health education plan for pregnant women and infants should be established and conducted every year (some revised legislation of the Oral Health Act, Korea, 2016). Compared to the policy, however, the oral

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health education for pregnant women and preschoolers is not actively performed. As the one-time education at educational institutes for children is neither continuous nor systematic, it has been reported that the effects of education are unacceptable^[1]. In the preschool age, it is necessary to prevent oral diseases by regularly visiting the dentist, and also to be educated about regular oral examination/treatment, fluoride application, dietary control, and oral care while the oral health could be improved by parents' education, guidance, and care at home^[2].

Contrary to emphasizing the treatment in the past, the direction of medical science is gradually changing to preventive medicine. Dentistry is also changing from treatment-centered to prevention-centered. The necessity of prevention-centered education is emphasized.

Considering the change in eating habits, increased intake of sticky saccharic processed food, high experience rate of dental caries, and high rate of early tooth extraction caused by the modernization and urbanization from the late 20th century, the oral health education that could prevent it proactively should be preceded first. As a period of moving beyond the nurturer's care because of social changes related to childcare caused by changes in family structure or increase of parents' social activities, approximately 80% of young children age three-five are enrolled at kindergarten or childcare facilities^[3] while the children's use of childcare institutes is also increasing. Even though the snacks, drinks, and food provided by childcare institutes include many foods causing dental caries such as bread, yogurt, and drinks^[4]. The education at kindergarten or childcare facilities, and homes is not sufficient. On top of supporting educational media or training of diverse educational method, it would be necessary to develop the oral health education programs based on close cooperation with families.

The oral health behavior refers to the general attitude towards oral health and the behavioral characteristics, and the factors affecting individuals' oral health behavior are considerably diverse^[5]. Once there is a problem with oral health, it has effects on the overall health. The oral symptoms have effects on the oral functions, which impact the subjective oral health condition again and affects the quality of life. As the parents' oral health perception has effects on their children's oral health behavior, there should be more research on the characteristics of parents, and oral health education and programs suitable for the oral health

perception and behavior^[6]. Such oral health education programs fully considering the oral health perception and behavior, would make parents realize more the effects on the improvement of oral health level and the enhancement of oral health^[7-8]. Thus, the purpose of this study was to establish the basic data for the development of a customized oral health education program and its method by understanding the parents' oral health perception and behavior.

Method

1. **Method:** Targeting a total of 83 parents at kindergartens in C region, September 2018-October 2018, this study distributed the home notification, questionnaire, and research consent form to each home by their children. The completed research consent forms and questionnaires were collected by the kindergartens by the children again.
2. **Materials:** On top of the questions about the general characteristics such as age and sex, the questionnaire was composed of eight questions about parents' oral health behavior and three questions about parents' oral health perception. Using the SPSS 22.0 Program, this study conducted the frequency analysis on the general characteristics of the subjects and the measured variables.

Result and Discussion

1. **Oral Health Behavior:** In the oral health behavior of the research subjects, regarding the number of brushing daily, three times (65.1%) was the most. In case of the brushing duration per each time, two, three minutes (38.6%) were the most. Regarding the toothpaste used for brushing, the 'use of 1/3 and 1/2 of the toothbrush' showed the same frequency as 34.9%. In case of the toothbrush change period, the change of it once in four weeks (42.2%) was the most. 72.3% of the parents were using the fluoride toothpaste while the 72.3% of the parents were controlling the food and snacks containing sugar. 73.5% of the parents were receiving the regular oral examination, and the annual regular examination showed the highest percentage (30.1%). 84.3% of the parents were using the secondary oral hygiene products, and currently, 72.3% of the parents were using the fluoride toothpaste. 53.0% of the guardians responded that they received the brushing education from a health center or clinic [Table 1].

