

ORAL HEALTH KNOWLEDGE, ATTITUDE AND PRACTICE AMONG SENDAFA SECONDARY AND  
PREPARATORY SCHOOL STUDENTS, SENDAFA, FINFINNE SURROUNDING OROMIA SPECIAL ZONE,  
ETHIOPIA

BY

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(DENTAL INTERN)

A RESEARCH PAPER TO BE SUBMITTED TO THE DEPARTMENT OF DENTISTRY, COLLEGE OF PUBLIC  
HEALTH AND MEDICAL SCIENCES AND SRP, JIMMA UNIVERSITY IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF DENTAL MEDICINE (DMD)

JUNE, 2013

JIMMA, ETHIOPIA

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Abstract

Introduction:-oral health means being free of mouth and facial pain, birth defects such as cleft lip and palate, periodontal diseases, tooth decay and tooth loss and other systemic diseases that affect the oral cavity.

Objective: to assess knowledge, attitude and practice towards oral health among SSPS, Sendafa, Finfinne Surrounding Oromia Special Zone.

Methods: - Across sectional study was conducted in SSPS from April 11-21/2013. The data was collected by distributing self administered questionnaire for students which was selected randomly from total of 2190 students. Simple random sampling technique was used. The sampling included grade 9th to12th students in the school.

Results The collected data was summarized and analyzed and the result was presented using tables.

Conclusion and recommendation: Based on the result, conclusion was made and recommendation was forwarded to the responsible bodies.

### Acknowledgement

I would like to express my special thanks to my advisor Dr. Muluaem Tolessa for his valuable and constructive comments during writing this paper.

Last but not least, I sincerely thank w/ro Sitina for typing this research paper.

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AA- Addis Ababa

CCF: christen children fund

DC. Data collector

DMD: Doctor of dental medicine

DM: Diabetes mellitus

KAP: Knowledge attitude and practice

PI: Principle investigator

Qty: Quantity

SRP: Students research program

SSPS: Sendafa secondary and preparatory school

WHO: World Health Organization

W/ro: Woizero

CHAPTER ONE  
INTRODUCTION



## 1.1 Back ground

Oral health means more than healthy teeth and healthy periodontium. The WHO has a definition of good oral health; oral health means free of mouth and facial pain, oral and throat cancer, birth defects such as cleft lip and palate, periodontal disease, tooth decay and tooth loss and other systemic disease(1).

Our mouth is teeming with bacteria- most of them are harmless normally the bodies natural defense and good oral health care such as daily brushing and flossing can keep these bacteria under control . However, harmful bacteria can some times grow out of control and cause oral infections such as dental caries and periodontal diseases(2).

Oral cavity is site of many infections and inflammatory diseases. Dental procedures ,medications that reduce saliva flow disrupt the normal balance of bacteria in our mouth or breach the mouth normal protective layers (barriers) may make it easier for bacteria to enter our blood stream .periodontal diseases are the possible risk factor for D.M(3,4,5).

The most oral health problems are dental caries and periodontal diseases (2). Cavities look like chalky white or brown holes on our teeth. We are all at risk of tooth decay. Bacteria (germs) that naturally live in our mouth use sugar in food to make acid .Over times acids destroy the outside layer of our teeth then cavities and other harm occur (6).

Gum diseases are caused by bacteria along with mucus and their particles form a sticky plaque on our teeth. Plaque that is left hardens to form calculus. Gingivitis is mild form of gum diseases which can be caused by plaque buildup and tartar stay on teeth. If gingivitis left untreated it can advance to periodontitis. Gum pull away from the teeth and infected pockets. We may loss of supporting bone which may need treatment by dentist (3).

To protect oral health, good oral hygiene is essential. Good oral hygiene is measured by the health of the oral cavity so that adequate oral health education is provided to create positive attitude and knowledge regarding oral hygiene in the society and providing opportunities for carrying out these practices which is essential for keeping the mouth and teeth healthy(7).

### Statement of the problem

Dental caries and periodontal disease have historically been considered the most global oral health burdens. At present the distribution and severity of oral disease vary in different parts of the world and within the same country or region (8).

In several developed countries, oral health services are made available to the population comprise preventive and curative services and are based on either private or public systems. In contrast, several studies have shown increasing oral health problems in number of developing countries where community oriented preventive programmes have not been implemented(8,9).

Despite great achievements in oral health globally, dental caries is still a major problems in most industrialized countries affecting 60-90% of school children and vast majority of adults. It is also most prevalent oral diseases in several Asian and Latin American countries while it papers to be less common and less severe in most African countries. In the light of changing living conditions, however, it is expected that the incidence of dental caries will increase in many developing countries as result of growing consumption of sugars(8).

Poor oral health reflects social inequalities; hence the prevention of oral diseases should be priority in developed and undeveloped countries so secondary school students may play an active role in oral health promotion. Lack of general knowledge of secondary school students about oral disease has been shown to contribute to delay in early treatment (8).

Dental disease is not just a minor alignment of periodontium and teeth. It is the disease of the body that happens to begin in the mouth. If left unchecked, it can contribute to other more harmful diseases that can seriously affect the quality of life, so taking care of oral health is investing in our overall health(3).

