ORAL HEALTH RELATED BEHAVIOUR, KNOWLEDGE, ATTITUDES AND BELIEFS AMONG SECONDARY SCHOOL STUDENTS IN IRINGA MUNICIPALITY

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ABSTRACT

OBJECTIVES
To determine oral health related behavior, knowledge, attitudes and beliefs among secondary school students in Iringa municipality.

DESIGN
Cross-sectional descriptive study.

RESULTS
All participants reported to brush their teeth at least once a day, only 24% brush twice a day. The use of plastic tooth brush was reported to be 97.1%. 72.7% of participants who reported to know about dental checkup and 84.6%, recommended the interval of dental check ups to be between one to six months.

About 58.6% reported to experience dental problems and the tooth ache was the most problem experienced (33.6%), tooth decay was 20.1% and (17.4%) experienced bleeding gum.

The attitude towards dental health problems was found to be positive and girls had more positive attitude than boys. In measuring beliefs on dental treatment, the majority held positive beliefs with no difference between boys and girls.

CONCLUSION
The findings of this study have shown that the participants had conducive oral health behavior, sufficient knowledge, positive attitude and held positive beliefs regarding dental treatments.

INTRODUCTION

Oral hygiene is the practice of keeping the mouth healthy and clean by brushing and flossing to prevent tooth decay and gum disease. The purpose of oral hygiene is to prevent the build-up of plaque, the sticky film of bacteria and food remains that form on the teeth and dorsum of the tongue. Plaque adheres to the crevices and fissures of the teeth and generates acids that, when not removed on a regular basis, slowly eat away, or decay, the protective enamel surface of the teeth, causing cavities to form.

Plaque also irritates gums and can lead to gum disease (periodontal disease) which eventually lead to tooth loss. Tooth brushing and flossing remove plaque from teeth and Fluoride in toothpaste helps to protect teeth by binding with enamel to make it stronger. In addition to such daily oral care, regular visits to the dentist promote oral health. Preventative services that he or she can perform include fluoride treatments, sealant application, and scaling (scraping off the hardened plaque, called calculus).

In the study done in Dar es Salaam Tanzania shows that most of the pupils (76.1%) had never visited a dentist[2]

Many people do brush their teeth at least once a day but lack the knowledge of proper tooth brushing. Tooth brushing at least once a day was reported by 92.1% of the children and 71.9% used toothpaste[2]

Raising public awareness about dental check up may assist in early diagnosis; however, public awareness in this regard as compared with other medical fields is low to nil mostly in the developing countries and this contributes to delay in the diagnosis.

Periodontitis and dental caries are among the common oral diseases that are still high in most communities in Tanzania but people are not aware of the problem. This is because at early stages the diseases are not painful hence people do not recognize them as problems until at late stages when become painful by-which the prognosis is poor.

The oral diseases are associated directly to people with behaviour of not practising proper oral hygiene, also resulting into the bad breath. Many people are not aware of proper tooth brushing being the good preventive measure of their oral diseases. Their altitude toward brushing is only for cosmetic purpose. Further more people have no behaviour of visiting dental clinics for general check up. They believe that the sign of dental diseases is painful tooth/teeth, and treatment available to dental clinic is only extraction.

Several studies have been conducted on knowledge, attitude and utilization of dental services among secondary school students in Tanzania which showed prevalence. A study on knowledge, attitude and utilization of dental services among secondary school students in Iringa is therefore called for to establish the association between education and awareness, attitude and utilization of dental services.

To determine the magnitude of oral health knowledge and behavior among secondary school students in Iringa region will rectify the problem of not using dental services and enable necessary interventions that can be undertaken by using the respective authorities.

After collecting data from the subjects, the task forward will be improving on education on dental services. This will enhance awareness, positive attitude and utilization of dental services not only for secondary school students in Iringa but also for the whole society in the country. There is a big task for dentists and other dental personnel's to educate the community on the different types of dental services provided and their importance in improving oral health.

