

Assessing Feasibility of a Brushing Intervention Targeted Towards Young Children and Adolescents Presenting to the Emergency Department

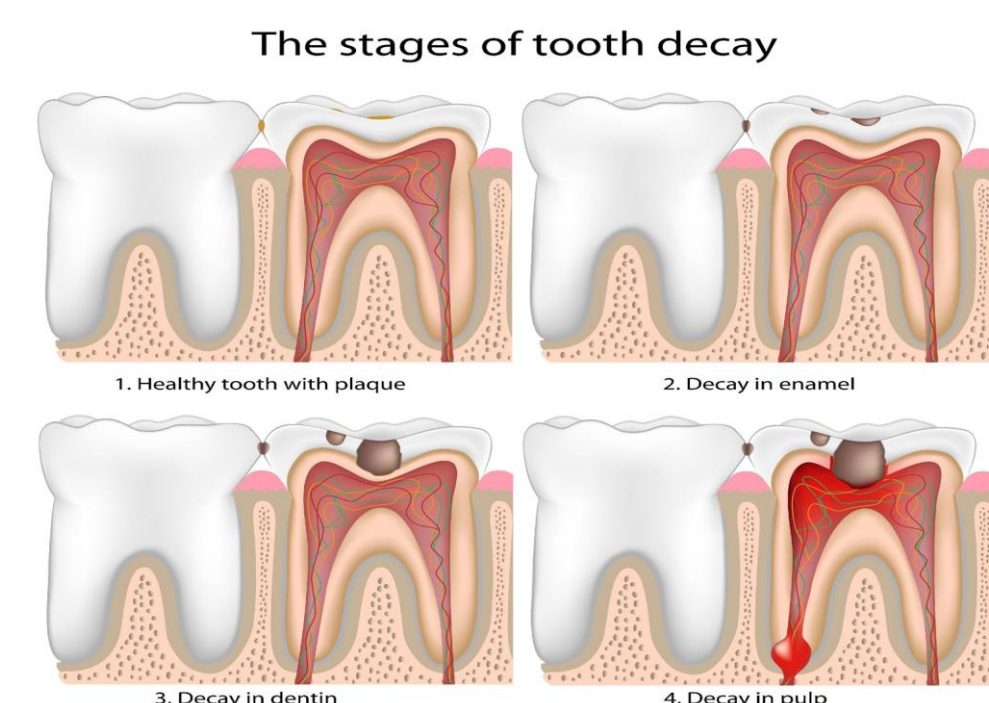
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Background

- Dental caries are one of the most common diseases affecting U.S. children and adolescents¹
- Hallmarks of progressive tooth decay include pain, sensitivity, and infection.²
- Tooth infections can cause abscesses, resulting in facial swelling, pain, fevers, and emergency room visits.²



- Prevention methods include the following: brushing twice a day with a fluoridated toothpaste, daily flossing, and visiting the dentist for regular check ups¹
- Visual media is an effective tool in pediatric education, habit formation, and decreasing plaque formation¹

Objective

This cross-sectional prospective study aims to assess whether an emergency-department-based intervention can improve the frequency of brushing in children ages 3-18 years of age.

Methods: Participant Selection

Inclusion Criteria:

- Children ages 3-18 years (from 3rd birthday until 19th birthday)
- Patients presenting to the emergency department
- Patients with a triage level of 2-5
- Parents and children able to communicate effectively in English
- Patients with access to email or a phone for follow-up

Exclusion Criteria:

