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**DENTAL AGE ESTIMATION USING ORTHOPANTOMOGRAMS FROM CHILDREN IN CROATIA AND BOSNIA- HERZEGOVINA****Galić I<sup>1</sup>**, Vodanović M<sup>2</sup>, Janković S<sup>3</sup>, Čuković-Bagić I<sup>4</sup>, Prohić S<sup>5</sup>, Nakaš E<sup>5</sup>, Brkić H<sup>2</sup>

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The aim of this cross-sectional retrospective study was to compare the accuracy of three radiographic methods for age estimation using orthopantomogram radiographs (OPGs) from developing children. OPGs of 2652 children (1214 boys and 1438 girls, aged 5.22–14.92 years) with 1474 children from Croatia and 1178 children from Bosnia and Herzegovina were examined and seven mandibular teeth from left side of mandible were assessed using Cameriere's method by measurement of open apices in teeth, mineralization stages of four different teeth from right side of jaws using Haavikko's adopted method based on Finnish children and Demirjian's mineralization stages of seven teeth from left side of mandible for Willems' method with updated scoring based on Belgian children. The mean difference(±SD) in years between dental and chronological age (DA-CA) was calculated for each method. Results show that the most accurate method was by Cameriere (boys  $-0.08 \pm 0.71$ , girls  $-0.03 \pm 0.70$  years), Haavikko's method underestimated age more (boys  $-0.09 \pm 0.80$ , girls  $-0.34 \pm 0.75$  years), while Willems' method overestimated age (boys  $0.51 \pm 0.79$ , girls  $0.28 \pm 0.83$  years). According to the analysis of variance, no statistically significant differences were found in results of DA-CA between children from Croatia and Bosnia and Herzegovina for each method. No statistically significant difference of DA-CA was found between boys and girls for Cameriere's method, for Haavikko and Willems method there were statistically significant differences between genders. Statistically significant differences were found in results of DA-CA among different age groups for each method. Published results could be used in clinical, forensic and anthropological purposes when sample of children was used from specified countries.

**Keywords:** forensic dentistry, age estimation, developing teeth, Croatia, Bosnia and Herzegovina