MALOCCLUSION AND ORTHODONTIC TREATMENT NEEDS IN 12-15-YEAR-OLD CHILDREN IN MOSHI, TANZANIA

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ABSTRACT

Background

Malocclusion may cause psychosocial problems and predispose to dental ill-health. Activities to recognize, prevent and treat malocclusion are essential for comprehensive oral health care.

Objective:

To assess prevalence of malocclusion, awareness and concern about malocclusion and orthodontic treatment need in 12–15– year–olds in Moshi, Tanzania.

Design:

Descriptive cross-sectional study.

Setting:

Moshi Municipality in Kilimanjaro region, Tanzania.

Subjects and Methods:

A sample of 299 randomly selected public primary school children aged 12 - 15 years. Data was collected using questionnaires and clinical examinations. A total of 158 males and 140 females responded to questionnaire and 153 males and 136 females were examined for malocclusion. Data on registration of malocclusion were collected using modified Bjork criteria and DAI scores. Data were analyzed using SPSS, Microsoft excel and Epi. Info. packages.

Results:

The overall prevalence of malocclusion was 97.6%. Angle's Class I malocclusion (67.5%) prevailed. Angle's Class II and III malocclusion occurred in 6.9% and

11% of the sample respectively. Subdivions occurred in 5.9% of those with Class II malocclusion and 8.7% of those with Class III malocclusion. Anterior irregularities were high in maxilla (46%) and in mandible (51.6%) with significant gender difference (P<0.05) where females exhibited more irregularities than males in both jaws. However, males exhibited more crowding in incisor segments than females (P<0.05). Frontal open bite occurred in 6.2% and deep bite in 10.7% of the sample. Although there were significant correlations between awareness and concern about malocclusion in the subjects, this, however did not correlate significantly with severity of malocclusion. Subjective and objective orthodontic treatment needs were found in 69.1% and 35.3% of the subjects respectively. Mean DAI score was 24.6 and handicapping malocclusion 6.9%.

Conclusion:

Overall there was a high prevalence of malocclusion. There was no significant gender difference in most of the malocclusion traits. Significant correlations between awareness and concern about malocclusion were noted. Objective orthodontic treatment need was lower than subjective need. Mean standard DAI score was below the lower cut off-point of treatment need categories. A small proportion of the subjects exhibited handicapping malocclusion. These findings form a base line for future studies on prevalence of malocclusion as well as trends of awareness and concern towards malocclusion in this population.

Recommendation:

Information from this study will be useful in the planning of oral health services in Tanzania. Presence of unmet orthodontic treatment needs in Tanzanian children calls for training of orthodontists to provide treatment opportunity for the population.