

## Awareness and utilization of dental services among secondary school student in Moshi municipality

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### Abstract

**Aim:** To determine the awareness and utilization of dental services among secondary school students in Moshi Municipality. **Materials and Methodology:** This cross sectional study among 200 secondary school students aged 13-21 years old was done using a supervised Kiswahili self administered questionnaire. Two schools were conveniently chosen to obtain the needed sample of participants into this study. The data were analyzed using the SPSS version 13.0. The significance level was set at  $p < 0.05$ . **Results:** About 55% of the participants were aware of the dental services rendered. Proportionately more males were aware of dental services (63.6%), and utilized the services (48.6%) than females (44.1% and 44.1% respectively). Older students were more aware of the dental services (56.6%) and less utilized them (41.0%) compared to younger students (52.6% and 55.1% respectively). Students who had moderate to high level of awareness utilized dental services more (59.1%) than those with low levels of awareness (40.8%). **Conclusion:** More than half of the respondents were aware of the available dental services. Only 46.5% had utilized dental services during their lifetime. Students with moderate to high levels of awareness utilized dental services more than those with low levels of awareness.

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### Introduction

Oral Health is an integral to general health and essential for well being. Good oral health means being free from periodontal diseases, caries and other diseases and disorders that affect the oral cavity. Most people tend to neglect the fact that dental health should be incorporated into general health (1).

Dental diseases are generally not self-limiting. If untreated, dental conditions may affect the person's well being and overall quality of life. Without knowledge and understanding of available dental services there can be no informed decision for promotion of oral health (2). Giving priority to prevention is often undermined by most individuals; most dental services provided are curative, rehabilitative and emergency care (3). Many people do not have a regular routine of attending dental clinics for check up but visits are based on dental pain and treatment given is usually extraction (4, 5).

Lack of knowledge and awareness of need for treatment is the major reason which hinders utilization of health facilities and patients delay to seek treatment (6). Increase in knowledge on oral health lead to an increase in awareness and finally increase in utilization of the dental services (7). With proper knowledge during adolescence, this can

maintain good quality of life in adulthood (8, 9, 10, 11).

Various studies on oral health knowledge and the levels of utilization of dental services have been done in Tanzania (8, 12, 13), but no published reports from Moshi Municipality were retrieved. Therefore, the objective of this study was to determine the awareness and utilization of dental services among students in Moshi Municipality.

### Methodology

A cross-sectional study was designed to recruit 200 students from two conveniently selected co-education secondary schools in Moshi Municipality. Systematic random sampling technique was used to get participants from school registers. A hundred students from each of the two selected schools were systematically sampled to participate in the study.

A structured questionnaire was prepared in English and later translated into Kiswahili and pre-tested before the actual study. The sociodemographic variables included age, gender, name of school and residence. The questionnaire enquired on the reasons and recommended frequency of visits to an oral health facility, awareness on various types of oral

health care services and the sources of this information.

Data collection was done using a self-administered questionnaire. Students filled the questionnaire in class rooms in the presence of the researcher. Data were entered into the computer and analysed using SPSS version 13.0. Awareness was computed by summation of positive responses to questions on types of dental services rendered. A score of 50% to 100% was categorised as moderate to high awareness, and 0%-49% as low. A participant who had attended to an oral health facility at least once during her/his lifetime was regarded as having utilized an oral health service. Frequency distributions and cross-tabulations were done and chi square test was used to test for significant associations. The significance level was set at  $p < 0.05$ .

**Results**

The frequency distribution of the participants by their socio-demographic characteristics is shown in Table 1. The participants' age ranged from 13-21 years, males were 53.5% and 83% of the participants were from urban areas.

**Table 1: Distribution of participants by socio-demographic characteristics (N=200)**

| Demographic characteristics | No  | %    |
|-----------------------------|-----|------|
| Age-group                   |     |      |
| 13-16                       | 78  | 39   |
| 17-21                       | 122 | 61   |
| Sex                         |     |      |
| Males                       | 107 | 53.5 |
| Females                     | 93  | 46.5 |
| Name of School              |     |      |
| Mawenzi                     | 100 | 50   |
| Majengo                     | 100 | 50   |
| Residence                   |     |      |
| Rural                       | 34  | 17   |
| Urban                       | 166 | 83   |

Table 2 shows that a slightly higher proportion (56.6%) of the participants aged 17-21 years had moderate to high level of awareness of dental services rendered at dental clinics than 13-16 years old students (52.6%). Males were significantly more aware of dental services (63.6%) than females (44.1%) ( $\chi^2 = 7.6, p < 0.01$ ).

