

Parental Acceptance and Feasibility of Telehealth Nutrition Intervention for High-caries-risk Children

Chou J, Yoon R¹, Lumsden CL

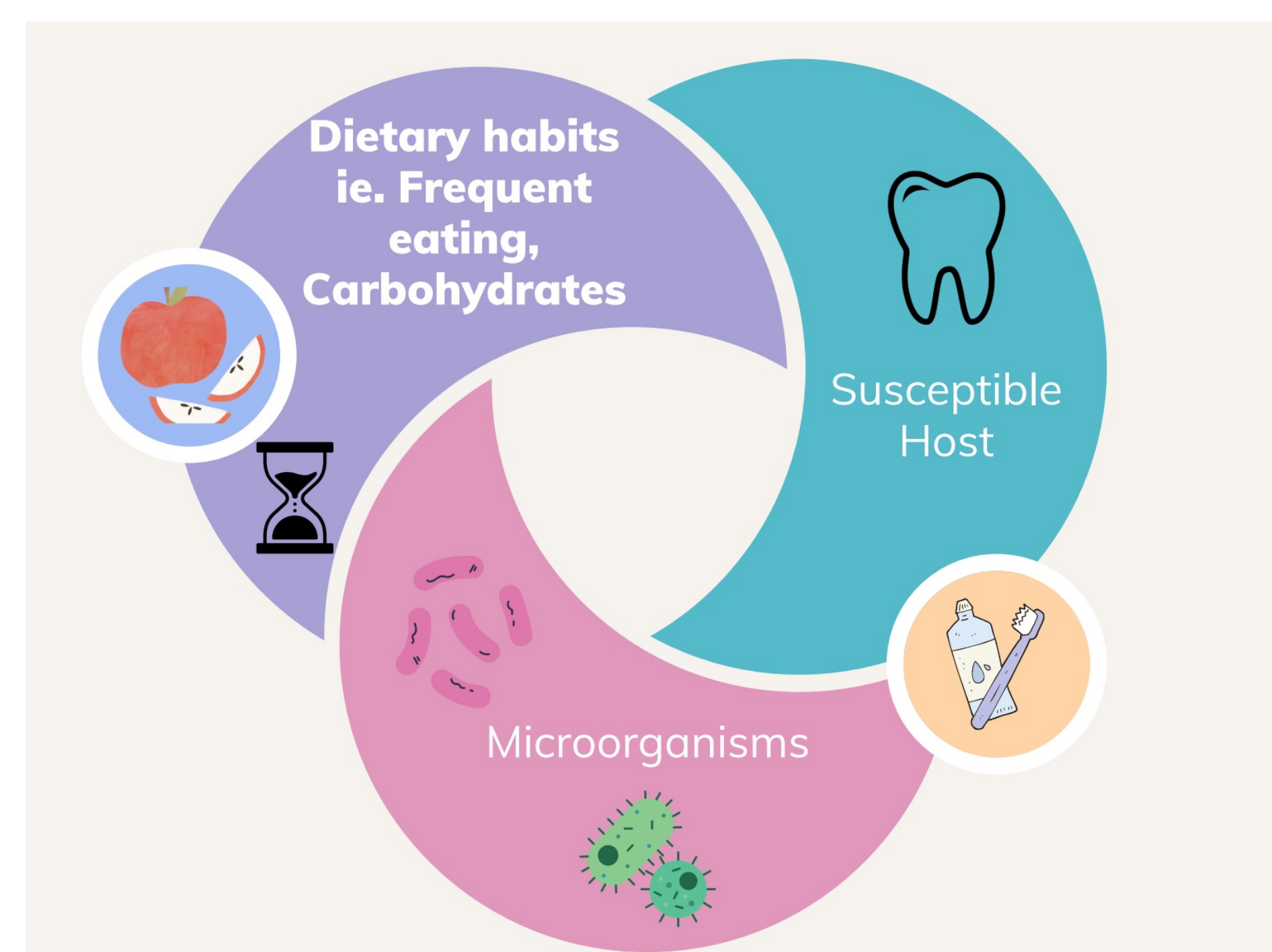
Division of Pediatric Dentistry¹; Columbia University College of Dental Medicine

Supported by the College of Dental Medicine D88HP37554, HRSA/ DHHS, Postdoctoral Training Grant in General, Pediatric and Public Health Dentistry

Background

- Dental caries is a costly chronic disease that continues to impact children globally despite being both preventable and treatable (Uribe, 2021).
- Nearly ¼ of US children 2-5 years old suffer from early childhood caries (ECC), with low-income minority populations disproportionately affected (CDC, 2019).
- The largely-behavior driven multifactorial etiology of ECC may be more effectively addressed with an interdisciplinary approach that complements clinical dental care with individualized dietary counseling and behavior modification guidance outside of the dental office.
- Telehealth nutritional counseling through a dental clinic could provide a structure for such an approach to improve pediatric oral health outcomes.

