

Supplementary Material

The Dental Aesthetic Index and its Association with Dental Caries, Dental Plaque and Socio-Demographic Variables in Schoolchildren Aged 12 and 15 Years

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Table S1. Differences between age groups: Chi-square test *p*-values.

Variables	Null	Moderate	Severe/Very Severe
Sex	0.572	0.111	0.009
Social class	<0.001	0.001	0.007
Residence	0.186	0.001	0.055
Type of school	0.003	<0.001	<0.001
Caries experience	<0.001	<0.001	0.302
Dental plaque	<0.001	<0.001	<0.001

Table S2. Intraclass Correlation Coefficient index (ICC) between each of the five work teams and the external calibrator.

Work Teams	ICC (IC95%)	<i>p</i> -Value
Work Team 1		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	1 (1-1) ^a	-
Spacing in the incisal segments	1 (1-1) ^a	-
Midline diastema	0.97 (0.95-0.98)	<0.001
Largest anterior maxillary irregularity	0.99 (0.98-0.99)	<0.001
Largest anterior mandibular irregularity	1 (1-1) ^a	-
Anterior maxillary overjet	1 (1-1) ^a	-
Anterior mandibular overjet	1 (1-1) ^a	-
Vertical anterior open bite	1 (1-1) ^a	-
Anteroposterior molar relationship	1 (1-1) ^a	-
Dental Aesthetic Index (DAI) Score	0.99 (0.98-1)	<0.001
Work Team 2		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	0.90 (0.83-0.95)	<0.001
Spacing in the incisal segments	1 (1-1) ^a	-
Midline diastema	1 (1-1) ^a	-
Largest anterior maxillary irregularity	0.99 (0.98-0.99)	<0.001
Largest anterior mandibular irregularity	0.98 (0.94-0.98)	<0.001
Anterior maxillary overjet	0.99 (0.99-1)	<0.001
Anterior mandibular overjet	1 (1-1) ^a	-
Vertical anterior open bite	1 (1-1) ^a	-
Anteroposterior molar relationship	1 (1-1) ^a	-

DAI Score	0.99 (0.99–1)	<0.001
Work Team 3		
Number of missing upper teeth	1 (1–1) ^a	-
Number of missing lower teeth	0.80 (0.64–0.88)	<0.001
Crowding (incisal segments)	1 (1–1) ^a	-
Spacing in the incisal segments	0.88 (0.79–0.93)	<0.001
Midline diastema	0.96 (0.94–0.98)	<0.001
Largest anterior maxillary irregularity	0.97 (0.95–0.98)	<0.001
Largest anterior mandibular irregularity	0.98 (0.94–0.98)	<0.001
Anterior maxillary overjet	0.98 (0.97–0.99)	<0.001
Anterior mandibular overjet	1 (1–1) ^a	-
Vertical anterior open bite	1 (1–1) ^a	-
Anteroposterior molar relationship	0.93 (0.88–0.96)	<0.001
DAI Score	0.94 (0.90–0.97)	<0.001
Work Team 4		
Number of missing upper teeth	1 (1–1) ^a	-
Number of missing lower teeth	1 (1–1) ^a	-
Crowding (incisal segments)	1 (1–1) ^a	-
Spacing in the incisal segments	1 (1–1) ^a	-
Midline diastema	1 (1–1) ^a	-
Largest anterior maxillary irregularity	0.99 (0.98–0.99)	<0.001
Largest anterior mandibular irregularity	0.97 (0.94–0.98)	<0.001
Anterior maxillary overjet	1 (1–1) ^a	-
Anterior mandibular overjet	1 (1–1) ^a	-
Vertical anterior open bite	1 (1–1) ^a	-
Anteroposterior molar relationship	0.93 (0.88–0.96)	<0.001
DAI Score	0.99 (0.98–0.99)	<0.001
Work Team 5		
Number of missing upper teeth	1 (1–1) ^a	-
Number of missing lower teeth	1 (1–1) ^a	-
Crowding (incisal segments)	1 (1–1) ^a	-
Spacing in the incisal segments	1 (1–1) ^a	-
Midline diastema	0.96 (0.94–0.98)	<0.001
Largest anterior maxillary irregularity	0.98 (0.96–0.99)	<0.001
Largest anterior mandibular irregularity	0.95 (0.91–0.97)	<0.001
Anterior maxillary overjet	1 (1–1) ^a	-
Anterior mandibular overjet	1 (1–1) ^a	-
Vertical anterior open bite	1 (1–1) ^a	-
Anteroposterior molar relationship	0.88 (0.78–0.93)	<0.001
DAI Score	0.98 (0.96–0.99)	<0.001

^a 100% agreement.

Table S3. Cohen's Kappa concordance index between each of the five work teams and the external calibrator.

Work Teams	Weighted Kappa	
	Kw (95% CI)	p-Value
Work Team 1		
Malocclusion: four categories ^a	1 (1-1) ^b	-
Malocclusion: yes/no	1 (1-1) ^b	-
Work Team 2		
Malocclusion: four categories ^a	1 (1-1) ^b	-
Malocclusion: yes/no	1 (1-1) ^b	-
Work Team 3		
Malocclusion: four categories ^a	0.84 (0.81-0.87)	<0.001
Malocclusion: yes/no	0.78 (0.74-0.82)	<0.001
Work Team 4		
Malocclusion: four categories ^a	1 (1-1) ^b	-
Malocclusion: yes/no	1 (1-1) ^b	-
Work Team 5		
Malocclusion: four categories ^a	0.94 (0.93-0.96)	<0.001
Malocclusion: yes/no	0.92 (0.90-0.95)	<0.001

^a No malocclusion, moderate, severe or very severe malocclusion.

