



Gender's Effect on the accuracy between Demirjian's and Williem's Methods

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Keywords

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Introduction

Estimating age is crucial in forensic medicine and clinical dentistry. Demirjian's method is the most commonly used method, Williem's method has modified Demirjian's method. Demirjian's method and Williem's method are utilized to investigate the correlation between dental age and chronological age among different genders and age groups.

Methods

There were 119 boys and 113 girls, aged 5 to 12 years old, their panoramic film were analysed. Based on the development of permanent teeth in the images, dental age (DA) was calculated using Demirjian's method and Williem's method. The subjects were then divided into different groups based on age range (5-9 years old, early mixed dentition period, vs. 10-12 years old, late mixed dentition period). Statistical analysis was conducted using SPSS software.

Results

The Williem's method did not show a significant difference in average dental age and chronological age among females and children in the late mixed dentition period. However, when examining the correlation between estimated age and chronological age, higher correlation was observed in males when grouping by gender, and higher correlation was observed in the early mixed dentition period (5-9 years old) when grouping by age. Additionally, the method was found not applicable to children in the late mixed dentition period (10-12 years old).

Conclusion

Besides genetic and racial differences, both gender and age are potential factors could influence the accuracy of age estimation for Demirjian's and Williem's method.

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