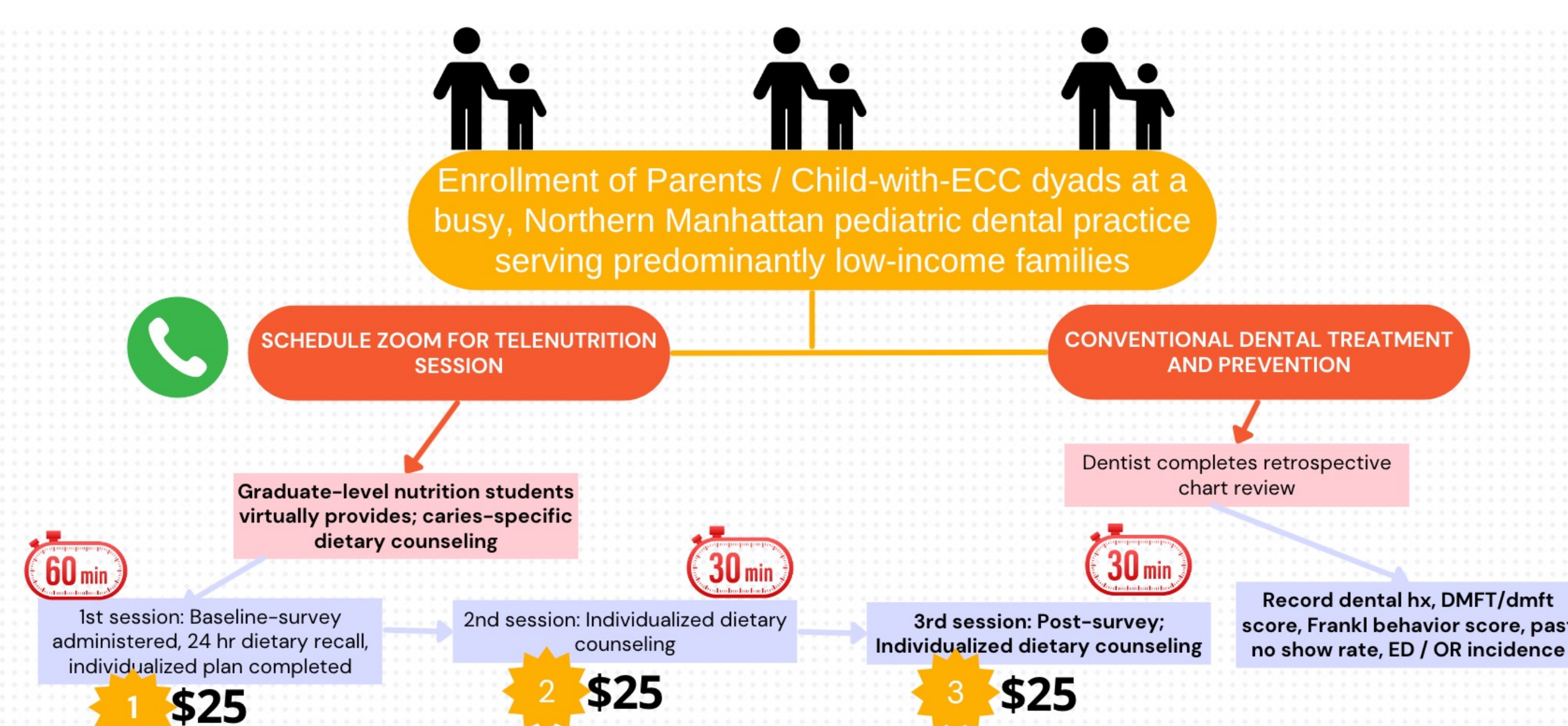
Figure 1. Multifactorial etiology of Dental Caries