The role that secondary school students can play in improving oral health of population rely on their knowledge about oral diseases, Attitude toward oral hygiene and their routine practice to maintain oral health. So oral health KAP study will be carried out to the ground realities and use as guide line to plan preventive measures and to state strategies to combat oral diseases (10).

## CHAPTER TWO

### Literature Review

Good oral health is important for keeping the mouth and teeth healthy. Unfortunately, dental disease is common particularly because of lack of dental care. For example, oral health has much remarkable progress in most developed countries as a result of prevention programmes that stress the optimal use of fluorides. Oral health practice and adaptation of healthy eating habits, however, the situation is beginning to deteriorate time to time in many developing countries. To modify this condition, there are several commonly recommended ways like reducing eating sweets, brushing the teeth as soon as after eating and rinse with water after eating (1).

In China, information on perception of adults about oral health care was inadequate in 1996-97. A large scale on oral health epidemiological study was conducted in southern China from 8 urban and 8 rural communities Guangdong province 1,573(35-40) years old and 1,551(65-74) years old were sampled. Almost all of the middle aged and more than 90% of the dental elderly survey claimed that they brushed their teeth every day and used tooth brush with paste during brushing but awareness about fluoride

content was lacking. The respondents had poor oral health knowledge but positive attitude towards oral health providing a base for more community based oral health education programme (6).

The study done Sarawak secondary school of students kuching shows that about 24.4% of the respondents had practiced although most of the students stated that regular dental visit was necessary. This shows that the awareness of oral health does not necessarily influence good dental practice. Barker and Lorton (2008) showed that delay in seeking dental care would be attributed to other factors like parental beliefs and practice lack of economic resources and accessibility of dental services. Research done in Sarawak secondary school students of kuching shows that about 95.7% of the respondents brush their teeth at least twice per day. Female Students (54.6%) brush their teeth more than twice a day as compared to male students. However female students have a higher consumption of sweet food daily compared to male students. Almost all of the respondents (97.6%) brushed their teeth with brush and tooth paste and most of the respondents practiced tooth brushing in the morning and before bed time (80.44%) only 1/3 of the respondents reported brushing their teeth at noon time. However the use of dental floss was still not very popular among the students. The majority of the students (52.2%) visited their dentist when they had dental pain. Approximately a quarter of the students (24.4) had regular dental visit every 6 to 12 months. This could be due to school oral health programme which required all of the students to visit their dentist as part of the annual routine (11).

The research done in Medina Arabia showed that 38% of students cleaned their teeth at least daily, 27% used the miswak (mefakia) and only 5.1% used dental floss (12)

Study conducted in India, Bangalore south city about their knowledge attitude and practice towards oral health, 58.4% received information regarding oral health mainly from TVs. 37% of study participants agreed that tooth decay make them look bad. It was found that 75.1% thought that brushing teeth prevents tooth decay and gum diseases. And 48.9% knew reason that eating sweets causes tooth decay. Only 36.5% knows fluoride prevents tooth decay (13).

Oral health seems to be deteriorating in developing countries when the provision of comprehensive care by university trained dentists impossible for economic reasons. Programmes of preventive cares are clearly necessary. In Zimbabwe's Moshonal and east province which has million in habitants in two areas during 1989, with the objective of promoting good oral health among children, two main target groups

were selected; School children and preschool children with their parents. The survey in Zimbabwe showed that children's knowledge on how to prevent oral problems was poor (14).

Research done on oral healthcare in nursing students of Zambia shows that 46 of 119 respondents had visited a dentist more than five times a year and almost all respondents brushed their teeth daily. The most frequently used aid for cleaning the teeth was tooth paste (n=112). Five respondents answered that they never cleaned between the teeth, 34 answered daily and 20 weekly use. Most of the respondents know that sugar and bacteria causes dental caries but their knowledge about periodontitis appeared to be low. Almost 90% of the respondents know that fluoride strengthen teeth and prevents caries. About 98% of students answered that treatment of the oral disease is equally important as in other parts of the body and also considered that regular visits to the dentist are essential (10).

As studied in the reports of CCF, National office Addis Abeba, Dr. Mesfin Tadesse (DMD) that the information of dental screening of children supported by CCF projects in A.A different kebeles and Shashamene and Meki areas. The reports depend on whether there is acceptable oral health condition in each individual or not. From the reports it is observed that among A.A 6064 examined children, 7.12% are healthy, 23.45% need health education, 69.24% need dental care and 0.18 needs serious attention. Among the Shashemene and Meki 1481 examined children 11.88% are healthy, 23.45% need oral health education, 62.12% need dental care and 0.14% needs serious attention. All those are result of lack of oral health education rather than negligence, therefore, the researchers recommended to conducted oral health education for all of children and train all parents so that they monitor their children as well as their siblings too(15).

The study done regarding oral health knowledge of Jimma town population shows that they brush their teeth in morning and before bed time (50%), in morning (28.3), before bed time (12.9) and after each meal (8.14%). About 63.9% of respondents know the risk factors and prevention measures of dental caries but the prevalence of dental caries were noted. The commonest method of teeth cleaning practice was found to be mefakia (62.2%) and followed by tooth brush with paste (28.9%) (16).

## 2.2. Significance of the study

Given the extent of the problems, oral diseases are the major public health burden in all regions of the world. Their impact on individuals and communities as a result of pain suffering, impairment of function and reduced quality of life, the cause is considerable.

