



# Assessment of Knowledge and Practice on Oral Health and Oral Hygiene Status Among Fitcha Preparatory School Students in Fitcha Town, Oromia, Ethiopia

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**Abstract:** Background: Good oral hygiene is essential for the well-being of an individual. However lack of knowledge, negative attitude and poor oral hygiene practices may predispose to oral related diseases. This study sought to determine whether practice and knowledge on oral health relate to the oral hygiene status. The study design was been descriptive cross-sectional study and the study population will involves both male and female students sampled from the class. Data will be analyzed using scientific calculator and presented in form of tables, charts and graphs. The number of participant for this study is 264 students and of these 158 [60%] and 106 [40%] are female. Most of them are between the age of 18-22, or in early adult hood age. From all respondents, 228 or 86% of give care for their tooth and mouth at least once a day and the remaining 36 [14%] of students replied they were not give care for their mouth and teeth properly. The main reason for not give mouth care is lack of money to buy toothpaste [56%], belief of not necessary [22%] and do not have toothbrush 8 [22%]. All the above result shows that status of oral hygiene is low among fitcha preparatory students. The result also shows that peer pressure is encouraging in supporting good oral hygiene as we observe in the above that 71.2% of our study participants got appreciation from their colleagues after they clean their teeth.

**Keywords:** Oral Hygiene, Oral Health, Practice

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## 1. Introduction

World Health Organization (WHO) in 2012 defined oral health as the state of being free from mouth and facial pain oral and throat cancer, oral infection and sores, periodontal and gum diseases and disorders that limit an individual's capacities and psychosocial well-being [1].

Good oral hygiene has been shown to contribute greatly to prevention oral related diseases. According to WHO report of April 2012 the prevalence of dental caries was 60-90% in children and nearly 100% in adults, about 30% of those aged 65-70 years had lost their natural teeth while periodontal diseases accounted for 15-20% [1]. Dental caries was the major cause of premature tooth loss, especially in the permanent dentition. According to this report, maintenance of good oral hygiene can help to prevent most of these

diseases.

However, WHO noted that there is uneven distribution of diseases prevalence in the world. The prevalence is high in developing countries, rural areas and disadvantaged populations. This is due to low social economic status, inaccessibility to oral health care services, and low level of education among other factors. Developed countries spend 5-10% of their public revenue on treatment of oral related diseases. This percentage is much lower in developing countries since little attention is given to oral health. Due to challenges facing oral health worldwide, especially in the developing countries WHO has formulated policies to improve oral health. Some of these policies include formation of community based health projects to educate and promote oral health in rural areas [2].

It also works together with governments of various

countries for full implementation of these policies. Africa being one of the developing regions records significant prevalence of oral diseases. Most of the countries are underdeveloped therefore not much attention is given to oral health. However there is marked improvement in the oral hygiene awareness as a result of the collaboration between WHO and governments to ensure that the population is educated on the importance of oral hygiene [2].

## 2. Methodology

### 2.1. Study Area and Period

The study has been conducted in over a period of month during December 2015 Fiche Preparatory School which is located in North Shoa Oromia region, 114km away from Addis Ababa capital city of Ethiopia. According to the information we obtained from the administration of fiche town, the basic infrastructures include one public hospital, two health centers, seven private clinics and six private pharmacies,. Dental services are scarce and only found at public hospitals. The study has been carried out at the fiche Town preparatory school.

### 2.2. Study Population

The study involved sampled students. Both male and female students were take part in the study.

### 2.3. Study Design

The study design used for this study was descriptive cross-sectional study.

### 2.4. Source Population

All members of fiche preparatory school students.

### 2.5. Sample Size and Sampling Method

A institution based a prospective Cross-sectional study design was used. The sample size was determined by using a formula for estimating a single population proportion with confidence interval of 95%, 5% marginal error, and 10% none response rate, a total of 266 students were required for the study. The prevalence of knowledge on oral health and oral hygiene status used 50% because no previous study in the area. A list of sample frame was prepared from each Class by using a lottery method. Then the study subjects were selected by simple random sampling. The data was collected from each student in the sample.