Participant's level of utilizing available dental services is shown in Table 3. Only 46.5% of the participants had utilized dental services in their lifetime. Proportionately more participants in the age group 13-16 years had utilized dental service than those aged 17-21 years ( $\chi^2 = 3.82, p < 0.05$ ). There were no statistically significant differences in the utilization of dental services between sexes or level of awareness.

**Table 2: Distribution of participants by level of awareness, age and sex**

| Level of awareness | Age-group (yrs) |      |       |      | Total | Sex*  |     |         |     | Total |     |      |
|--------------------|-----------------|------|-------|------|-------|-------|-----|---------|-----|-------|-----|------|
|                    | 13-16           |      | 17-21 |      |       | Males |     | Females |     | N     | (%) |      |
|                    | N               | %    | N     | %    |       | N     | %   | N       | (%) |       |     |      |
| Moderate to High   | 41              | 52.6 | 68    | 55.7 | 109   | 54.5  | 68  | 63.6    | 41  | 44.1  | 109 | 54.5 |
| Low                | 37              | 47.4 | 54    | 44.3 | 91    | 45.5  | 39  | 36.4    | 52  | 55.9  | 91  | 45.5 |
| Total              | 78              | 39.0 | 122   | 61   | 200   | 100   | 107 | 53.5    | 93  | 46.5  | 200 | 100  |

\*  $\chi^2 = 7.6; p < 0.01$

**Discussion**

In the current study, the level of awareness on dental services rendered at dental clinics did not vary significantly with age. This indicates that awareness does not rise as one move from age-group or school year to the other. However, male students were significantly more aware of dental services than female students. This indicates that male students are more exposed to sources of information such as TV, radio and newspapers than female students.

The fact that 46.5% of the participants had utilized dental services in their lifetime indicates that a big proportion of Tanzanians have dental problems since majority of Tanzanians visit dental clinics for emergency care when they are in pain. Proportionately more participants from the younger age group had utilized dental service than the older age group. This may reflect improvements in oral health services overtime, thus provided an

opportunity for care. Dental caries in Tanzania affects the primary dentition more than the secondary dentition (14, 15), thus probably, as services improved; the older age group had passed the primary dentition age. The findings from this study

show the participants aged 13-16 years utilized more dental services (55.1%) compared to 17-21 age group (41%). These findings are similar to a study by Dasayanake et al (1) where 30% of the younger age group (below 16 years) utilized more dental services.

**Table 3: Distribution of participants by level of utilization of dental services by age, sex and level of awareness**

| Utilization  | Age Group in years* |      |         |    |       |      | Sex   |      |         |      |       |      | Level of awareness** |      |                  |      |       |      |
|--------------|---------------------|------|---------|----|-------|------|-------|------|---------|------|-------|------|----------------------|------|------------------|------|-------|------|
|              | 13 - 16             |      | 17 - 21 |    | Total |      | Males |      | Females |      | Total |      | Low                  |      | Moderate to high |      | Total |      |
|              | n                   | %    | n       | %  | n     | %    | n     | %    | n       | %    | n     | %    | n                    | %    | n                | %    | n     | %    |
| Utilized     | 43                  | 55.1 | 50      | 41 | 93    | 46.5 | 52    | 48.6 | 41      | 44.1 | 93    | 46.5 | 38                   | 41.8 | 55               | 50.4 | 93    | 46.5 |
| Not Utilized | 35                  | 44.9 | 72      | 59 | 107   | 53.5 | 55    | 51.4 | 52      | 55.9 | 107   | 53.5 | 53                   | 58.2 | 54               | 49.6 | 107   | 53.5 |
| Total        | 78                  | 39   | 122     | 61 | 200   | 100  | 107   | 53.5 | 93      | 46.5 | 200   | 100  | 91                   | 45.5 | 109              | 54.5 | 200   | 100  |

\*  $\chi^2 = 3.82$ ,  $p < 0.05$ .; \*\*  $\chi^2 = 1.5$ ,  $p > 0.05$ .

There being no statistically significant differences in the utilization of dental services between sexes indicate that there is equal access to service for both sexes. The findings differ from the study by Dasayanake et al (1) in which, females utilized more the available services (51.2%) and a study by Moshha (6) which reported that more females (52.1%) were users of dental care services than males (43%).

Lack of statistically significant differences in the utilization of dental services between level of awareness, indicate that level of awareness is not necessarily directly related to utilization of services.

Results from this study show that the utilization of dental health services is not directly related to the levels of awareness of the available dental services unlike in a study by Mumghamba et al (2) where it was shown that one's knowledge of oral health would lead to an informed decision on utilization.

### Conclusion and Recommendations

More than half of the respondents were aware of the available dental services. Only 46.5% had utilized dental services during their lifetime. Students with moderate to high levels of awareness utilized dental services more than those with low levels of awareness. Nevertheless, more studies need to be done to verify any relationship between awareness of available dental services and utilization of the services.

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