

## **Orthodontic treatment needs among 12-15 year-olds in Moshi, Tanzania.**

### **Abstract:**

**OBJECTIVE:** To assess malocclusion and orthodontic treatment needs among 12-15-year-olds in Moshi municipality, Tanzania. **DESIGN:** A cross-sectional study. **SETTING:** Moshi municipality, Tanzania. **SUBJECTS:** Two hundred and eighty nine randomly selected primary school children in Moshi municipality in the year 2003. **RESULTS:** Maxillary median diastema occurred in 20.1% of the children. Crowding and spacing in the incisor segments occurred in 41.2% and 28.4% respectively with significantly more crowding in males than in females ( $p = 0.009$ ). Anterior irregularities occurred in 46% of the sample in the maxilla and 51.6% in the mandible. These irregularities were significantly more common in the females than in males in the maxilla and mandible ( $p = 0.014$ ,  $p = 0.037$  respectively). Reverse overjet was extremely rare (0.3%). Anterior openbite and antero-posterior molar relation discrepancies occurred in 6.2% and 32.5% of the sample, respectively. Crowding, irregularities in the incisor segments and antero-posterior molar relation discrepancies were dominant malocclusion traits in this population. The sample mean DAI score was 24.6 points (CI 95% 23.86-25.36). There was no statistically significant gender difference of DAI scores ( $p = 0.473$ ). About 65% of the subjects had either no need or had slight need for treatment whereas 35.3% were found with orthodontic treatment needs ranging from elective (21.5%), highly desirable (6.9%) to mandatory (6.9%). There was no significant gender difference in the categories of treatment need ( $p = 0.942$ ). Unmet orthodontic treatment needs were present in this population with a very small proportion of subjects exhibiting handicapping malocclusion. **CONCLUSION:** The information from this study forms part of the basis not only for further research, but also for planning orthodontic care in this community where unmet orthodontic treatment needs are present.