The current patterns of oral disease reflect distinct profiles across countries related to living conditions, life styles and environmental factors and the implementation of preventive oral health schemes.

In developing countries including Ethiopia, the general population does benefit from preventive oral health care programs. Hence, this study will assess the patterns of oral health related knowledge, attitude and practice among SSPS students to identify the risk attitude among them and recommends the preventive care for concerned bodies.

It is therefore, expected to reduce the existing knowledge gap among these students. The study may also used as baseline information for future studies or intervention.

## CHAPTER THREE

### OBJECTIVE

#### 3.1. General objective

To assess knowledge, attitude and practice of oral health among Sendafa Secondary and Preparatory School.

#### 3.2. Specific objectives

- To assess the knowledge of the students towards oral health
  - To assess their attitude towards oral health
  - To assess their practice to keep oral hygiene
- To associate oral health KAP with educational level

## CHAPTER FOUR

### 4. METHOD AND MATERIALS

#### 4.1 Study area and period

##### 4.1.1 Study area

The study was conducted in Sendafa secondary school which is located 38km from Addis Abeba to north east in Sendafa town, Finfinne Surrounding Oromia Special Zone. Administratively, the town is structured into 8 gotts. According to 2007 census, the total population of the town is 12,298 with about 1:1 male to female ratio. The working language of the town is Afan Oromo. There is one secondary and preparatory school in the town with the total number of students 2190 of which 1189 are males and 1001 are females.

##### 4.1.2 Study period

The study was conducted from April 11-21, 2013

#### 4.2 Study design

Cross-sectional study was conducted among secondary school students with the help of self-administered questionnaires by using random numbers.

#### 4.3 Population

##### 4.3.1 Sources population

All Sendafa Secondary and Preparatory School students

##### 4.3.2 Study population

Students of Sendafa secondary and Preparatory school who are from grade 9th to 12th with total number 2190. Systematic random sampling technique was used.

#### Sample size determination and sampling techniques

##### Sample size

The sample was determined using the following formula;

$$(n) = Z^2 pq$$

D2

$$n = \text{sample size} \quad n = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2}$$
$$Z_{\alpha/2} \text{ standard normal value} \quad n = 384.16 \approx 384$$
$$\text{Corresponding to the given confidence interval} \quad n_f = \frac{n}{1 + n/N}$$
$$D = \text{margin of error } 5\% = 0.05 \quad n_f = \frac{384}{1 + 384/N}$$
$$P = \text{maximum prevalence } 0.5 \quad n_f = \frac{384}{1 + 384/2190}$$
$$n_f = 326$$
$$Q = 1 - P = 1 - 0.5 = 0.5$$
$$N = 2190 \text{ study population}$$
$$n_f = \text{final sample size}$$

#### Sampling technique

Simple Random sampling technique was used to select the sampled students

#### 4.5 Study variables

##### 4.5.1 Independent variables

Age

Sex

Address

Frequency of tooth brushing

##### 4.5.2 Dependant variables

Knowledge, attitude and practice

#### 4.6 Inclusion and exclusion criteria

All students of SSPS got a chance to be included.

4.7 Materials: Questionnaire, pens, pencils, CD, flash, rulers, eraser, calculator

4.8 Data collection after preparing a structured format, questionnaire was distributed to the students by data collector for randomly selected students in each class.



4.9 Pre testing before actual data collection, pretesting was done on 30 questionnaires among Jimma Jiren Secondary School students to discover if there was any defect (unforeseen error) in the questionnaire.

#### 4.10 Data quality control

The principal investigator had on going supervision each day during data collection to ensure quality of data by checking filled formats for their completeness and consistency.

#### 4.11 Data analysis

The collected data was sorted, processed and analyzed. The analyzed data was be presented by tables.

#### 4.12 Ethical consideration

A format letter of permission was written by Jimma university department of dentistry to SSPS to get permission and support during data collection. The objectives of the study were explained to director of the school.

#### 4.13 Plan for dissemination

The paper was disseminated to department of dentistry, the head office of the school and woreda health bureau.

#### 4.14 Operational definitions

Knowledge: the feelings, facts or experiences known by a person or group of people which obtained from study or investigation something or tends to be have towards it.

Attitude: An opinion or general feeling about something

Practice: the cognition of having mastery of skill or activity via repetition

Plaque: A soft sticky which attached to tooth surface formed mainly by growth of bacteria colonizing the teeth.

Tartar: Hard deposit of mostly organic material that forms on teeth at the gum line and contributes to periodontal disease if not regularly removed.

Dental caries: formation of cavities in the teeth by action of bacteria

Periodontal diseases: diseases affecting the supporting structures of tooth. Satisfactory knowledge: the respondents answer each knowledge question >60%

Unsatisfactory knowledge: the respondents answer each knowledge questions <60%

Favorable attitude: the respondents answer each attitude questions greater than 60%

Unfavorable attitude: the respondents answer each attitude questions less than 60%.

Good practice: the respondents answer each practice questions greater than 60%.

