

A Healthy Smile Begins with a Child: Increasing Community Health Worker Knowledge of Oral Health through GRIN

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Background

The Challenge

- Tooth decay is the most common and preventable chronic disease among children in the United States.
- Minority and low-income populations have disproportionately high levels of tooth decay.
- Parents and guardians’ (henceforth, guardians) low oral health literacy is a risk factor that predicts primary tooth decay and related negative outcomes among Black children and adolescents in low-income households.

Our Approach

- Community Health Workers (CHWs) are public health workers who are trusted community members that share culturally-competent knowledge with their community.
- CHWs are uniquely positioned to conduct oral health outreach within their community and reduce the oral health disparity gap.

Our Hypothesis

The *Guardians Receiving Information through Navigators (GRIN)* prototype prepares CHWs (by increasing knowledge, attitudes, perceived self-efficacy, and intentions to conduct outreach) to provide oral health outreach to low-income Black guardians of children and adolescents.

Methods

- *Study Timeframe:* Conducted from June 2022 to September 2022.
- *Study Design:* a randomized pretest/posttest survey with treatment (exposure to two GRIN modules) and control group (no materials).
 - Survey questions included demographics (pretest only), knowledge, attitudes and beliefs, self-efficacy, intentions to conduct oral health outreach, and satisfaction (treatment only at posttest).
- *Recruitment:* KDHRC partnered with four Area Health Education Centers (AHECs) across the United States to recruit CHWs.
- *Study population:* 107 participants (45 control and 62 treatment) CHWs
- *Inclusion criteria:*
 - At least 18 years old
 - Self-identified as a CHW
 - Lived in the United States
 - Conducted active outreach to Black guardians of children and adolescents
 - Had no previous oral health training
 - Had at least six months of field experience during outreach

As an evidence-based, culturally competent, and on-demand program, GRIN is a **health equity tool that trains CHWs to reduce oral health disparities among Black children and adolescents** by building the knowledge, skills, and confidence of their guardians.

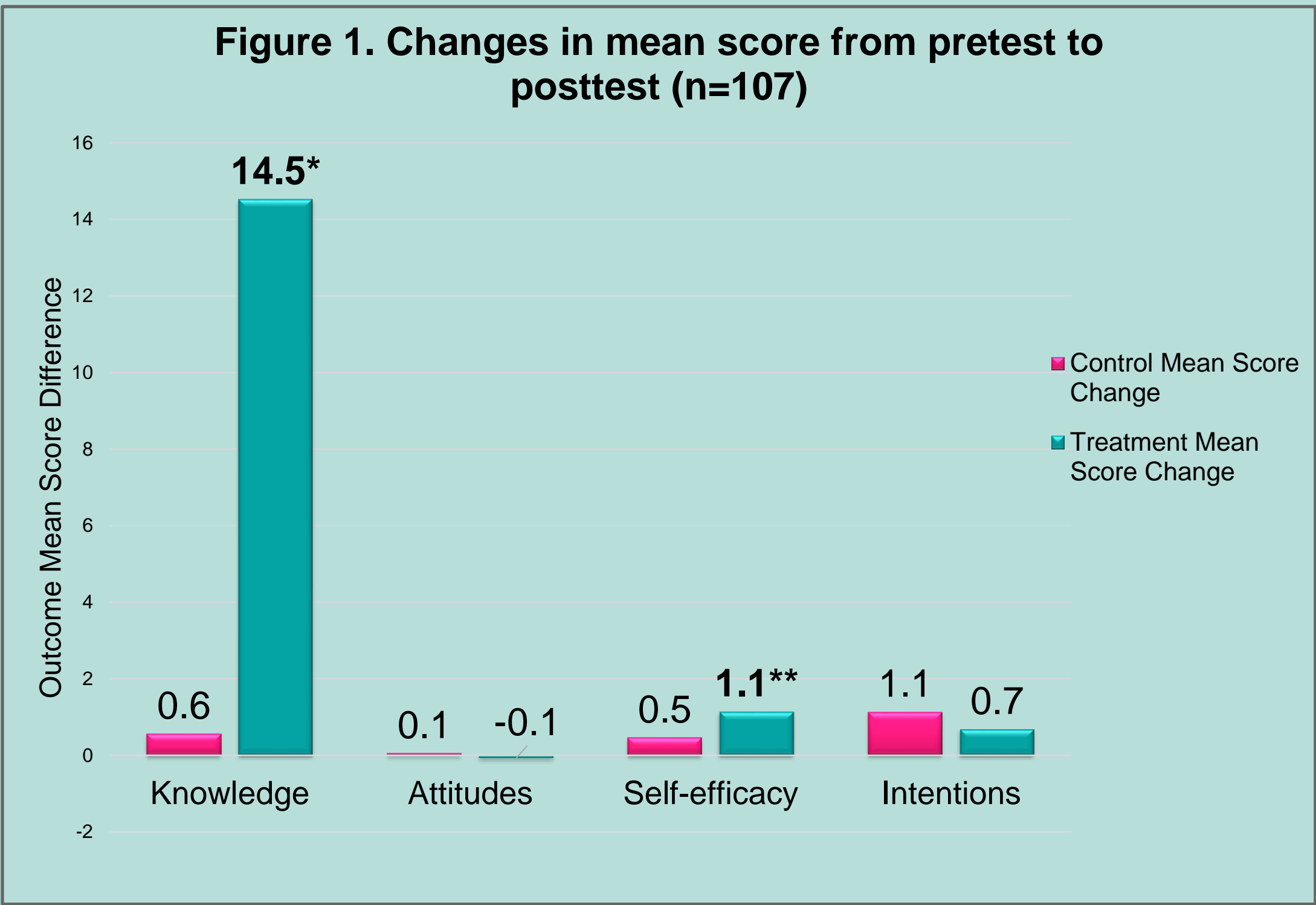


Figure 1 shows the changes in mean score from pretest to posttest among control and treatment groups for knowledge, attitudes, self-efficacy, and intentions. A higher mean score difference indicates a larger increase in the respective outcome from pretest to posttest.

*Statistically significant at $p \leq 0.001$

** Statistically significant at $p \leq 0.05$



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Results & Discussion

The GRIN prototype significantly increased the knowledge ($p \leq 0.001$) of CHWs in the treatment group when compared to CHWs in the control group. Specifically, treatment group participants showed a 14.5% increase in knowledge from pretest to posttest while control group participants only showed a 0.6% increase in knowledge.

Also, the GRIN prototype significantly increased the self-efficacy ($p \leq 0.05$) of the treatment group (1.1) when compared to the control (0.5).

While the GRIN prototype showed no significant differences between the treatment and control groups for attitudes and intentions, the next iteration of GRIN will improve upon this prototype and show significant differences between the treatment and control groups for all four factors (knowledge, attitudes, self-efficacy, and intentions). Improvements will include:

- adding interactive activities to the GRIN prototype so CHWs can apply their newfound knowledge using simulated, real-life situations
- incorporating informative video vignettes from oral health professionals, CHWs, and Black guardians
- expanding the content to include information on healthcare system navigation, preventive oral healthcare visits, and CHW outreach strategies

Conclusion & Next Steps

This evaluation of the GRIN prototype shows GRIN participation relates to significant increases in knowledge and self-efficacy of CHWs to conduct oral health outreach in their communities. These findings indicate a strong basis for further development of GRIN to reduce the oral health equity gap.

Next, KDHRC will expand the GRIN prototype to reach more CHWs on a national scale by focusing on full development of a program that will be informative, interactive, and applicable.

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