Relationships Among Adolescent Health Promotion, Oral Health Behavior, and OHRQoL

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INTRODUCTION

- Many contemporary oral health interventions target children before their sixth birthday and emphasize parental integration in order to promote oral health prior to eruption of teeth.
- While experiences during early childhood certainly impact oral health, adolescence is a life phase in which the opportunities for health are great and future determinants of adult health are established[1].
- Though pre- and perinatal focus may prevent problems, it fails to promote strengths and encourage participation from the patients themselves[2].
- In order to develop appropriate and effective adolescent oral health promotion efforts, it's first critical to understand the relationships among adolescent health promotion (AHP), oral health perceptions and behavior, and oral health-related quality of life (OHRQoL).

OBJECTIVE

- The research objective was to evaluate the OHRQoL, oral health knowledge and behavior, and health promoting behaviors of adolescent dental patients as well as discover preferences for oral health promotion techniques.

HYPOTHESIS

- The null hypothesis being explored was that there is no correlation between OHRQoL, adolescent health behavior domains, and oral health knowledge and behavior (r=0).

METHODS

- This was a cross-sectional study involving a convenience sample recruited from the University of Illinois Chicago College of Dentistry (UIC COD) in Chicago, Illinois sampled over a five-month period, from October 2021 through February 2022.
- Adolescent patients (11 to 17 years) were recruited at initial or recall exam to complete a Qualtrics© iPad survey that included the following four components:
  1. Adolescent Health Promotion-Short Form (AHP-SF)[3] (*21 questions*)
  2. Child Oral Health Impact Profile-Short Form (COHIP-SF)[4] (*19 questions*)
  3. Oral Health Knowledge Questionnaire (*25 questions)*
  4. Questions regarding demographics, oral health behaviors, and oral health promotion preferences (*10 questions)*
- Data was analyzed by SPSS and SAS.
- Statistical associations were tested by using Pearson Correlation Coefficients and ANOVA with statistical significance set at $p<0.05$.

Inclusion Criteria:
• Adolescent patients, 11 to 17 years of age
• Attending an initial or recall examination at the UIC COD
• Appointment between October 2021 and February 2022

Exclusion Criteria:
• Patients with communication barriers including but limited to lack of proficiency in English and communicative Special Health Care Needs (e.g. Autism Spectrum Disorder, Cerebral Palsy, Developmental Delay, Intellectual Disability)
• Patients who attended appointment without legal guardian

Initial / Recall | Qualtrics ® iPad Survey | Statistical Analysis

RESULTS

- Of 105 adolescents approached for the survey, consent and assent was obtained for 102 adolescent respondents (97%).
- As noted in **Table 1,** the majority identified as male (48%), reported no health issues (91%), identified as Hispanic/Latino (64%) and were in early adolescence (68%).
- As seen in **Table 2**, respondent OHRQoL (total COHIP score) was significantly correlated with oral health behavior and four adolescent health behaviors domains.
- Oral Health Knowledge was not significantly correlated with OHRQoL, oral health behavior, or adolescent health behavior domains.
- The most reported source of health information was health professionals (46%), followed by school (25%).
- The most reported oral health promotion technique was verbal lecture (33%).
  - This was *despite* the largest proportion preferring to receive oral health education via visual demonstration (35%) and reporting they believed this technique would "best help change their oral health for the better" (33%).

Variable	Categories	N (%)
Age	11-13	70 (68)
	14-16	32 (32)
Gender	Male-identifying	49 (48)
	Female-identifying	43 (42)
	Non-binary or other gender identifying	5 (5)
	Prefer not to say	5 (5)
Health Status	No health issues	92 (91)
	Minimal disease	9 (9)
	Moderate to severe disease	0 (0)
Insurance Status	Public insurance	81 (85)
	Private insurance	8 (8)
	No insurance	7 (7)
Race/ethnicity	White /Caucasian	9 (9)
	Hispanic /Latino	65 (64)
	Black/ African American	17 (17)
	Other	11 (11)

Table 1. Respondent Demographics.

Components	Correlation (p-value)
Oral Health Behavior & Total COHIP Score	r=0.226 (p=.022)
Oral Health Behavior & Total AHP Score	r=0.412 (p<.001)
Total COHIP Score & ➢ Life Appreciation Construct ➢ Social Support Construct ➢ Exercise Construct ➢ Stress Management Construct	r=0.327 (p=.001) r=0.290 (p=.004) r=0.251 (p=.012) r=0.210 (p=.037)

Table 2. Pearson Correlation Coefficients between OHRQoL (COHIP), Oral Health Behavior (OHB), and AHP constructs.

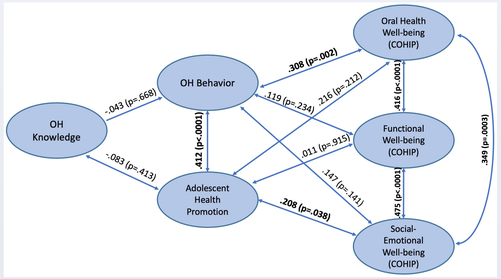

Figure 1. Theoretical framework demonstrating relationships between OHRQoL (COHIP) domains, OHB and AHP.

CONCLUSIONS

- The results of this study indicate that the null hypothesis is rejected at $\alpha = .05$.
- There are weak, but positive and significant correlations between OHRQoL, adolescent health behavior domains, and oral health behavior ($r \neq 0$).
- Findings suggest that adolescent oral health promotion efforts should incorporate not only visual demonstration for oral hygiene, but also the promotion of other health behavior domains (e.g. life appreciation, stress management, exercise) in order to positively impact OHRQoL.

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Method Images found on ShutterStock

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ACKNOWLEDGEMENTS

I'd like to thank my research team, co-residents, and partner for their support.

This study received expeditated approval from UIC's Institutional Review Board and did not receive funding (IRB #2021-0587).