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The prevalence of malocclusion and orthodontic treatment needs of patients treated by students at Wits Oral Health Centre

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2024
https://hdl.handle.net/10539/37612

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Abstract

Objectives: To assess the prevalence of malocclusion and orthodontic treatment needs of patients treated by undergraduate students at Wits Oral Health Centre.

Materials and Methods: 124 pre-treatment orthodontic study models were reviewed. The Angle's classification was used to classify malocclusion and the Dental Aesthetic Index (DAI) scores categorised the severity of malocclusion and orthodontic treatment needs. The prevalence of malocclusion was determined by the percentage of patients in the sample who were categorised by DAI as definitive, severe and handicapping malocclusion. Stata version 16 was used to analyse the data and statistical tests were conducted at 5% significance level.

Results: The prevalence of malocclusion was estimated to be 92.74%. The mean DAI score was 39.54, ranging from 23 to 94. Handicapping malocclusion requiring mandatory treatment presented in 60.48% of the sample. Severe and definite malocclusion presented in 19.35% and 12.9% of the sample respectively, indicating a need for treatment. Minor malocclusion requiring minimal or no orthodontic treatment was in 7.26%. Angle's classification showed that most of the study sample (n=101; 81.45%) had a Class I malocclusion, followed by Class III (n=12; 9.68%) and Class II (n=11; 8.87%). There were no statistically significant differences between the DAI scores and the Angle's classification of malocclusion, p=0.9.

Conclusion: Angle's classification and the DAI scores showed that all patients in the study sample presented with malocclusion. However, 92.74% of the sample was deemed requiring orthodontic treatment by the DAI.