METHODOLOGY

The type of the study was descriptive cross-sectional study in 384 adolescent Secondary school students, sampled by random sampling technique, within the Iringa Municipality from August to September 2008 (from data collection to submission of report). Students from different schools in the municipal area were given Swahili questionnaires to fill and from each form, 25 students were given questionnaires from form one to form three

Behavior refers to all of a person's actions that affect oral health. This was measured by a dichotomous scale whereby 1 indicates 'Yes' and 0 indicates 'No'

Knowledge refers to oral health factual information possessed by individual. This was measured by asking questions of dichotomous scale whereby 1 indicates 'Yes' and 0 indicates 'No'

Attitude is a positive or negative evaluation of a behavior, and that performance of that behavior will lead to valued outcome. It is how a person thinks and whether he/she lean to optimistic or pessimistic. This was measured by asking questions of 5 point scale.

The collected data were analyzed by using a computer statistical program, SPSS. Frequency distribution and bivalent association were made, statistical test of chi square test was used to compare proportions and T-test was used to compare means and P-value was set at 0.05

Ethical clearance was obtained from the collage (MUHAS) and the permission was given from the Municipal director of the respective municipal council. Eligible subjects were informed about the purpose of the study and consent was sought.

RESULTS

The study sample was 384 students, 159 (41.4%) were males and 255(58.6%) were females. The age ranged from 13 through 22 years old.

Frequency distribution of participants by self reported health problems, dental visits with reasons and treatment given.

	Yes		No		Total	
	N	%	N	%	n	%
Perceived problems						
Experienced dental problems	225	58.6	159	41.4	384	100
Tooth decay	77	20.1	303	79.9	384	100
Experienced bleeding gum	67	17.4	317	82.6	384	100
Bad breath	16	4.2	368	95.8	384	100
Tooth ache	129	33.6	255	66.4	384	100
Visit						
Dental visit	112	29.2	272	70.8	384	100
Reasons for visit						
Tooth decay	71	63.4	41	36.6	112	100
Bleeding gum	15	13.4	97	86.6	112	100
Dental check up	38	33.9	74	66.1	112	100
Treatment given						
Extraction	91	81.3	21	18.7	112	100
Filling	11	9.8	101	90.2	112	100
Scaling	10	8.9	102	91.1	112	100

Fifty nine percent reported to experience dental problems. Of those, tooth ache was the most common problem experienced (33.6%) while 20.1% were tooth decay and 17.4% reported to experience bleeding gum. Only 112(29.2%) reported to visit the dental clinic whereby 63.4% of those were due to tooth decay, 13.4% were due to bleeding gum and only 33.9% were for dental checkup. For 112 subjects who visited the clinic, the treatment given was 91(81.3%) extraction, 11(9.8%) filling and 10(8.9%) scaling.

Frequency distribution of participants by self reported tooth brushing per day

	N	%
Brushing time		
Once	232	60.4
Twice	92	24
Thrice	56	14.6
Four times	4	1
Total	384	100
Time length for one tooth brush use:		
one month	227	59.1
two months	66	17.2
three months	49	12.8
More than three months	42	10.9
Total	384	100

The study showed that all participants reported to brush their teeth. Most of individuals (60.4%) brushed only once a day, 24% brushed twice and 14.6% brushed three times, whereby a very few (1%) brushed four times a day. Those who reported to use a plastic tooth brush were 97.1% whereby 59.1 % used one tooth brush for one month, 17.2% for two months, 12.8% for three months and 10.9% for more than four months.

Frequency distribution of participants by time of tooth brushing

	Yes		No		Total	
	N	%	N	%	n	%
Before breakfast	346	90.1	38	9.9	384	100
After breakfast	44	11.5	340	88.5	384	100
Before lunch	11	2.9	373	97.1	384	100
After lunch	100	26	284	74	384	100
Before supper	23	6	361	94	384	100
Before bed time	76	19.8	308	80.2	384	100

Among 384 subjects, 346(90.1%) brushed their teeth before breakfast and only 76(19.8%) brushed before bed time.