Poor practice: the respondents answer each practice questions less than 60%

## CHAPTER 5

### RESULTS

Table 1. Frequency distribution of students with socio- demographic variables in SSPS, 2013 GC

| Variables | Number     | Percent |       |
|-----------|------------|---------|-------|
| Age       | <15        |         |       |
|           | 15-17      |         |       |
|           | 18-20      |         |       |
|           | >20        |         |       |
|           | Total      | 20      | 6.13  |
| Sex       | Male       |         |       |
|           | Female     |         |       |
|           | Total      | 217     | 66.56 |
|           | 109        | 33.44   |       |
|           | 326        | 100     |       |
| Religion  | Orthodox   |         |       |
|           | Muslim     |         |       |
|           | Protestant |         |       |
|           | Catholic   |         |       |
|           | Others     |         |       |
|           | Total      | 218     | 66.87 |
|           | 59         | 18.09   |       |
|           | 23         | 7.05    |       |
|           | 26         | 7.98    |       |
|           | -          | -       |       |

|           |       |       |
|-----------|-------|-------|
|           | 326   | 100   |
| Setting   | urban |       |
|           | Rural |       |
| Total     | 258   | 79.14 |
|           | 68    | 20.86 |
|           | 326   | 100   |
| Ethnicity |       |       |

Oromo

Amhara

Tigre

Gurage

Others

Total

230 70.55

58 17.79

23 7.05

15 4.60

- -

326 100

Educational Status

9th

81 24.84

|       |     |       |
|-------|-----|-------|
| 10th  | 81  | 24.84 |
| 11th  | 82  | 25.15 |
| 12th  | 82  | 25.15 |
| Total | 326 | 100   |

As shown in the above table, out of the total respondents (326), 217 (66.56%) are males and 109 (33.44% are females with sex ratio of 199%. Regarding their distribution, 155 (15.17%) are within the range of 15-17 age groups while 20 (6.13%) are within <15. The majority of them, 218 (66.87%) are orthodox. Among the respondents, 258(79.14%) live in urban while the rest live in rural. 230 (70.55%) are Oromo regarding their ethnicity.

Table 2. Distribution of students by their category of Grades with their knowledge towards cause of oral health problems SSPS, 2013 GC

| Knowledge                        |   | Category of grade           |    |    |    |    |   |
|----------------------------------|---|-----------------------------|----|----|----|----|---|
|                                  |   | 9                           | 10 | 11 | 12 |    |   |
| No                               | % | No                          | %  | No | %  | No | % |
| Causes of dental caries ( decay) |   |                             |    |    |    |    |   |
|                                  |   | ☐ Sugar containing foods    |    |    |    |    |   |
|                                  |   | ☐ Lack of flouridated water |    |    |    |    |   |

|        |    |       | Not brushing |       |    |      |    |      |  |
|--------|----|-------|--------------|-------|----|------|----|------|--|
|        |    |       | Dry mouth    |       |    |      |    |      |  |
|        |    |       | Don't know   |       |    |      |    |      |  |
| Others | 35 | 43.2  | 40           | 49.4  | 45 | 55   | 50 | 61   |  |
|        | 15 | 18.52 | 10           | 12.2  | 10 | 12   | 5  | 6.1  |  |
|        | 8  | 9.88  | 10           | 12.2  | 8  | 9.8  | 6  | 7.3  |  |
|        | 8  | 9.88  | 6            | 7.4   | 4  | 5    | 11 | 13.4 |  |
|        | 15 | 18.52 | 15           | 18.52 | 15 | 18.3 | 10 | 12.2 |  |
|        | -  | -     | -            | -     | -  | -    | -  | -    |  |

Causes of gum disease

|        |    |    | Irregular tooth brush |    |    |    |    |    |  |
|--------|----|----|-----------------------|----|----|----|----|----|--|
|        |    |    | Bacteria in the mouth |    |    |    |    |    |  |
|        |    |    | Alcohol drinking      |    |    |    |    |    |  |
|        |    |    | Smoking cigarette     |    |    |    |    |    |  |
|        |    |    | Don't know            |    |    |    |    |    |  |
| Others | 10 | 12 |                       |    |    |    |    |    |  |
|        | 5  | 61 | 5                     | 60 | 20 | 24 |    |    |  |
|        | 30 | 37 | 35                    | 43 | 20 | 24 | 30 | 36 |  |
|        | 10 | 12 | 10                    | 12 | 10 | 12 | 5  | 6  |  |
|        | 15 | 19 | 15                    | 19 | 40 | 48 | 20 | 24 |  |
|        | 11 | 14 | 17                    | 21 | 7  | 9  | 7  | 0  |  |
|        | -  | -  | -                     | -  | -  | -  | -  | -  |  |

Causes of bad breath ( halitosis)

|        |    |    | Eating Garlic            |    |    |    |    |    |  |
|--------|----|----|--------------------------|----|----|----|----|----|--|
|        |    |    | Not keeping oral hygiene |    |    |    |    |    |  |
|        |    |    | Brushing                 |    |    |    |    |    |  |
|        |    |    | Don't know               |    |    |    |    |    |  |
| Others | 12 | 15 | 7                        | 9  | 4  | 5  | 7  | 9  |  |
|        | 40 | 49 | 50                       | 62 | 60 | 73 | 65 | 79 |  |
|        | 8  | 10 | 6                        | 7  | 5  | 7  | 4  | 5  |  |
|        | 16 | 20 | 18                       | 22 | 13 | 16 | 6  | 7  |  |

Regarding knowledge towards the causes of dental caries, a total of 35 (43.2%) of grade 9, 40(49.4%) of grade10, 45(55%) of grade 11, 50(61%) of grade 12 students are knowledgeable and of 30(37%) of grade 9, 35(43%) of grade 10, 40(48%) of grade 11, 30(36%) of grade 12 students are knowledgeable about the main causes Of periodontal diseases.