Purpose

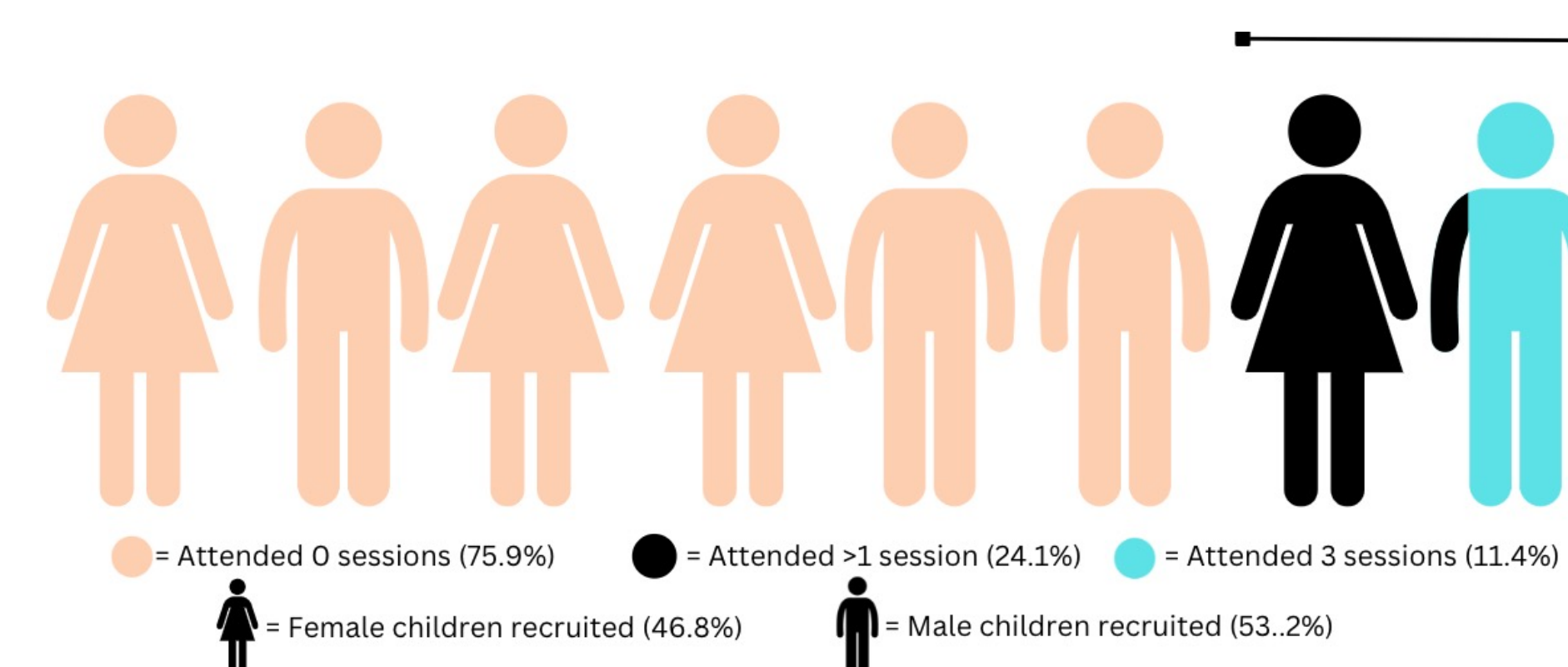
To assess parental acceptance of virtual nutrition counseling and protocol compliance, and to explore associations with children's clinical dental history.