### 2.6. Data Collection Process

A self-administered closed and open ended questionnaire was used. The questions had been prepared and delivered in English and Afan Oromo. Those questions where the respondent will have more than one response, he/she was allowed to provide the responses. The respondent had filled a consent letter before entering into filling questionnaires. Thereafter the respondents were given a questionnaire which

he/she filled anonymously.

### 2.7. Data Analysis and Presentation

The data collected has been processed by hand using scientific calculator. The presentation of data was in the form of tables, charts and graphs.

### 2.8. Ethical Consideration

Letter of approval was obtained from the advisor and the department. Then it was submitted to ethical review committee of AAU for ethical review. The permission letter from the ethical review committee was submitted to CBE coordination office of AAU to grant letter or cooperation. The letter of cooperation was given to each of the Keble of Fiche town, Fiche health bureau and administrative office. The respondents were informed about the objective and purpose of the study and verbal consent was obtained from each respondents. They had the rights to refuse or withdraw from the study.

### 2.9. Dissemination of the Finding

The findings of this study will be distributed to health and administrative offices of Fiche town. Copy of the research report will be submitted to the department of nursing, AAU, Selale campus. An attempt will be made to publish it on national and international journals.

## 3. Result

### 3.1. Socio-demographic Information

Among 264 students those who participated in the study 106 (40%) were female students; whereas 158 [60%] of them were male. And of all, 32 [12%] Muslim, 11% protestant and the remaining 57% were orthodox Christian. Summary of socio-demographic information is prepared by the following table.

Table 1. Socio-demographic information.

variable	frequency	Percent%
Ethnicity	Oromo	73.5%
	Amhara	13.3%
	Guragie	3%
	Tigre	3.4%
	Others	6.8%
	Total	100%
Gender	Male	60%
	Female	40%
	Total	100%
Religion	Orthodox	77.3%
	Muslim	12.1%
	Protestant	10.6%
	Total	100%
Educational status	Grade 11	40%
	Grade 12	60%
	Total	100%
Age	16-20	98.5%
	>20	1.5%
	Total	264

### 3.2. Practice of Oral Hygiene

From all respondents, 228 or 86% of them reported <<I give care for my tooth and mouth at least once aday>>. And the remaining 36 [14%] of students replied, they were no give care for their mouth and teeth properly. Out of all those who do not give care for their mouth and teeth the reason they prepare or provided is that they do not have money to buy toothpaste [56%], it is not necessary [22%] and do not have toothbrush 8 [22%]. From those who give care for their mouth and teeth most of them, or 93 [35.2%] replied they did so to prevent mouth disease and the remaining reported to prevent bad odor, to look good and all of the above, 29.3%, 6.4%, 22.7% respectively. Here in these study the purpose of

cleaning the teeth and mouth is mostly for preventive purpose rather than cosmetic purpose.

Out of all the students those who participated in the study 57.6% (152) students mentions more than one disease, 15.1% are one disease and 6.1% reported I do not know. Among those who mentioned one and more than one mouth and teeth disease most of them (n=88, 45.8%) reported they hear from their teachers, 48 (25%) heard over the radios, 32 (16.7%) heard from parent and relative and the remaining from newspaper and others 4.2%, 2.1% respectively. And 96 students visited dentist before, and they constitute 36.4% out of all students who attend the study. And the reason for which they visited the dentist was mostly toothache (66.7%).