Concerning the causes of halitosis, 40(49%) of grade 9, 50(62%) of grade 10, 60(73%) of grade 11 and 65(79%) of grade 12 students are knowledgeable.

Table3. Distribution of students by their category of grades with their knowledge towards preventive measures against major oral health problem in SSPS, 2013 GC

|   | 9  |    | 10 |    | 11 |     | 12 |     |
|---|----|----|----|----|----|-----|----|-----|
|   | No | %  | No | %  | No | %   | No | %   |
| Preventive measures against major oral health problems      |    |    |    |    |    |     |    |     |
| - Avoiding sugar foods ( snacks)                            |    |    |    |    |    |     |    |     |
| - Proper brushing of teeth by modern tooth brush with paste |    |    |    |    |    |     |    |     |
| - Visiting a dentist  |    |    |    |    |    |     |    |     |
| - Rinsing the mouth with water                              |    |    |    |    |    |     |    |     |
| - Do not know   |    |    |    |    |    |     |    |     |
| - Others  | 30 | 37 | 40 | 49 | 50 | 61  | 55 | 67  |
|   | 16 | 20 | 6  | 7  | 5  | 6   | 3  | 4   |
|   | 15 | 19 | 20 | 25 | 20 | 24  | 15 | 18  |
|   | 15 | 19 | 10 | 12 | 5  | 6   | 8  | 10  |
|   | 5  | 6  | 5  | 6. | 2  | 2.4 | 1  | 1.2 |

Out of 326 respondents, 37% of grade 9, 49% of grade 10, 61% of grade 11 and 67% of grade 12 students agreed that avoiding sugar foods (snacks) as a preventive measures of major oral health problems as shown above in the table.

Table 4. Distribution of students by their category of grades with their attitude towards oral health SSPS,

| 2013 GC                       |       |                   |     |    |     |    |     |    |     |
|-------------------------------|-------|-------------------|-----|----|-----|----|-----|----|-----|
| Attitude                      |       | Category of grade |     |    |     |    |     |    |     |
|                               |       | 9                 |     | 10 |     | 11 |     | 12 |     |
| No                            | %     | No                | %   | No | %   | No | %   | No | %   |
| Regular visiting of a dentist |       |                   |     |    |     |    |     |    |     |
| Yes                           |       |                   |     |    |     |    |     |    |     |
| No                            |       |                   |     |    |     |    |     |    |     |
| 13                            |       |                   |     |    |     |    |     |    |     |
| 16                            | 14    | 17                | 20  | 24 | 30  | 37 |     |    |     |
| 68                            | 84    | 67                | 83  | 62 | 76  | 52 | 63  |    |     |
| Frequency of dental visit     |       |                   |     |    |     |    |     |    |     |
| - Regularly every 6-12 months |       |                   |     |    |     |    |     |    |     |
| - Occasionally                |       |                   |     |    |     |    |     |    |     |
| - When dental pain occurs     |       |                   |     |    |     |    |     |    |     |
| -                             | Never | 3                 | 4   | 4  | 5   | 6  | 7   | 8  | 10  |
|                               |       | 5                 | 6   | 6  | 7   | 12 | 15  | 15 | 18  |
|                               |       | 5                 | 6   | 4  | 5   | 2  | 2   | 7  | 9   |
| Interest of brushing teeth    |       |                   |     |    |     |    |     |    |     |
| Yes                           |       |                   |     |    |     |    |     |    |     |
| No                            |       |                   |     |    |     |    |     |    |     |
|                               |       |                   |     |    |     |    |     | 81 | 100 |
|                               |       |                   | 100 | 82 | 100 | 82 | 100 |    |     |

Regarding their attitude towards oral health, a total of 249 (76.4%) respondents do not prefer visiting dental professional since dental professionals are not available nearby and they believe that the costs are too expensive. 5.5% of students believe that the frequency of dental visit should be needed only when dental pain occur. Almost all students have interest of brushing their teeth.

Table 5. Distribution of students by their category of grades on practice towards oral health SSPS, 2013

