

## IADR Abstract Archives

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> > > Harmonization of Visible Posterior Teeth Width After Orthodontic Treatment

### Harmonization of Visible Posterior Teeth Width After Orthodontic Treatment

**Objectives:** To determine whether successfully treated orthodontic patients exhibit similar visible posterior teeth width values regardless of initial malocclusion type, and to evaluate the influence of age and sex on this variable.

**Methods:** Orthodontically treated patients (n=60; 20/group; age 16–35 y; mean 23.8±5.2 y; median 22 [IQR: 21–26]) with Class I, II, and III malocclusions were photographed under standardized conditions using a 1-cm adhesive calibration strip to control magnification error. Frontal full-face smiling images were analyzed using image-analysis software to quantify visible posterior teeth width. Differences were assessed using one-way ANOVA (group), independent t-tests (gender), and Spearman rank-order correlation (age).

**Results:** No significant difference in visible posterior teeth width was observed among the three malocclusion groups ( $p>0.05$ ). Mean visible posterior teeth width was highest in Class I (52,22±2,48mm) and lowest in Class III (51,53±2,85mm) ( $F(2)=0,322, p=0.726$ ). Male subjects showed a nonsignificant trend toward greater visible posterior teeth width compared to females in Class I ( $t(18)=1.119, p=0.278$ ), Class II ( $t(18)=-0.544, p=0.593$ ) and Class III ( $t(18)=0.702, p=0.491$ ). Age showed nonsignificant correlations with visible posterior teeth width, with slight negative trend in Class I ( $R(20)=0.064, p=0.789$ ) and Class II ( $R(20)=0.017, p=0.945$ ), and a nonsignificant positive trend in Class III ( $R(20)=0.433, p=0.057$ ).

**Conclusions:** Orthodontic treatment harmonizes smile parameters, producing comparable visible posterior teeth width across malocclusion types. Comprehensive smile analysis remains essential for accurate diagnosis and optimal esthetic treatment outcomes.

Division:

Meeting: 2026 IADR/AADOCR/CADR General Session (San Diego, California)

Location: San Diego, California

Year: 2026

Final Presentation ID: 3171

Abstract Category|Abstract Category(s): Orthodontics Research

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Financial Interest Disclosure: NONE

SESSION INFORMATION

Poster Session

Clinical Advances in Orthodontic Treatment

Saturday, 03/28/2026 , 03:45PM - 05:00PM