Figure 2. Methods and Materials



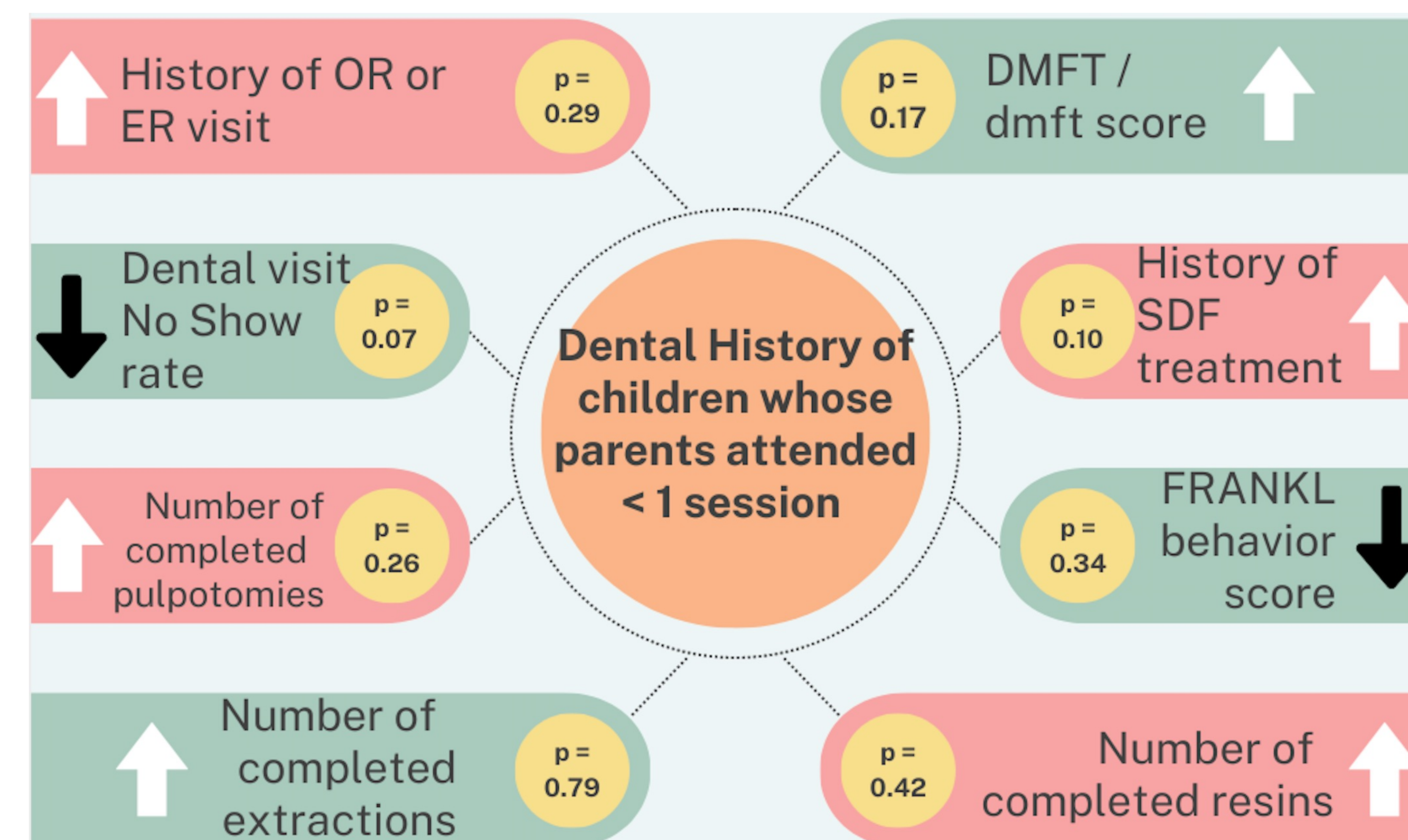
Findings

Figure 3: Participant Results:



- 79 parent/child dyads were enrolled in total, with 19 parents completing at least one session, and 9 completing all three.
- The average age of enrolled children was 4.6 years (range: 2-6).

