



Reproducibility of the Oral Health Impact Profile Survey in Children

Bottner D, Bares A and Jones R

Division of Pediatric Dentistry, University of Minnesota, MN

UNIVERSITY OF MINNESOTA

School of Dentistry
Driven to DiscoverSM

Introduction

- Patient-reported oral health-related quality of life (OHRQoL) is an emerging clinical assessment approach to quantify the holistic health condition of patients in dental practice and in public health environments.
- Hypothesis: A newly modified English version of the OHIP-5_{SCHOOL} questionnaire for children (Ages 9-14) is a reproducible measure of OHRQoL.


Materials and Methods

- Oral Health Impact Profile (OHIP-5) questionnaire was modified (OHIP-5_{SCHOOL}) to assess OHRQoL in the pediatric population.
- 32 English-speaking children aged 9-14 were given the initial survey at a new patient exam or recall (1st OHIP), then given the same survey (2nd OHIP) at a recommended follow-up appointment (sealants, orthodontic consults/adjustments, operative) within 3 months.

- OHIP answers were assigned a score from 1-5:
Never = 1
Hardly Ever = 2
Occasionally = 3
Often = 4
Very Often = 5


- Statistical analysis: Medcalc (v23.1.7, Ostend, Belgium) and Microsoft Excel (v2501, Washington, USA).

How often have you had the following problems in the past 7 days

Chewing 


In the past 7 days, have you had **difficulty chewing** any foods because of problems with your teeth, mouth, jaws or braces?

☐ Never ☐ Hardly Ever ☐ Occasionally ☐ Often ☐ Very Often

Flavor 


In the past 7 days, have you felt there has been **less flavor in your food** because of problems with your teeth, mouth, jaws or braces?

☐ Never ☐ Hardly Ever ☐ Occasionally ☐ Often ☐ Very Often

Activities 


In the past 7 days, have you had **difficulty doing** your usual **activities** because of problems with your teeth, mouth, jaws, or braces (e.g., in your family, at school, and with your friends)?

☐ Never ☐ Hardly Ever ☐ Occasionally ☐ Often ☐ Very Often

Pain 

In the past 7 days, have you had **painful aching** in your mouth?

☐ Never ☐ Hardly Ever ☐ Occasionally ☐ Often ☐ Very Often

Appearance 

In the past 7 days, have you felt **uncomfortable about the appearance** of your teeth or braces?

☐ Never ☐ Hardly Ever ☐ Occasionally ☐ Often ☐ Very Often

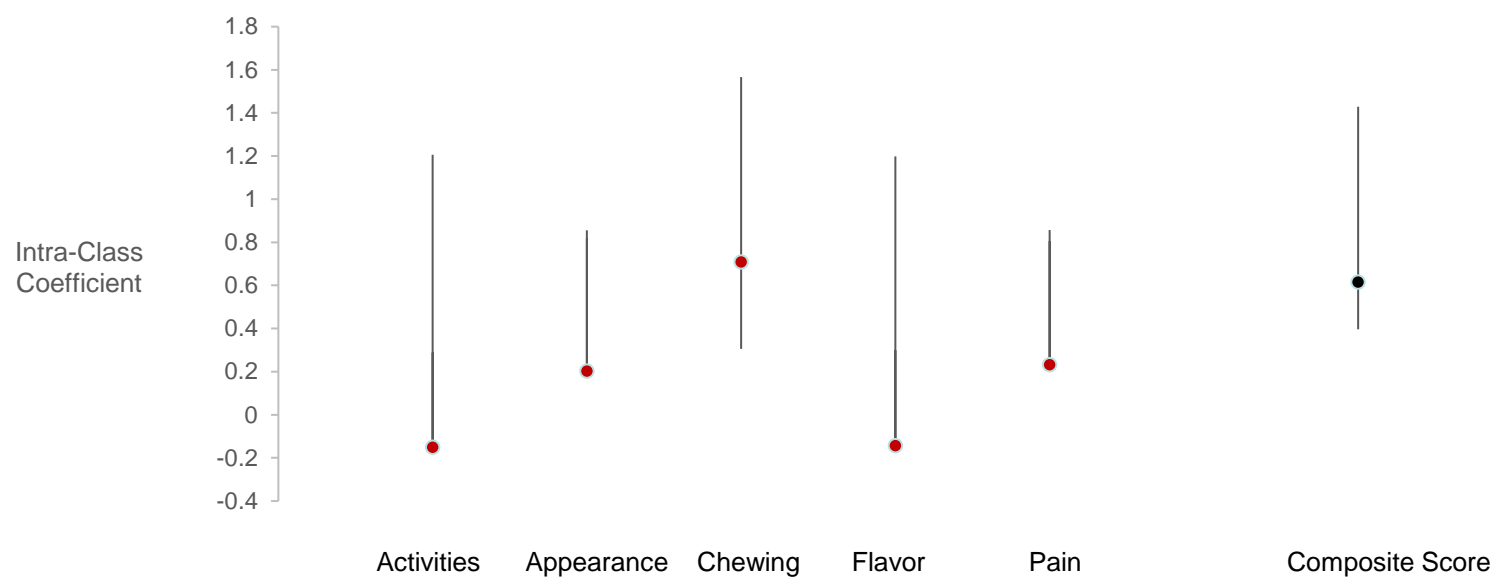
Results

Table 1. Mean OHIP Score

	Activities	Appearance	Chewing	Flavor	Pain
Mean Score					
1 st OHIP	1.06	1.52	1.38	1.06	1.31
2 nd OHIP	1.19	1.31	1.47	1.06	1.25

OHIP scores were consistently low, indicating a lower OHRQoL burden. This may have resulted in a small number of patients having a disproportionate effect on the ability to validate this survey. The mean follow-up time for the 2nd OHIP was 23 days,.

Figure 1. Intra Class Coefficient (95% Confidence Interval)



Intraclass correlation coefficient (95% confidence interval) showed moderate reliability within the chewing domain (0.71) and the composite score (0.62).

Table 2. Agreement of Domains Between 1st OHIP and 2nd OHIP (%)

	Activities	Appearance	Chewing	Flavor	Pain
100% agreement	81	68	66	88	72
Diff by 1 OHIP	13	16	31	13	22
Diff by >1 OHIP	6	16	3	0	6

There was a high level of agreement within the domains.

Table 3

a) 1st OHIP: Average Inter-Item Correlation = 0.0009642

	Appearance	Chewing	Flavor	Pain
Activities	-0.1698	0.03963	-0.06897	0.1452
Appearance		0.2056	-0.00531	-0.1192
Chewing			0.03963	-0.00954
Flavor				-0.1549

b) 2nd OHIP: Average Inter-Item Correlation = 0.2359

In this sample of children, the low correlation suggests the domains (questions) contribute to the overall OHIP assessment score independently.

Conclusions

- The OHIP-5_{SCHOOL} had low reproducibility in this cohort.
- The overall low OHRQoL burden (scores) may have contributed to this finding.
- Next steps will be to assess a broader population of OHIP burden for test-retest.



UNIVERSITY OF MINNESOTA
Driven to DiscoverSM