|                       |                | GC                        |    |               |    |     |    |    |    |
|-----------------------|----------------|---------------------------|----|---------------|----|-----|----|----|----|
|                       |                | PracticeCategory of grade |    |               |    |     |    |    |    |
|                       |                | 9                         |    | 10            |    | 11  |    | 12 |    |
|                       |                | No                        | %  | No            | %  | No  | %  | No | %  |
|                       |                | cleaning tooth            |    |               |    |     |    |    |    |
|                       |                | Yes                       |    |               |    |     |    |    |    |
|                       |                | No                        | 81 | 100           | 81 |     |    |    |    |
|                       |                | 100                       | 82 | 100           | 82 | 100 |    |    |    |
|                       |                | -                         | -  | -             | -  | -   | -  | -  | -  |
| Frequency of cleaning |                | 30                        | 37 | 21            | 30 | 20  | 24 | 15 | 18 |
|                       |                |                           | -  | Once day      |    |     |    |    |    |
|                       |                |                           | -  | Twice a day   |    |     |    |    |    |
|                       |                |                           | -  | 3 times a day |    |     |    |    |    |
|                       |                |                           | -  | Once a week   |    |     |    |    |    |
| -                     | Irregularly    | 5                         | 6  | 10            | 12 | 40  | 49 | 45 | 55 |
|                       |                | 21                        | 26 | 20            | 25 | 15  | 18 | 12 | 15 |
|                       |                | -                         | -  | -             | -  | -   | -  | -  | -  |
|                       |                | 30                        | 37 | 25            | 31 | 10  | 12 | 7  | 9  |
|                       |                | Time spent for brushing   |    |               |    |     |    |    |    |
|                       |                | - For < 2 minutes         |    |               |    |     |    |    |    |
|                       |                | - For 2- 4 minutes        |    |               |    |     |    |    |    |
| -                     | For >4 minutes | 21                        | 26 | 20            | 25 | 10  | 12 | 5  | 6  |
|                       |                | 35                        | 43 | 40            | 49 | 50  | 61 | 65 | 79 |
|                       |                | 25                        | 31 | 21            | 26 | 22  | 27 | 12 | 15 |



Frequency of eating sweet food (candy or chocolate or sugars) Food per day

|  | - Once a day | - 2-4 Times | - 4-6 Times | - More than 6 times |
|--|--------------|-------------|-------------|---------------------|
|  | 40           | 49          | 50          | 62                  |
|  | 60           | 73          | 65          | 79                  |
|  | 15           | 19          | 10          | 12                  |
|  | 12           | 15          | 8           | 10                  |
|  | 7            | 6           | 4           | 5                   |
|  | 9            | 7           | 5           |                     |

Methods of cleaning teeth

|  | - Horizontal | - vertical ( up and down) | - Mixed |
|--|--------------|---------------------------|---------|
|  | 35           | 43                        | 40      |
|  | 49           | 45                        | 55      |
|  | 50           | 61                        |         |
|  | 25           | 31                        | 20      |
|  | 25           | 15                        | 18      |
|  | 15           | 18                        | 15      |
|  | 18           | 21                        | 21      |

Regarding oral hygiene practice, 86 (26.4%) of the respondents clean their teeth once a day, 100 (30.7%) clean twice a day and 68 (20.85%) of the respondents clean their teeth three times a day while 72 (22.09%) clean their teeth irregularly. Among the total respondents, 56 (17.17%) respondents clean their teeth for <2 minutes, 190 (58.3%) for 2-4 minutes and 80 (24.5%) clean for >4 minutes. 52.15% of the respondents clean their teeth horizontally, 75 (23%) vertically and 81 (24.84%) of the respondents use mixed method of teeth cleaning. Most of the respondents, 215 (65.95%), take sweets once a day.

Table6. Distribution of students by their category of grades on the use of tools (materials) to clean their teeth SSPS, 2013 GC

|                    |        | Materials |     |                         |     |    |     |    |     |
|--------------------|--------|-----------|-----|-------------------------|-----|----|-----|----|-----|
|                    |        | 9th       |     | 10th                    |     | 11 |     | 12 |     |
| No                 | %      | No        | %   | No                      | %   | No | %   | No | %   |
| -Sticks ( Mefakia) |        |           |     |                         |     |    |     |    |     |
|                    |        | -         |     | tooth brush             |     |    |     |    |     |
|                    |        | -         |     | toothpaste              |     |    |     |    |     |
|                    |        | -         |     | tooth brush and mefakia |     |    |     |    |     |
|                    |        | -         |     | Dental floss            |     |    |     |    |     |
|                    |        | -         |     | Rinsing with water      |     |    |     |    |     |
|                    |        | -         |     | Charcoal                |     |    |     |    |     |
| -                  | Others | 10        | 12  | 8                       | 10  | 6  | 7   | 5  | 6   |
|                    |        | 17        | 21  | 15                      | 19  | 13 | 16  | 14 | 17  |
|                    |        | 13        | 16  | 13                      | 16  | 11 | 13  | 10 | 12  |
|                    |        | 35        | 43  | 39                      | 48  | 4  | 5   | 46 | 56  |
|                    |        | -         | -   | -                       | -   | -  | -   | -  | -   |
|                    |        | 4         | 5   | 4                       | 5   | 6  | 7   | 5  | 6   |
|                    |        | 2         | 2.5 | 2                       | 2.5 | 1  | 1.2 | 2  | 2.4 |
|                    |        | -         | -   | -                       | -   | -  | -   | -  | -   |

Most of the students, 124 (38.04%) use tooth brush and mefakia to clean their teeth while non of them use dental floss.