Table 2. Practice of oral hygiene.

variable		frequency	Percentage
cleaning of teeth	Yes	228	86%
	No	36	14%
	total	264	100%
The reason for NOT cleaning	It is not necessary	8	22.2%
	Do not have tooth brushes	8	22.2%
	Do not have money to buy tooth paste	20	56.4%
	Others	0	0%
	total	36	100%
The reason for cleaning teeth	To look good	93	40.8%
	To prevent mouth disease	51	22.4%
	To prevent bad odor	77	29.3%
	Others	7	37.8%
Difference after cleaning.	total	228	100%
	Yes	248	93.9%
	No	16	6.1%
Type of difference after cleaning of teeth	Total	264	100%
	Feeling of being health	72	29.03%
	Feeling of good appreciation and admiration from friends	60	24.2%
	Both of the above	48	19.3%
	Others	68	27.4%
Appreciation from their colleagues after cleaning their teeth	total	248	100%
	Yes	188	71.2%
	No	76	28.8%
Type of material use for cleaning of teeth	total	264	100%
	Tooth brush	164	62.1%
	Chewing stick	68	25.8%
	Charcoal	4	1.5%
	Others	28	10.6%
aid use to cleaning of your teeth.	Toothpaste	124	47%
	Salty water	12	4.5%
	Water only	100	37.9%
	Others	28	10.6%
	total	264	100%
frequency of teeth cleaning	>2x/day	16	6.1%
	2x/day	48	18.2%
	Once/day	124	47%
	3x/weak	36	13.6%
	Others	40	15.1%
Cleaning of the space between their teeth.	Yes	220	83.3%
	No	24	9.1%
Cleaning of tongue.	total	264	110%
	Clean their teeth	90	34.1%
	Do not clean their teeth	164	62.9%
The disease they knows that affect mouth and teeth	total	264	100%
	Mentioned more than two disease	152	58%
	Mentioned only one	39	15.1%
The source from which they hear about those disease	Not mentioned	73	26.9%
	Teachers	264	100%
		88	46.1%

variable		frequency	Percentage
Had ever visited the dentist	Heard over the radio	91	47.6%
	Parents and relatives	32	16.7%
	News paper	8	4.2%
	Others	4	2%
	Yes	96	36.4%
The reason for visiting the dentist	No	168	63.6%
	Toothache	66	67%
	Gum bleeding	15	15%
	Bad odor	3	3%
	Others	12	12%
The frequency of visiting the dentist	total	96	100%
	When I am sick	79	82%
	Every six month	2	2.1%
	Once in a year	15	15.9%
	total	96	100%
The reason for never visiting the dentist	I am scared	14	8.3%
	I don't have a money	34	20.2%
	I don't see the need	16	9.5%
	Because of no complain on my teeth	104	61.9%

### 3.3. Oral Hygiene Status of Students

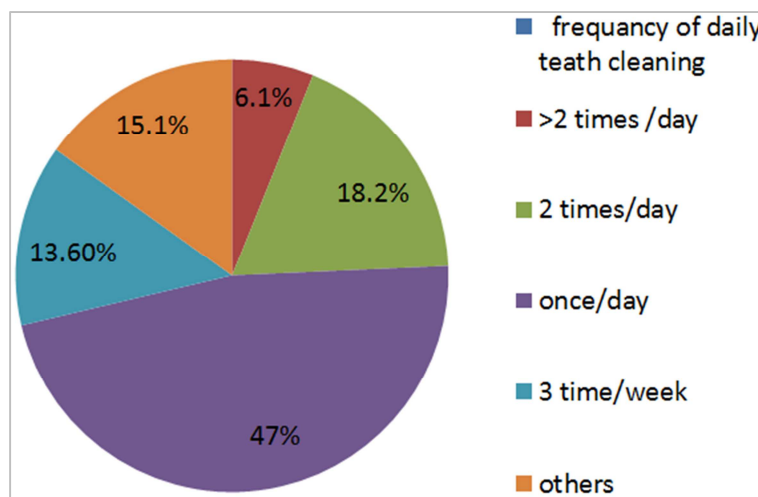


Figure 1. Frequencies of teeth cleaning.

The above pie charts show the numbers of students those clean their teeth more than two time per days constitute 6.1%, and those clean two times per days are 18.2%, and thirteen percent (13.6) of the students clean their teeth three times per weeks.