^b 100% agreement.

Table S4. Intraclass Correlation Coefficient index (ICC) between each of the five work teams.

Work Teams	ICC (95% CI)	p-Value
Work Team 1		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	0.96 (0.93-0.98)	<0.001
Spacing in the incisal segments	0.93 (0.88-0.96)	<0.001
Midline diastema	0.95 (0.91-0.97)	<0.001
Largest anterior maxillary irregularity	0.98 (0.96-0.99)	<0.001
Largest anterior mandibular irregularity	0.80 (0.64-0.89)	<0.001
Anterior maxillary overjet	0.93 (0.88-0.96)	<0.001
Anterior mandibular overjet	0.93 (0.88-0.96)	<0.001
Vertical anterior open bite	1 (1-1) ^a	-
Anteroposterior molar relationship	0.81 (0.66-0.89)	<0.001
DAI Score	0.93 (0.88-0.96)	<0.001
Work Team 2		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	0.84 (0.71-0.91)	<0.001
Spacing in the incisal segments	0.88 (0.79-0.93)	<0.001
Midline diastema	0.91 (0.85-0.95)	<0.001
Largest anterior maxillary irregularity	0.97 (0.94-0.98)	<0.001
Largest anterior mandibular irregularity	0.96 (0.93-0.98)	<0.001
Anterior maxillary overjet	0.93 (0.87-0.96)	<0.001
Anterior mandibular overjet	1 (1-1) ^a	-

Vertical anterior open bite	1 (1-1) ^a	-
Anteroposterior molar relationship	0.84 (0.72-0.91)	<0.001
DAI Score	0.93 (0.88-0.96)	<0.001
Work Team 3		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	0.79 (0.62-0.88)	<0.001
Spacing in the incisal segments	0.96 (0.92-0.98)	<0.001
Midline diastema	0.54 (0.18-0.74)	0.014
Largest anterior maxillary irregularity	0.93 (0.87-0.96)	<0.001
Largest anterior mandibular irregularity	0.95 (0.90-0.97)	<0.001
Anterior maxillary overjet	0.84 (0.72-0.91)	<0.001
Anterior mandibular overjet	1 (1-1) ^a	-
Vertical anterior open bite	1 (1-1) ^a	-
Anteroposterior molar relationship	0.75 (0.56-0.86)	<0.001
DAI Score	0.93 (0.88-0.96)	<0.001
Work Team 4		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	0.80 (0.64-0.89)	<0.001
Spacing in the incisal segments	0.94 (0.89-0.97)	<0.001
Midline diastema	0.75 (0.58-0.84)	<0.001
Largest anterior maxillary irregularity	0.94 (0.89-0.96)	<0.001
Largest anterior mandibular irregularity	0.96 (0.93-0.98)	<0.001
Anterior maxillary overjet	0.89 (0.81-0.94)	<0.001
Anterior mandibular overjet	1 (1-1) ^a	-
Vertical anterior open bite	1 (1-1) ^a	-
Anteroposterior molar relationship	0.88 (0.80-0.94)	<0.001
DAI Score	0.91 (0.85-0.95)	<0.001
Work Team 5		
Number of missing upper teeth	1 (1-1) ^a	-
Number of missing lower teeth	1 (1-1) ^a	-
Crowding (incisal segments)	0.94 (0.90-0.97)	<0.001
Spacing in the incisal segments	0.80 (0.64-0.88)	<0.001
Midline diastema	0.76 (0.60-0.85)	<0.001
Largest anterior maxillary irregularity	0.96 (0.93-0.98)	<0.001
Largest anterior mandibular irregularity	0.95 (0.90-0.97)	<0.001
Anterior maxillary overjet	0.94 (0.89-0.96)	<0.001
Anterior mandibular overjet	1 (1-1) ^a	-
Vertical anterior open bite	0.88 (0.79-0.93)	<0.001
Anteroposterior molar relationship	0.94 (0.90-0.97)	<0.001
DAI Score	0.96 (0.92-0.98)	<0.001

^a 100% agreement.

Table S5. Cohen's Kappa concordance index between each of the five work teams.

Work Teams	Weighted Kappa	
	K _w (95% CI)	<i>p</i> -Value
Work Team 1		
Malocclusion: four categories ^a	0.84 (0.81–0.87)	<0.001
Malocclusion: yes/no	0.82 (0.78–0.86)	<0.001
Work Team 2		
Malocclusion: four categories ^a	0.84 (0.80–0.89)	<0.001
Malocclusion: yes/no	0.72 (0.66–0.78)	<0.001
Work Team 3		
Malocclusion: four categories ^a	0.73 (0.67–0.79)	<0.001
Malocclusion: yes/no	0.79 (0.72–0.85)	<0.001
Work Team 4		
Malocclusion: four categories ^a	0.65 (0.55–0.76)	<0.001
Malocclusion: yes/no	0.65 (0.55–0.76)	<0.001
Work Team 5		
Malocclusion: four categories ^a	0.85	<0.001
Malocclusion: yes/no	1 (1–1) ^a	-

^a No malocclusion, moderate, severe, or very severe malocclusion.