Table7. Occasion of tooth brushing among students by their category Categories of grades SSPS, 2013 GC

|    |             | Time of tooth brushing            |    |    |    | Category of grade |    |    |    |
|----|-------------|-----------------------------------|----|----|----|-------------------|----|----|----|
|    |             | 9                                 |    | 10 |    | 11                |    | 12 |    |
| No | %           | No                                | %  | No | %  | No                | %  | No | %  |
|    |             | - Morning                         |    |    |    |                   |    |    |    |
|    |             | - Before going to bed             |    |    |    |                   |    |    |    |
|    |             | - Morning and before going to bed |    |    |    |                   |    |    |    |
|    |             | - After meal                      |    |    |    |                   |    |    |    |
| -  | Irregularly | 21                                | 26 | 20 | 25 | 40                | 49 | 50 | 61 |
|    | 12          | 15                                | 10 | 12 | 5  | 6                 | 5  | 6  |    |
|    | 20          | 25                                | 21 | 26 | 50 | 61                | 45 | 55 |    |
|    | 18          | 22                                | 20 | 25 | 10 | 12                | 15 | 18 |    |
|    | 10          | 12                                | 10 | 12 | 7  | 9                 | 7  | 9  |    |

Of the total respondents, 141 (43.25%) Of the students brush their teeth morning and before going to bed, 131 (40.18%) brush their teeth every morning while the rest brush their teeth after meal and irregularly.

Table8. Frequency of changing tooth brush after use among students SSPS, 2013 GC

|    |    | Frequency of changing tooth brush after use |    |    |    | Category of grade |    |    |   |
|----|----|---|----|----|----|-------------------|----|----|---|
|    |    | 9   |    | 10 |    | 11                |    | 12 |   |
| No | %  | No  | %  | No | %  | No                | %  | No | % |
|    |    | - Monthly                                   |    |    |    |                   |    |    |   |
|    |    | - Every three month                         |    |    |    |                   |    |    |   |
|    |    | - Once a year                               |    |    |    |                   |    |    |   |
|    |    | - Irregularly                               |    |    |    |                   |    |    |   |
|    |    | - Don't know                                |    |    |    |                   |    |    |   |
|    | 5  | 6   | 4  | 5  | 3  | 4                 |    |    |   |
|    | 13 | 16  | 10 | 12 | 14 | 17                | 20 | 24 |   |
|    | 20 | 25  | 15 | 19 | 13 | 16                | 10 | 12 |   |
|    | 30 | 37  | 42 | 52 | 46 | 56                | 45 | 55 |   |
|    | 11 | 14  | 10 | 12 | 5  | 6                 | 4  | 5  |   |



|                       | Satisfactory knowledge |    |    |    | Unsatisfactory knowledge |    |    |    |    |
|-----------------------|------------------------|----|----|----|--------------------------|----|----|----|----|
|                       | 35                     | 43 | 42 | 52 | 48                       | 59 | 48 | 59 |    |
|                       | 11                     | 14 | 7  | 9  | 5                        | 6  | 5  | 6  |    |
| -Good practice        | 43                     | 53 | 48 | 59 | 56                       | 68 | 62 | 76 |    |
| -Poor practice        | 28                     | 35 | 30 | 37 | 24                       | 29 | 23 | 28 |    |
| -Favorable attitude   |                        | 51 | 63 | 51 | 63                       | 52 | 63 | 50 | 61 |
| -Unfavorable attitude | 40                     | 49 | 35 | 43 | 33                       | 41 | 32 | 39 |    |

Out of 326 respondents, 173 (53.06%) of the respondents have satisfactory knowledge and the rest 28 (8.58%) have unsatisfactory knowledge. 204 (62.5%) of the respondents have favorable attitude while 146 (42.94%) have unfavorable attitude. Regarding their practice, 209 (64.1%) of the respondents have good practice and 105 (32.2%) of them have poor practice.

## CHAPTER 6

### DISCUSSION

The objective of this study was to assess high school and preparatory school students' KAP towards oral health, at SSPS, Sendefa, 2013. Oral health KAP of SSPS students is less than the expected. These students seemed to be aware about oral health. 52.14% of students put sugar containing food as the main cause of dental caries which is correct and supported by research done in India. Most respondents know that sugar and bacteria causes dental caries. Study done in Jiren high school students showed that 26.1% put sugar containing food and 49% do not know the main cause of dental caries (16).

A total of 173 (53.06%) of students are knowledgeable regarding the cause of the periodontal diseases i.e. bacteria. Study showed that 18.9% of students considered bacteria as the main cause of periodontal diseases (16).

Concerning the causes of halitosis, 215 (65.95%) of respondents said put poor oral hygiene as the main factor and 35 (10.74%) of respondents considered eating garlic as the other cause of halitosis. Research done in Bulgaria showed that tobacco chewing as well as poor oral hygiene was indicated for the main cause of halitosis (12).

Of the total respondents, 5.5% of them believe that dental visit is necessary if and only if dental pain occurred which is as compared to study done in Kuching which showed that 52.2% of students visited their dentist when they had dental pain (12).

Concerning their practice, 209 (64.1%) of the students have good practice. About 84 (26.45%), 100 (30.7%) and 68 (20.85%) of the respondents brush their teeth once a day, twice a day and three times a day respectively which is correct according to ADA recommendation frequency of dental hygiene i.e. twice a day and also study done in Kuching showed that about 95% of the respondents brush their twice a day (12).

Study done in Jimma showed that about 47% of the respondents clean their teeth irregularly while 26.5% of the students clean their teeth twice a day (16).

56 (17.17%) of the respondents brush their teeth for <2 minutes while 190 (58.3%) of them brush their teeth for 2-4 minutes which is the correct time spent for cleaning of teeth according to ADA recommendation on dental hygiene (18).