## 4. Discussions

The rapid changes in the patter of oral diseases have been noted at the global label, during the past decade. For instance, in the developed countries, caries experience, and poor gum conditions have declined dramatically among young aged groups [3, 4].

Most people in the developed countries show great interest in oral hygiene and that 16-80% of boys in 32 countries in Europe and North America practiced tooth brushing more than once a day, whereas girls reported better compliance 26-89% [5]. Another multinational study of 22 countries reported similar results [6, 7, 8].

In urban areas commercial tooth brushes and tooth pastes

are used. In rural areas beside the use of tooth brushes and tooth pastes, other traditional methods egg charcoal and chewing stick are used [9, 10]. The main reason for tooth brushing among the young people seem to be cosmetic than preventive. Oral practices which predispose to oral diseases like sugar intake exist in both urban and rural areas though the percentage is more in urban areas [11, 12, and 13].

Oral hygiene practices are also prevalent in some developing countries. A study conducted in Nigeria in the year 2012 showed that 46.6% of the students changed their tooth brushes when they get frayed and few, 9.3% did not engage in confectionaries. Majority, 83% had never visited a dentist before. Almost all the students, 93% reported that brushing teeth was to prevent mouth diseases. All the respondents brushed their teeth at least once a day. 67.3% of the students could not define oral health. 11% of the students had no reason for brushing their teeth. About the source of oral health information 36.1% reported they heard from teachers, 34.7% from TV, 12.9% from relatives, 8.4% from newspapers and 4.4% from the radio [10].

A cross-sectional study by Yusuf A, et al in South Africa on principle motives of tooth brushing in a Pretoria population of adolescents [11] showed that 27.2% had never visited a dentist, while 28.9% reported their parents were unemployed. The principle motive of brushing among most adolescents, including those who frequent sugar intake was related to cosmetic (84.9%) rather than preventive dental health. Motive for tooth brushing was not related to frequency of brushing [11]. A study of oral health knowledge and practices of secondary schools in Tanga Tanzania by Carneiro and, Msafiri Kabluwa in 2011 showed [12] that 88.4% of the students had adequate level of knowledge on causes, prevention and signs of dental caries. 79.1% of had adequate practice of sugary consumption 72.4% had acceptance frequency of tooth brushing 39.9% went for dental check-ups. Majority of the students had adequate level of knowledge on oral health but low level of oral health and practice.

In Ethiopia it has been shown that substantial portions of the population do carryout oral hygiene procedures. However, the methods used for oral hygiene include chewing sticks (mefakiya, prepared from a variety of plant stems, twigs and roots), plant stems, use of fingers, or toothbrushes with or without toothpastes [13]. The consensus statement on oral hygiene states that tooth brushing and other mechanical procedures, including chewing sticks are considered the most reliable means of controlling plaque, provided that cleaning is sufficiently through and performed daily.

The aim of this study is willing to explore fiche preparatory school students' oral hygiene behavior with respect to frequency and quality of use and to investigate the effect of gender differences on the distribution of oral health-related knowledge and behavior.

## 5. Conclusion

The finding of the study show the knowledge of oral hygiene status is poor among Fiche preparatory school. Knowledge about oral and dental health can affect oral and dental health status and frequency of teeth cleaning. All the above result shows that status of oral hygiene is low among fiche preparatory students. The result also shows that peer pressure is encouraging in supporting good oral hygiene. seventy one percent (71%) of our study participants got appreciation from their colleagues after they clean their teeth.

## Recommendations

The school management should incorporate oral and dental health program into the policy of the school, because study result shows that oral hygiene status is low. The zonal health office should do on the issue to increase awareness of orodental health problems and benefit of oral hygiene and combating oral health problems such as gingivitis, dental plaque, bad odors, and many others accordingly.

## Strength of the Study

The study used primary data and Cross sectional study design was conducted.

## Limitation of Study

There were a bias in knowledge & practice of oral hygiene.

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