Frequency distribution of participants by scores of attitudes towards dental health

Scores	Frequency	%
9-14	24	6.3
15-19	162	42.1
20-22	127	33.1
23-25	71	18.5
Total	384	100

The attitudes were measured using five questions of 5-point scale, the questions were added up and the distribution ranged from 9 - 25, the overall mean was 19.47. Scores were categorized into 9-14, 15-19, 20-22, and 23-25. The majority were in the range of 15-19. Mean for boys was 19.14 and that for girls was 19.87. Comparing mean for boys and girls, significantly girls had more positive attitude towards dental health compared to boys. (t = -2.244, p value =0.025)

Beliefs were measured at a 5-point scale, the questions were added up, the scores ranged from 3- 14, the overall mean was 7.41.the scores categorized to 3-6, 7-10 and 11-14. Majority were in the range of 7-10. The mean for boys was 7.24 and that for girls was 7.53. Comparing mean for boys and girls no significant difference in beliefs between boys and girls. (t = -1.183, p value = 0.238)

Frequency distribution of participants by oral health education and dental visits

		Dental visit		
		Yes	No	Total
Oral health education	Yes	73 (65.2%)	111(47.9%)	184(47.9%)
	No	39(34.8%)	161(59.2%)	200(52.1%)
Total		112(100%)	272(100%)	384(100%)

Significantly, higher proportion of those who reported to attended dental clinic received oral health education (65.2) whereby 59.2% of those who didn't visit the dentist had no oral health education. The chi square is 18.88 and the p value is 0.000.

Those who reported to be aware of dental check up were 279(72.7%) and 325(84.6%) thought that the interval of dental check ups should be one to six months

Those who received oral health education were 184(47.9%). Of those 51% received from television programs and only 47% received from dental practitioners.

DISCUSSION

The study sample may not reflect the student's knowledge, behavior attitude and beliefs of all students in Iringa as the study conducted only in schools of urban areas. Due to participants seeking social desirability, they may over score when it comes to desirable behavior. This may lead to bias. The sample size was large enough to represent students in Iringa municipality.

In assessing the attitude and beliefs of secondary school students towards dental health problems, it was found that most students had moderate positive attitude. Similar results found that generally participants had positive attitude towards dental problems.[3] Girls had more positive attitude compared to boys.

Most of participants believed bad breath to be caused by poor oral hygiene and treated by proper tooth and tongue brushing. Similar results were obtained in Kuwait found that inadequate oral hygiene practices were the factors most strongly associated with self-reported oral malodor in Kuwait patients[7]

Majority of participants reported to be aware that, regular dental visits are important for prevention of dental diseases and a moderate proportion believed that dental diseases are dangerous to the life. Moreover when assessing the students beliefs on dental treatment, they were holding slightly positive beliefs with no difference in beliefs among boys and girls

Most of students had satisfactory knowledge on tooth brushing practices. It was encouraging to note that all participants reported to brush their teeth at least once a day although they didn't know how to brush systematically. Similar results have also been demonstrated, revealing that many people brushed their teeth at least once a day but lack the knowledge of proper tooth brushing[2] and in Uganda and Tanzania revealed that most students reported to practice daily tooth brushing[1]

Most of participants brushed before breakfast with the majority using a plastic tooth brush. Most people brush before breakfast because it is cultural acceptance of the society and they also intend to remove bad breath after waking up. Most students knew that tooth paste helped to control tooth decay and reported to use tooth paste on brushing. Very few participants reported to brush before bed time because most people are not aware if they are supposed to brush twice a day.

Very few participants reported to practice flossing and at least some reported to use toothpicks to clean between teeth. The awareness of participants towards dental check up was reasonably highly and most of them thought that the dental check ups should be one to six months interval. This could be due to the fact that study was done within the municipality where sources of information such as TV, newspapers, internet and posters were available. Very few reported to visit dental clinic for preventive dental check up. Similar also reported very few dental visits for preventive dental check up[5]

The majority of participants reported to have experienced dental problems and the leading problem being tooth ache followed by tooth decay although very few reported to have visited the dentist which means that many people suffer from dental diseases but do not seek treatment. This could be due to dental treatment fear and costs. Further more, the majority of people were not aware of dental treatment other than tooth extraction. Only 18.7% received treatment other than tooth extraction. This could have made participants to believe that extraction is the treatment of choice for toothache. However extractions are done because patients usually report for treatment at a later stage of disease. Oral health education is very important for people to understand the importance of preventive dental check ups and reporting to dentist at early stages of dental diseases.

CONCLUSION:

The findings of this study have shown that the participants had conducive oral health behavior, sufficient knowledge, positive attitude and held positive beliefs regarding dental treatment.

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