

# Brush Text: A Multimedia Text Messaging Intervention to Improve the Oral Health of Rural Head Start Children

by

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# My Problem

Parents are hard  
to reach.

Rural parents are even harder  
to reach.



We have a problem with access  
to dental care.

But we have a bigger problem  
with access to  
prevention education.



# **NOTICE**



**NO CELL PHONE USE IN  
WAITING ROOM**

**PLEASE BE COURTEOUS AND  
TAKE YOUR CALLS OUTSIDE  
THANK YOU!**

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# Literature Review

## **Text messaging and oral health – only three studies**

Sharma, R., Hebbal, M., Ankola, A. V., & Murugabupathy, V. (2011). Mobile-phone text messaging (SMS) for providing oral health education to mothers of preschool children in Belgaum City. *Journal of Telemedicine and Telecare*, 17(8), 432-436.

Hashemian, T. S., Kritz - Silverstein, D., & Baker, R. (2014). Text2Floss: the feasibility and acceptability of a text messaging intervention to improve oral health behavior and knowledge. *Journal of Public Health Dentistry*.

Schluter, P., Lee, M., Hamilton, G., Coe, G., Messer-Perkins, H., & Smith, B. (2014). Keep on Brushing: a longitudinal study of motivational text messaging in young adults aged 18-24 years receiving Work and Income Support. *Journal of Public Health Dentistry*. Retrieved from <http://onlinelibrary.wiley.com/enhanced/doi/10.1111/jphd.12079/>

## **Multimedia Text Messaging – only one study**

Whittaker, R. (2011). Smoking cessation intervention for young adults using multimedia mobile phones: Development and effectiveness (Doctoral dissertation, ResearchSpace@ Auckland).

# Purpose of the Study

Determine the feasibility and effectiveness of a five week long multimedia text messaging intervention, delivered to parents and children, in improving rural Indiana Head Start parents' adherence to twice daily brushing for their preschool-aged children.

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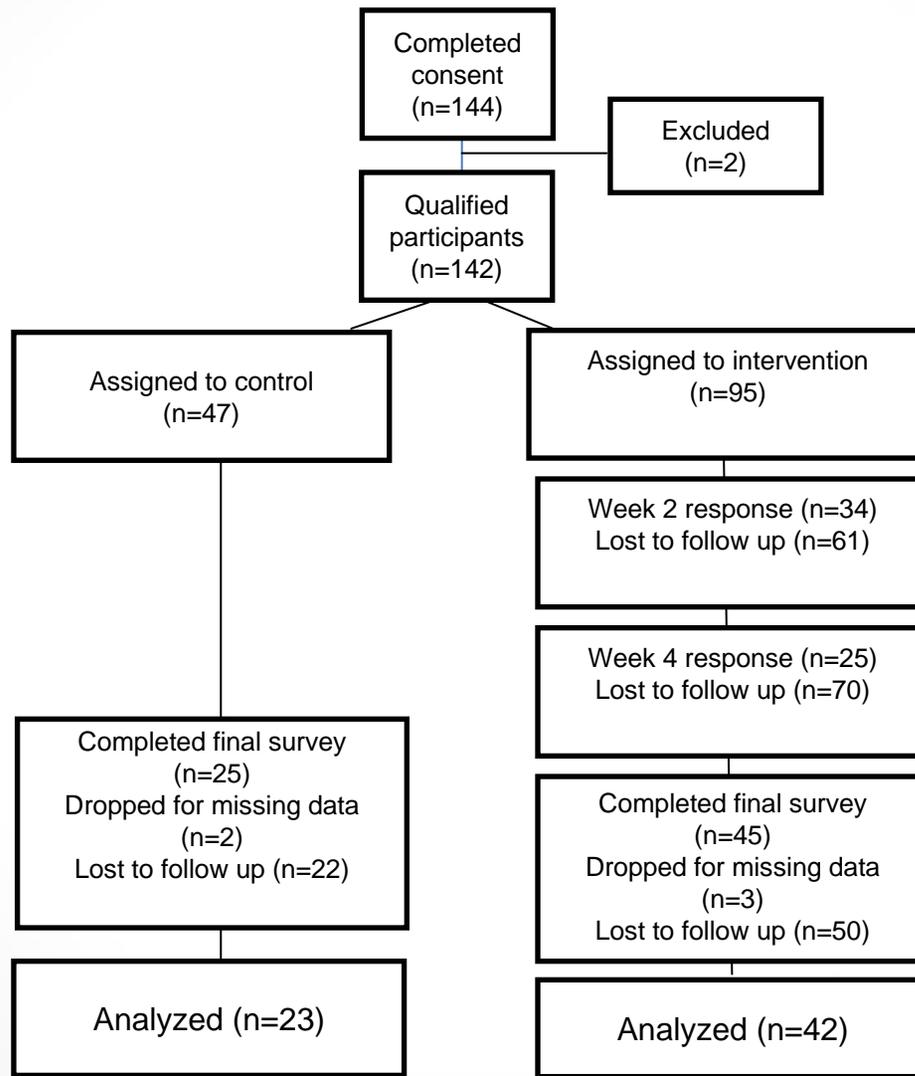
# Methodology

- Mixed methods, with quantitative being dominant and qualitative used for intervention refinement.
- Based on Social Cognitive Theory, which is becoming increasingly popular in oral health interventions because it focuses on motivation and thought processes parents undertake when making health decisions for children (Findlayson et al., 2007).

