



Evaluation of the impact of restorative treatment on patient reported outcomes using OHIP-5 SCHOOL

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Introduction

- Pediatric dental assessment has historically focused on disease presence/absence.
 - An emerging paradigm shift in adult based medical/dental care evaluates patient reported outcomes across quality-of-life domains.
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- Patient reported outcomes around types of restorative treatment in the pediatric population have not been evaluated.
 - We hypothesized that patients with non-esthetic restorative treatment would report poorer patient-reported outcomes than those who had received no received no restorative or esthetic restorative treatment.

Materials and Methods

- A 5-item questionnaire (Oral Health Impact Profile/OHIP-5SCHOOL) designed for school-aged children was routinely administered to English-speaking children ages 9 and older at the University of Minnesota Pediatric Dental Clinic.
- The survey instrument evaluated patients in four quality of life domains: oral function, orofacial appearance, orofacial pain and psychosocial impact.
- Time to complete the questionnaire was measured for each participant.
- Patient demographics captured in the EHR such as age, gender, insurance type (public vs private) were also collected.
- OHIP scores were compared between patients with a history of esthetic/tooth-colored restorative treatment, non-esthetic treatment, and no history of dental treatment.
- Statistical analysis was performed to evaluate variables predictive of patient responses and differences between the groups.

Chart #:
Date:
Time:

Oral Health Impact Profile – School Version (OHIP-5_{SCHOOL})

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

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 |
|-------|-------------|--------------|-------|------------|
| | | | | |

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 |
|-------|-------------|--------------|-------|------------|
| | | | | |

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 |
|-------|-------------|--------------|-------|------------|
| | | | | |

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

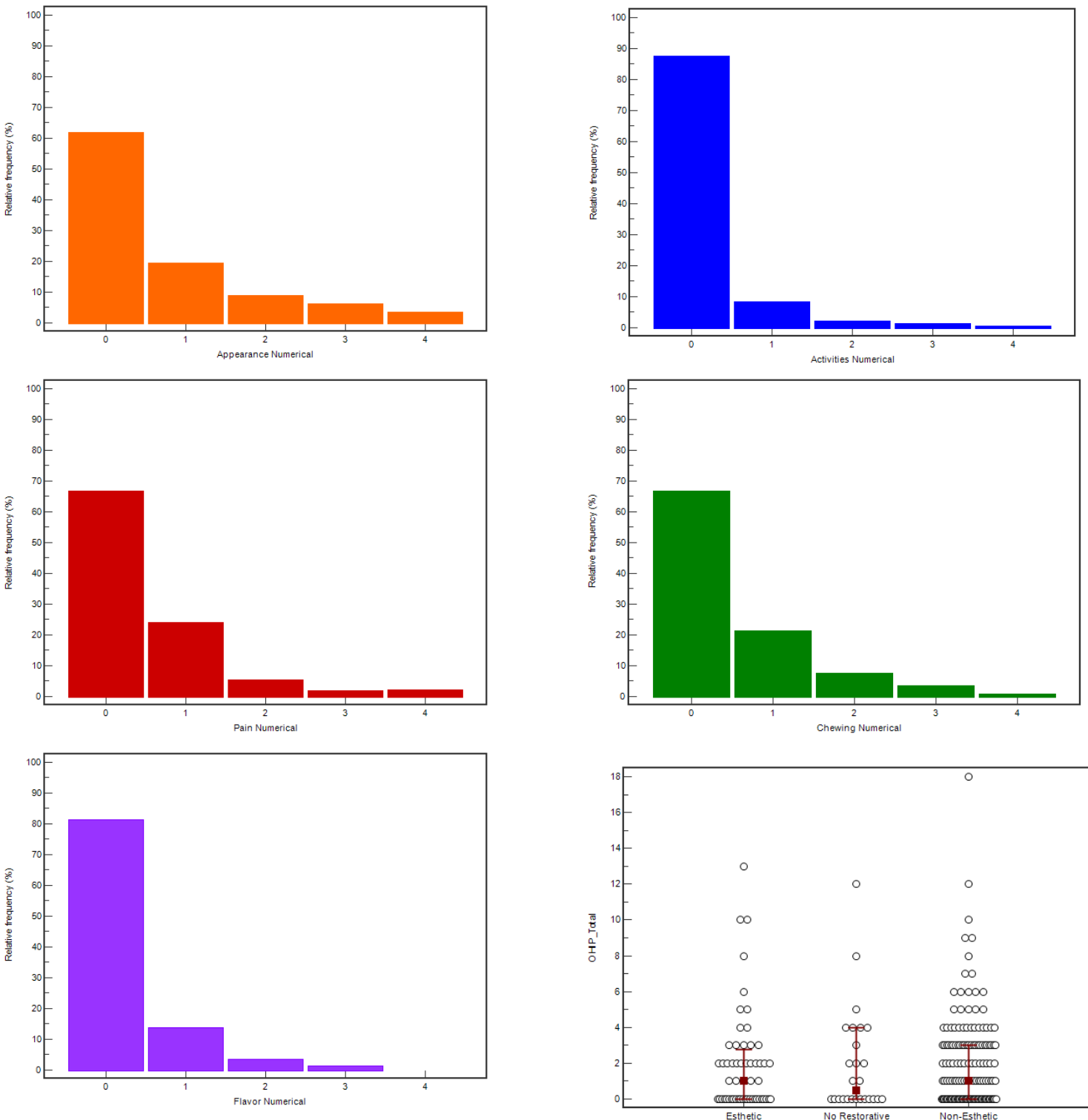
| Never | Hardly Ever | Occasionally | Often | Very Often |
|-------|-------------|--------------|-------|------------|
| | | | | |

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

| Never | Hardly Ever | Occasionally | Often | Very Often |
|-------|-------------|--------------|-------|------------|
| | | | | |

Implementation of the survey instrument included timing response completion by clinic staff

Results



- Data evaluation and the study included evaluation of 230 responses to the OHIP questionnaire. The median time to complete the questionnaire was ~ 60 seconds.
- OHIP responses across all five questions assessed demonstrate a non-parametric distribution with a majority of participants answering ‘Never’ or “Hardly Ever.”
- A Kruskal-Wallis test was conducted to compare the median overall OHIP score based on patients age (p=.19), gender (p=.52), insurance status (p=.27) and history of esthetic or non-esthetic restorative treatment (p=.40). The test indicated that for each, there was no statistically significant difference between the groups.
- There was positive inter-item correlation between all items and a Cronbach alpha score of .71 indicating internal consistency across the items.

Inter-Item correlation

| | Appearance_Numerical | Chewing_Numerical | Flavor_Numerical | Pain_Numerical |
|----------------------|----------------------|-------------------|------------------|----------------|
| Activities_Numerical | 0.3094 | 0.3857 | 0.1597 | 0.5518 |
| Appearance_Numerical | | 0.2274 | 0.2151 | 0.4306 |
| Chewing_Numerical | | | 0.2706 | 0.4378 |
| Flavor_Numerical | | | | 0.4017 |

Average Inter-Item correlation 0.3390

2. Cronbach's alpha with standardized variables

| | |
|----------------------------|--------|
| Cronbach's alpha | 0.7194 |
| 95% lower confidence limit | 0.6676 |

Conclusions

- In the study population, we found no statistically significant difference in OHIP scores between groups based on age, gender, insurance status or restoration history.
- This current study suggests that for our population the type of restorative treatment did not find a significant difference in OHIP scores across the five domains.
- Further research is needed to evaluate whether the verbiage of OHIP questions is applicable and understood in a diverse population of children 9 and older.



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