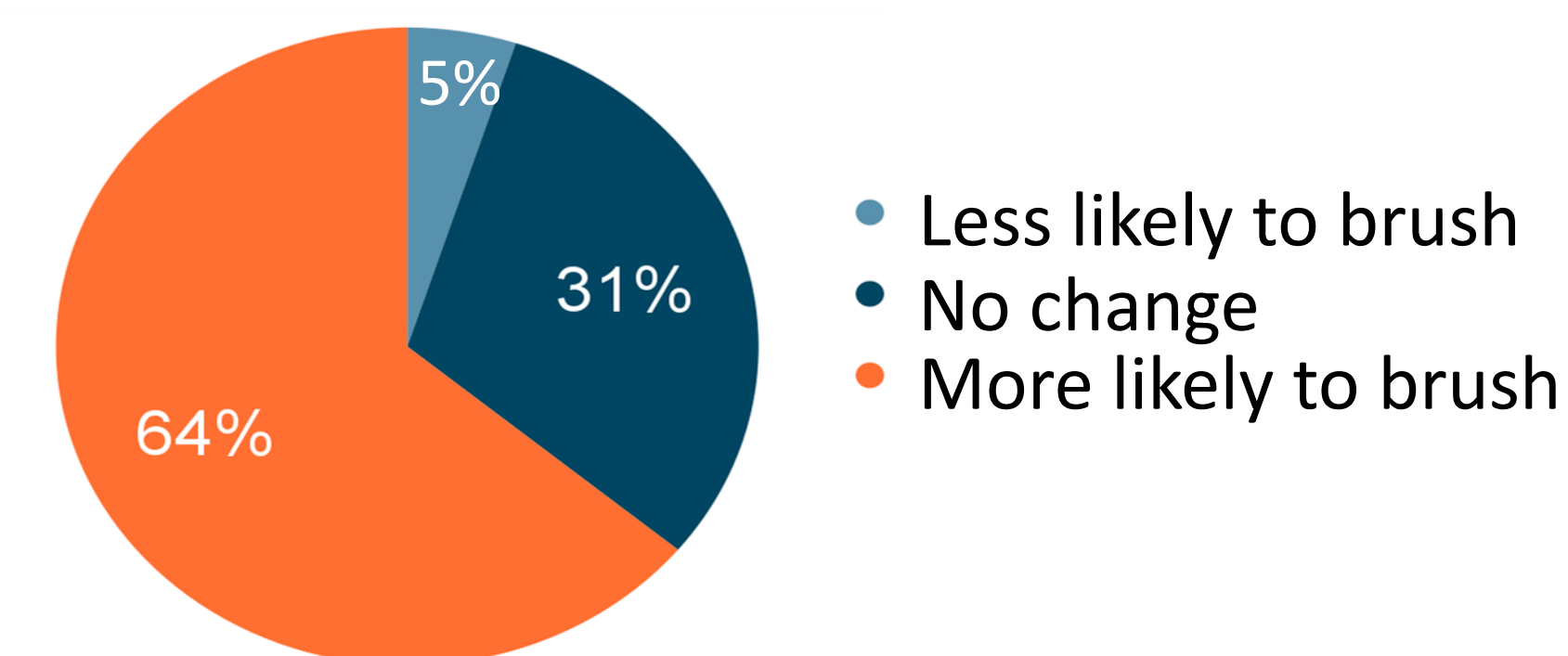
- Patients with physical or mental disabilities that prohibit watching a video or independently brushing teeth
- Patients who are suicidal or homicidal while in the ED
- Patients in foster or DCF care

Methods: Experimentation

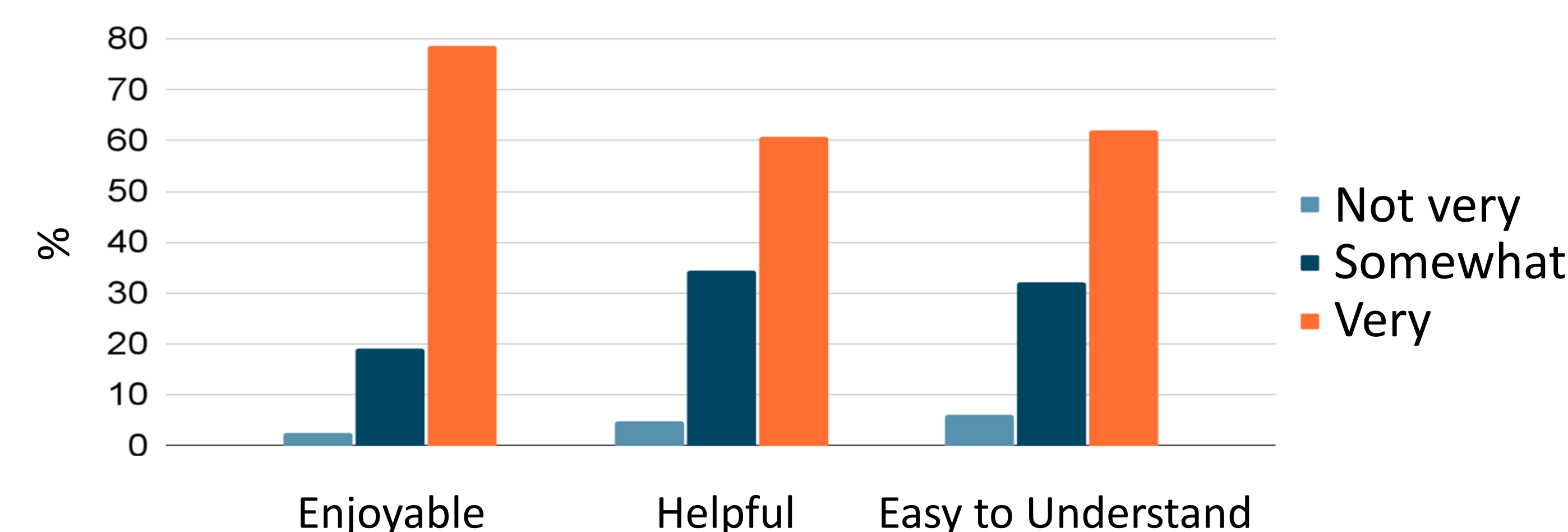
- Participants who meet study criteria are recruited by trained research assistants (RA) who explain the study and obtain consent/assent.
- Subjects answer survey questions on RedCap and watch one of the age-appropriate brushing videos.
- The RA teaches the parent and child how to track brushing frequency using the brushing activity calendar or cellphone entries. Subjects enter daily brushing events on calendar at home.
- QR codes for all videos are provided with the calendars.
- A dental kit is provided to reduce the barrier of access to toothbrush and toothpaste.
- Follow-up at 1 and 2 weeks after the ED visit is done by sending a link to their cell phone or email (subject choice).
- Follow-up surveys ask about videos and brushing frequency.
- Participants who complete both follow-up are mailed a gift including a new toothbrush and toothpaste. All dental supplies were donated by the Connecticut State Dental Association (CSDA).

