

Additional file S3 – Reliability and validity of OHRQoL instruments

S3 Table 1. Internal consistency reliability of the OHRQoL instruments

	Number of items	Cronbach's alpha	Average interitem covariance
ECOHIS			
Total scale - First visit	13	0.81	0.06
JIA - First visit	12	0.82	0.10
Controls - First visit	13	0.77	0.03
Total scale - Follow-up	13	0.79	0.08
JIA - Follow-up	13	0.82	0.11
Controls - Follow-up	12	0.74	0.05
Child OIDP			
Total scale - First visit	8	0.76	0.05
JIA - First visit	8	0.77	0.08
Controls - First visit	8	0.73	0.02
Total scale - Follow-up	8	0.68	0.02
JIA - Follow-up	8	0.69	0.03
Controls - Follow-up	7	0.65	0.01

ECOHIS =early childhood oral health impaction scale. JIA =juvenile idiopathic arthritis. OIDP =oral impact on daily performances. JIA =juvenile idiopathic arthritis.

S3 Table 2. Mean OHRQoL change ADD scores by change categories of reference variables in children and adolescents

Change in the category of the reference variable								
	Worsened		Stable		Improved		Total	
	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)	Mean (SD)[95%CI]	
Satisfaction with oral health								
Children - ECOHIS change ADD score								
JIA	7	-2.6 (2.8)	35	-0.4 (4.0)	1	6 (0)	-1.0 (4.0) [-2.1-0.2]	
Controls	2	-2.0 (0)	51	-0.5 (3.4)	1	-1 (0)	- 0.5 (3.3) [-1.4-0.4]	
Adolescents - Child OIDP change ADD score								
JIA	4	-0.8 (1.5)	90	0.7 (2.7)	16	0.7 (2.0)	0.6 (2.6) [0.1-1.1]	
Controls	2	2.0 (2.8)	89	0.2 (1.3)	11	0.3 (0.8)	0.3 (1.3) [0.0-0.5]	
Satisfaction with tooth appearance								
Children - ECOHIS change ADD score								
JIA	5	-3.6 (3.2)	34	-0.6 (3.7)	4	3.5 (3.8)*		
Controls	5	-2.2 (1.5)	47	-0.3 (3.4)	2	-2.5 (0.7)		
Adolescents - Child OIDP change ADD score								
JIA	4	0.25 (0.5)	87	0.4 (2.1)	19	1.5 (4.2)		
Controls	6	-0.5 (1.2)	85	0.3 (1.3)	11	0.1 (1.1)		
Gingival bleeding during toothbrushing								
Children - ECOHIS change ADD score								
JIA	7	-0.7 (2.3)	34	-1.2 (4.3)	4	-0.5 (5.2)		
Controls	9	-1.3 (3)	34	-0.6 (3.3)	8	0.6 (3.7)		
Adolescents - Child OIDP change ADD score								
JIA	14	-0.3 (1.6)	69	0.5 (2.0)	15	1.5 (3.7)		
Controls	20	0.7 (1.9)	65	0.2 (1.1)	16	0.1 (0.6)		
Pain or discomfort during toothbrushing								
Children - ECOHIS change ADD score								
JIA	1	-2 (0)	45	-1.0 (4.1)	0			
Controls	0		50	-0.6 (3.3)	1	1 (0)		
Adolescents - Child OIDP change ADD score								
JIA	10	0.8 (1.9)	78	0.2 (1.8)	9	2.9 (4.6)*		
Controls	7	-0.7 (1.3)	85	0.2 (1.2)	9	1.1 (1.8)*		
Ulcerations - several times yearly or more								
Children - ECOHIS change ADD score								
JIA	6	-4.8 (4.6)	31	-0.3 (4.0)	7	-1.3 (2.1)*		
Controls	5	0.6 (3.6)	42	-0.5 (3.2)	3	-3.3 (3.5)		
Adolescents - Child OIDP change ADD score								
JIA	17	0.3 (1.2)	68	0.5 (2.6)	9	0.8 (2.2)		
Controls	19	0.3 (1.1)	68	0.1 (1.3)	14	0.8 (1.5)		
Orofacial pain the last 30 days								
Children - ECOHIS change ADD score								
JIA	6	-5.2 (3.1)	38	-0.2 (3.8)	3	-2.3 (4.5)*		
Controls	1	-7 (0)	53	-0.4 (3.2)*	0			
Adolescents - Child OIDP change ADD score								
JIA	16	-0.3 (2.2)	74	0.7 (2.5)	20	0.9 (3.2)		
Controls	6	0 (0.9)	93	0.3 (1.3)	3	-0.7 (2.1)		

One-way ANOVA: *p<0.05

Bonferroni post hoc analyses indicated the following (p < 0.05): Statistically significant differences in mean ECOHIS change by change score of satisfaction with tooth appearance for children in the JIA-group worsened vs improved; for change score of ulcerations in children with JIA worsened vs same; in both groups for change score of orofacial pain worsened vs same

Statistically significant differences in mean Child OIDP change by change score of pain during toothbrushing for adolescents in the control group worsened vs improved and for adolescents with JIA same vs improved.