Table 1. Oral Health Behavior

Variables	Section	Frequency	Valid Percentage
Guardian’s number of brushing daily	One time	2	2.4
	Two times	19	22.9
	Three times	54	65.1
	Four times or more	8	9.6
Guardian’s brushing time	30 seconds	2	2.4
	One minute	12	14.5
	Two minutes	32	38.6
	Three minutes	32	38.6
	More than three minutes	5	6.0
Guardian’s amount of toothpaste	As big as a bean	21	25.3
	1/3 of toothbrush	29	34.9
	1/2 of toothbrush	29	34.9
	3/2 of toothbrush or more	4	4.8
Guardian’s toothbrush change period	Two weeks	6	7.2
	Three weeks	14	16.9
	Four weeks	35	42.2
	Five weeks or more	28	33.7
Guardian’s use of fluoride toothpaste	Use	60	72.3
	Do not use	23	27.7
Guardian’s control of food and snacks containing sugar	Control	60	72.3
	Do not control	23	27.7
Guardian’s regular oral examination	Every six months	16	19.3
	Once a year	25	30.1
	A year or longer	20	24.1
	Do not schedule examination	22	26.5
Oral hygiene secondary products in use+	Use	70	84.3
	Do not use	13	15.7
Place where the guardian has received the education of brushing method	Never learned it	3	3.6
	School	19	22.9
	Home	11	13.3
	Health center or clinic	44	53.0
	Others	6	7.2

2. Oral Health Perception: In the oral health perception of the subjects, the necessities of fluoride application, regular dental examination, and oral health education were shown as average 3.59, average 4.55, and average 4.63 respectively while the oral health perception was average 4.26 [Table 2].

Table 2. Oral Health Perception

Variables	Mean±SD	Range
Necessity of fluoride application	3.59±0.11	1-5
Necessity of regular dental examination	4.55±0.77	1-5
Necessity of oral health education	4.63±0.68	1-5

Discussion

The modern medical science is changing from the treatment-centered to the prevention-centered^[9]. To improve the oral health, it is emphasized to conduct health education that could influence health, knowledge, attitude, behavior, and the healthy behavioral aspect of each community member. Also, there have been many studies reporting that the parents’ oral health knowledge and behavior would play a crucial role in the establishment of children’s oral health, and they would also have major effects on the family health and education^[10-13].

According to the subjects' oral health behavior revealed in this study, in the number of brushing daily, less than three times was 25.3%, and 16.9% of the respondents brushed their teeth for less than a minute. Such improper brushing habits could influence children. Also, the necessity of regular dental examination was 4.55 of the highest 5 while 26.5% of the respondents did not receive regular oral healthcare. This means that they do not practice regular oral healthcare even though they feel the necessity to do so.

In the oral health perception, the necessities of regular dental examination and oral health education were shown as 4.55 and 4.63 respectively of the highest 5 while the necessity of fluoride application was shown as low as 3.59. The awareness of effects and convenience of fluoride application may be low.

Considering the change of eating habits, increased intake of sticky saccharic processed food, high experience rate of dental caries, and high rate of early tooth extraction caused by the modernization and urbanization from the late 20th century, to effectively practice oral health and to prevent the oral diseases of preschoolers, the oral health education for the continuous oral healthcare of children and parents should be preceded first.

The oral health condition has effects on the quality of life, and the parents' oral health perception has effects on the oral health behavior of their children. The oral health education programs could realize the effects on the improvement of oral health level and the enhancement of oral health. It would be necessary to have more studies on the characteristics of parents, and the specialized oral health education suitable for the oral health perception and behavior.

Conclusion

This study examined the oral health perception and behavior targeting a total of 83 parents at kindergartens in C region September 2018-October 2018, and the results of analyzing the questionnaires composed of eight questions about oral health behavior and three questions about oral health perception are as follow. Using the SPSS 22.0 Program, this study conducted the frequency analysis on the general characteristics of the subjects and the measured variables.

First, the three times of brushing daily, two-three minutes of brushing per each time, and the '1/3, 1/2 of the toothbrush for the amount of used toothpaste

received the most responses.

Second, many respondents changed their toothbrushes every four weeks. 72.3% of the respondents used the fluoride toothpaste, and 72.3% of the respondents were controlling the food and snacks containing sugar.

Third, 73.5% of the parents were receiving the regular oral examination, and the 30.0% of the parents received it once a year. 84.3% of the parents were using the secondary oral hygiene products.

Fourth, the average oral health perception was 4.26 while the necessities of fluoride application, regular dental examination, and oral health education were average 3.59, 4.63, and 4.63 respectively.

Such results show the necessities of fluoride application, regular dental examination, and oral health education for parents, and also their improper oral healthcare behavior, which would have indirect effects on children. Thus, in the future, it would be necessary to vitalize the oral health project and oral health education for parents and children, and also to have the accurate and systematic research on more inclusive and diverse elements.

Ethical Clearance: Not required

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Conflict of Interest: Nil

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