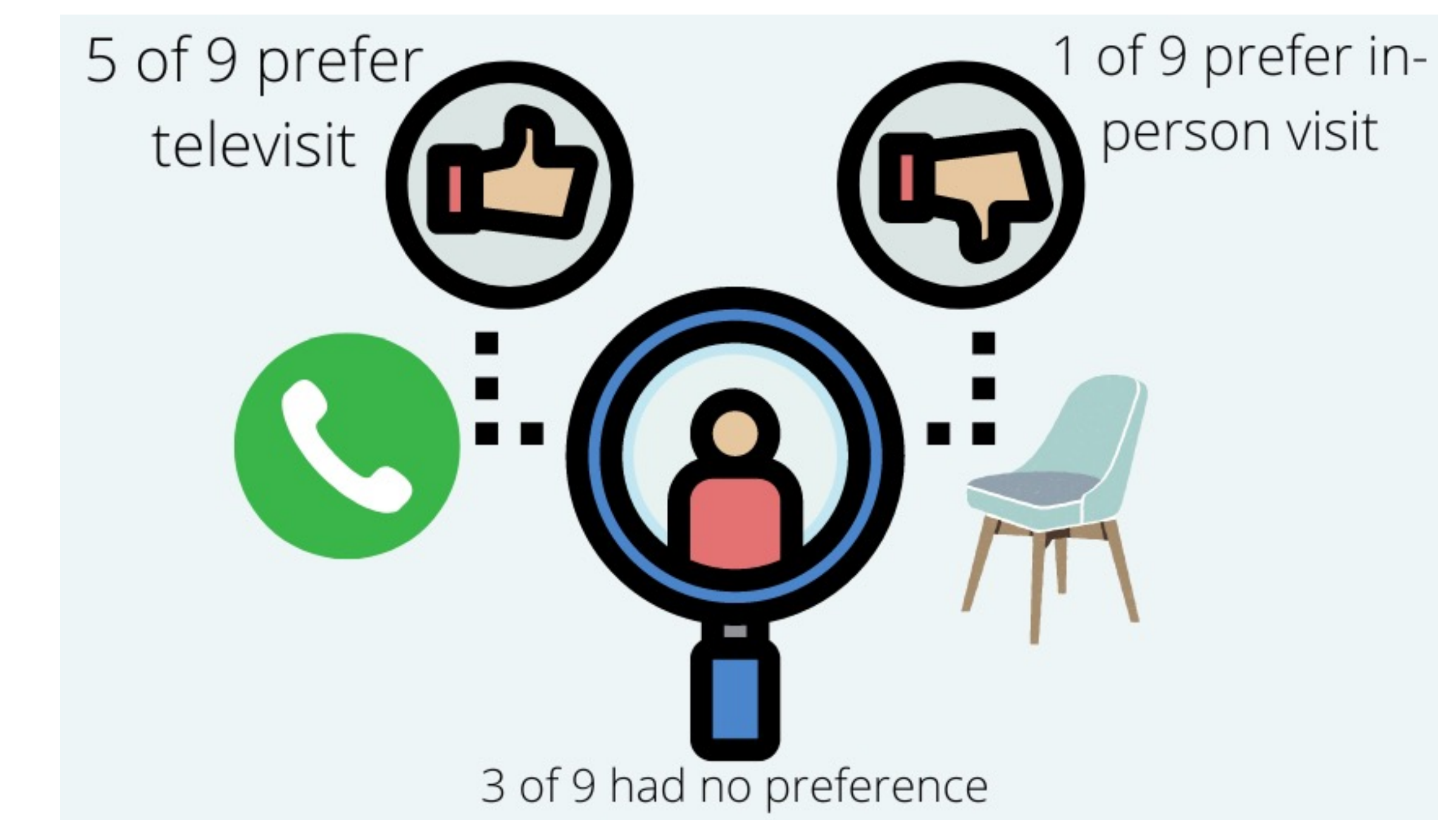
Figure 4. Comparison of child dental history between non-completers (parents enrolled who did not complete a nutrition session) and those who completed at least one session.



- There were no statistically significant difference between the two groups.
- Higher Dental visit no-show rate may be associated with non-completers (16.9%) compared with those who attended at least one telenutrition session (9.2%; p=0.07).
- Though not statistically significant, parents of children with previous SDF treatment were more likely to attend a telenutrition visit (0.78 surfaces treated with SDF for non-completers vs. 1.74 surfaces treated among parents who attend at least one session, p=0.10).

Findings (continued)

Figure 6. Post-survey responses by participants who completed all three telenutrition sessions



- All parents who completed three sessions reported positive responses to post-survey acceptability questions, with 9 of 9 participants stating they had nothing they would change with the study design.

Discussion

- Relatively high enrollment and initial baseline survey responses suggest parental acceptability and desire to participate in this type of telehealth intervention.
- Feasibility may be limited as indicated by low compliance with session completion and high attrition rate between enrollment and scheduled telenutrition sessions.
- While no significant clinical associations were determined, data suggests that some predictive factors of parents who completed at least one telenutrition session were more likely to have a lower dental clinic no-show rate under 10% (p=0.07) and more likely to have a history of SDF treatment (p=0.10) than parents who completed zero sessions.

Limitations and Lessons Learned

- Despite successful recruitment and enrollment, few participants were able to successfully complete one session, yielding a small sample and survey response rates.
- The dental team and nutrition interventionists worked in separate locations, posing communication challenges; thus future study designs should seek to mitigate this limitation.
- No feedback was able to be collected regarding reasons for patient attrition between visit.

Conclusions

An interdisciplinary approach to reducing behavioral risks for caries and ultimately disease progression could be impactful, but future studies are needed to conclusively evaluate acceptability and impact. A study design that increases feasibility and reduces barriers to participation should be implemented, which may include streamlining communication between dental and nutrition investigators.