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191.

Finlayson, T. L., Siefert, K., Ismail, A. I., & Sohn, W. (2007). Maternal self - efficacy and 1-5 - year - old children's brushing habits. *Community Dentistry and Oral Epidemiology*, 35(4), 272-281.

# Data Collection/Analysis

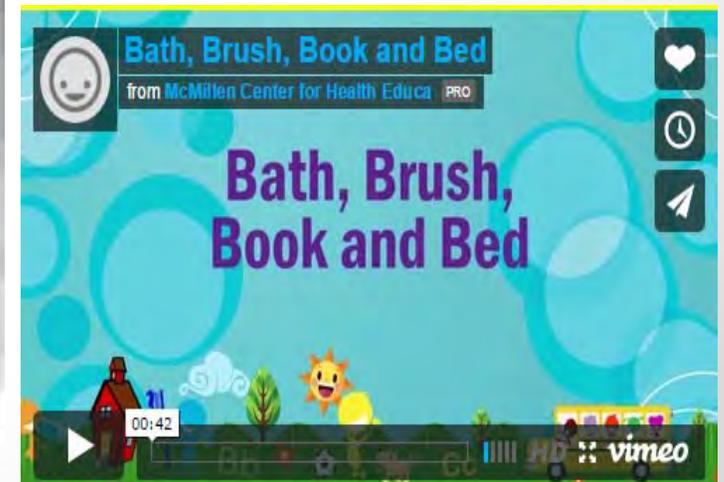




# Parent Message



# Child Message ages 3-5



Week	Topic	Length of video	Social cognitive theory constructs
1	Daily oral hygiene	1.51 min	Skills training Norming Social support
2	Role-modeling	1.05 min	Role-modeling Skills training Norming Social support External cues to action
3	Nutrition	1.42 min	Role-modeling Skills training Norming
4	Oral health and school success	1.16 min	Skills training Norming Social support
5	Bedtime routines	1.42 min	Role-modeling Skills training Norming Social support External cues to action

## How are rural, low socioeconomic (SES) parents using their mobile phones?

- > 90% own a smartphone
- > 87% use their mobile phone to watch videos
- >76% had not experienced an interruption to their mobile phone service in the past six months
- >89% using the same mobile phone number as they had six months ago
- 93% felt they would have no extra charges from a multimedia intervention



## What are the attitudes rural, low SES parents have towards receiving oral health information through text messaging?

- <20% had received health information through text message, such as Text4Baby
- Nearly 80% were open to receiving health information about children through text messages depending upon the topic

## Results for child toothbrushing for intervention group

	Baseline	Final
Twice or more	55.8%	76.2%
Once	43.2%	21.4%
Zero	1%	2.4%

- Control group: 50% baseline/52.9% final for 2x brushing
- Parents' rate of toothbrushing also showed a significant increase (p=.019)

# Post-Intervention Findings

- >86% had no problems viewing the videos
- >87% were very satisfied (53%) or satisfied (34%) with the BrushText messages and videos
- 84% would recommend BrushText to a friend
- >84% indicated the text messages and videos strongly encouraged or encouraged their child to brush twice a day

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# Qualitative Findings

## **Theme One: Children's Positive Attitude**

- "Emma really loved them. She was excited when I would say, Emma, you have a text!" (ID Three).
- Children had a more positive attitude towards brushing.

## **Theme Two: Parent/Caregiver Attitudes Towards the Intervention**

- Intervention was for the children
- "Just for him"
- Parents seemed to take the information more seriously when it was in video format

## **Theme Three: Positive Reactions to Multimedia Text Messaging as a Teaching Tool**

- "If I read them a paper from school they're like, yeah, whatever. But if you play them a video they'll watch it. I did like the text and video because it was immediate. Some things get lost in the transition home by kids. So if I wanted to be sure to have it then the text is the way to go" (ID Five).



# Implications for Practice

- Head Start/Early Head Start and WIC should integrate multimedia text messaging into curriculum and promote the current interventions available. Head Start should also consider integrating multimedia text messaging into home visiting curriculum.
- Multimedia text messaging offers a modality for dental professionals to use to reach parents with messaging outside of the dentist office, in an effort to reduce dental decay in young children (like Text4Baby.)



**Pick up a handout!**  
**Text BRUSHDEMO to 49798**

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