Study done in Jimma showed that about 68% of students clean their teeth for >3 minutes while 20.2% of them clean their teeth for 2-3 minutes.

Most of the students use tooth brush and mefakia as a tool to clean their teeth. Research done in Medina showed that about 27% of the students use mefekia and 5.1% use dental floss (15).

Other study done in Jimma showed that about 63% of the students use mefakia and 14.5% of students use tooth brush with paste (16).

Of the total respondents, 15.64% of respondents clean their tongue by rinsing with water while 3.7% of them clean their tongue using tooth brush for 20-30 seconds which is correct according to ADA recommendation (18).

In my study, there is no significant association between KAP with educational level.

## CHAPTER 7

### CONCLUSION AND RECOMMENDATION

#### CONCLUSION

Sendafa Secondary and Preparatory School students have satisfactory knowledge, good practice and favorable attitude while their cleaning behavior is still far from ADA recommendation i.e. twice a day.

-Most of them use mefakia and tooth brush and horizontal  
method of tooth brushing

-Most of them do not clean their tongue

-Their tongue cleaning behavior is far from ADA recommendation i.e. 20-30 seconds

#### RECOMMENDATION

The woreda health bereau should promote health education and information for the school in  
collaboration with school community and other concerned bodies.

Additional epidemiological studies are needed including a large number of respondents from different  
areas. All health professionals have a responsibility to provide health education and information to  
ensure quality life.

#### ANNEX-I

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ANNEX II  
QUESTIONNAIRE  
Jimma University

Department of dentistry, college of public Health and medical sciences structured questionnaire on oral health KAP SSPS students.

N.B the aim of this questionnaire is to assess the KAP of respondents towards oral health, so it needs your volunteeerness.The questionnaire does not include your name, so be confident to answer questions.

You can discontinue if you are not volunteer

Thank You!!

I. General information:

1. Age      A. >15    B.15-17   C.18-20    D.> 20
2. Sex            Male            Female
3. Religion    Orthodox        Muslim  
Protestant    Catholic        Others
4. Ethnicity    Oromo            Amhara            Tigre  
                  Gurage            Others
5. Educational status  
                  A.9    B.10    C.11    D.12
6. Setting  
                  A.Urban    B.Rural

II. Knowledge, questions regarding on oral health:

1.      Do you know the main cause of dental caries?  
          A. Sugar containing foods            C. Dry mouth  
          B. Lack of fluoridated water        D.Not brushing  
          E. Don't know    F. Others —
2. What do you think the main cause of gum disease?  
          A. Irregular tooth brush            D. Smoking

- B. Bacteria in the mouth                      E. Don't know  
C. Alcohol drinking                                F. Other \_\_\_\_\_

3. Do you know the main cause of bad breath (halitosis)?

A. Not keeping oral hygiene

B. Eating garlic

C. Brushing with tooth brush with or without paste

D. Don't know

E. Other \_\_\_\_\_

4. Do you know the preventive measures against dental caries,  
Gum diseases and bad breath?

A. Avoiding sugar foods (snack) between meals.

B. Proper brushing of tooth by modern tooth brush and paste

C. Visiting a dentist

D. Rinsing the mouth with water

E. Don't know                      F. other \_\_\_\_\_

III. Attitude, Questions regarding on oral health:

1. Do you regularly visit a dentist?

A. yes                      B. No

2. How often do you visit a dentist?

A. Regularly every 6 to 12 months

B. Occasionally

C. When dental pain occur

D. Never

3. Do you like to brush teeth?

A. yes                      B. No

IV Practice, questions regarding on oral health:

1. Do you clean your tooth?

A. yes                      B. No

2. How often do you clean (brush) your teeth?

- A. Once a day
- B. Twice a day
- C. three times a day
- D. Once a week
- E. Irregularly

3. For how long do you clean your tooth?

- A. For < 2 minutes
- B. >4 minutes
- C. 2-4 minutes

4. How often do you take sweet foods (candy, chocolate or sugar) per day?

- A. Once a day
- B. 2-4 times
- C. 4-6
- D. more than 6 times

5. What method of cleaning technique do you use?

- A. Horizontal
- B. Vertical (up and down)
- C. mixed

6. What tools do you use to clean your tooth?

- A. sticks (mefakia)
- B. Tooth brush
- C. Tooth brush and mefakia
- D. Dental floss
- E. Tooth paste with brush
- F. Rinsing with water
- G. Charcoal
- H. Other

7. When do you brush your teeth?

- A. Morning
- B. Before going to bed
- C. morning and before going to bed
- D. After meal
- E. Irregularly

8. How often do you change your tooth brush?

- A. Monthly
- B. Every three month
- C. Once a year
- D. Irregularly
- E. Don't know

9. How often do you brush your teeth?

- A. Once a day
- B. Twice a day
- C. Three times a day
- D. Once a week
- E. Irregularly

10. Do you clean your tongue?

- A. Yes
- B. No

11. If yes, how do you clean it?

A. Rinsing with water

B. Mefakia

C. Using tooth brush

D.Other

Thank you!

Name of Data collector \_\_\_\_\_ Sign \_\_\_\_\_ Date\_\_