Results: Post-Intervention Responses

Survey Responses: Impact of Video on Future Brushing Frequency (%)

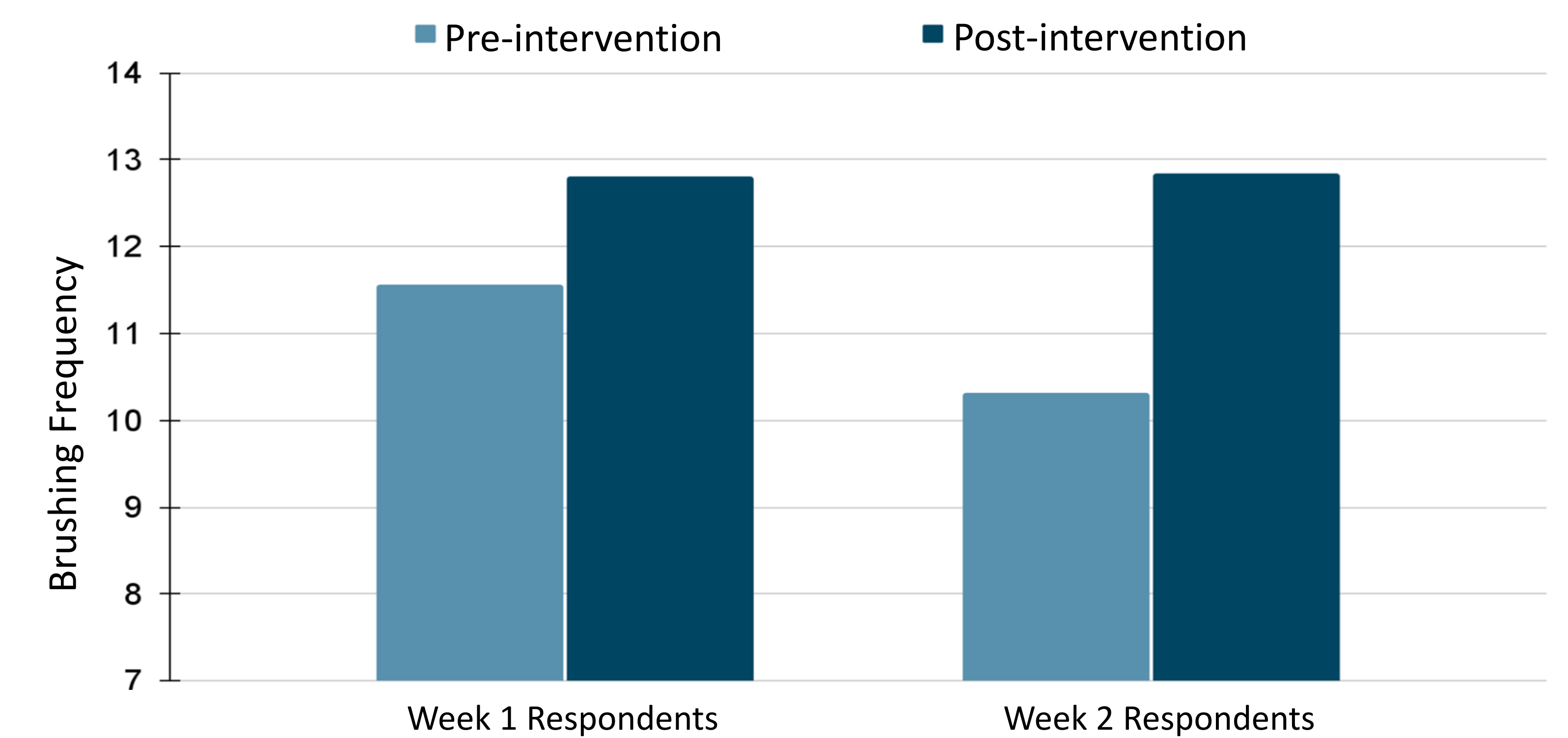


Survey Responses: Video Enjoyment, Helpfulness and Understanding (%)



Results: Follow-up

Weekly Brushing Frequency Pre and Post Intervention



Mean brushing frequency for all participants (n = 86) is 9.3 times per week. 1st week follow up: mean brushing frequency increased from 11.6 to 12.1 p=0.03. 2nd week follow up: mean increased from 10.3 to 12.9 p=0.03.

Conclusions

- Statistically significant differences were found in the brushing frequency after the intervention at both 1 and 2 weeks.
- After the video intervention survey, 64.3% of respondents indicated an increased likelihood of brushing.
- Children and parents reported liking the videos and found them useful.

Future Directions

Next steps involve increasing sample size, including non-English speakers, and exploring the feasibility of oral health education in other settings.

Acknowledgement and References

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References: