A qualitative study of multi-level influences on oral hygiene practices for young children in Early Head Start

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STATEMENT OF PROBLEM

• Early childhood caries (ECC) remains the most prevalent chronic childhood disease in the United States 1,2.
• ECC poses a serious threat to child welfare, particularly among economically disadvantaged, underserved, and migrant children 3,4.
• National ECC prevalence (any decayed, extracted, or filled primary teeth (deft)) among 2-5 year olds was 23% in 2011-2012 5. Mexican-Americans had double the ECC severity of non-Hispanic Whites 6.
• Individual child-level risk factors for ECC have been studied, but broader family- and community- level influences on child oral hygiene behaviors are less well understood.

This study explored multiple levels of influence on mothers’ oral health-related knowledge, attitudes and oral hygiene behaviors for young children in Early Head Start (EHS) to inform future behavioral intervention targeting children from low income families 7.

We sought to understand how and where to intervene and support optimal child oral hygiene practices, defined as twice daily toothbrushing with age-appropriate amount of fluoridated toothpaste.

GOALS AND OBJECTIVES

This study explored multiple levels of influence on mothers’ oral health-related knowledge, attitudes and oral hygiene behaviors for young children in Early Head Start (EHS) to inform future behavioral intervention targeting children from low income families. We sought to understand how and where to intervene and support optimal child oral hygiene practices, defined as twice daily toothbrushing with age-appropriate amount of fluoridated toothpaste.

PROJECT DESCRIPTION

Study Design:

This qualitative study used interviews with 25 parents of children under four years old in one EHS in Los Angeles, CA. This study investigated child-, family-, and community-level influences on the EHS child’s oral hygiene practices. Sample demographics were collected. Participants got a $40 grocery store gift card.

• Semi-structured interviews (~ 1 hr) covered these topics:
  - EHS parent-to-parent communication
  - Family oral health practices
  - Brushing narratives

Participant Recruitment:

• 14 EHS home visitors (HV) verbally advertised the study and disseminated a project flyer to each of their families
• Trained Research Assistants (RA) from UCLA contacted parents and screened them for eligibility. Eligibility requirement included: 1. parent must be primary caregiver; 2. child must be at least 6 months old but less than 4 yrs old; 3. child must be enrolled in or waitlisted for the EHS HV program

RESULTS

EHS Program

• Multi-site Federally Qualified Health Center (FQHC) in Los Angeles, CA
• EHS program offers home-based services (weekly 90-minute home visits) and 2 group socializations each month
• As of 2017, this FQHC provided a medical home to 26,000 children and adults

EHS Home Visitors (HVs)

• EHS HVs played an essential role in recruiting for this study
• EHS HVs helped educate parents about the study and connected them with the study staff
• Helped to promote good oral health behaviors during home visits and parent socializations

UCLA and UCSF Research Team

• Comprised of 2 co-investigators, Project Manager, and Qualitative Data team. This team designed formative research study and managed qualitative data collection, analysis, and publication of findings

UCLA Research Assistants (RA)

• Two trained RAs contacted each parent and screened them for eligibility and conducted interviews

TABLE 1 explains the 7 themes identified in this study at the child-, family-, and community levels that are influential on the child oral hygiene behaviors.

Data Analysis

Thematic analysis was guided by Fisher-Owens and colleague’s conceptual framework, which examines multi-level influences on child oral hygiene behavior.

FIGURE 1. Framework

FIGURE 2 - EDUCATION

FIGURE 3 - AGE

FIGURE 4 - ANNUAL INCOME

TABLE 1. Themes Identified

<table>
<thead>
<tr>
<th>Child Independence</th>
<th>Desire for independence</th>
<th>Stage of development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers’ Role</td>
<td>Have primary responsibility for child’s oral hygiene routine</td>
<td>Mothers model brushing behavior</td>
</tr>
<tr>
<td>Other Family Roles</td>
<td>Older siblings</td>
<td>Father’s role</td>
</tr>
<tr>
<td>Oral Health Knowledge</td>
<td>Mothers were knowledgeable about ECC risk factors</td>
<td></td>
</tr>
<tr>
<td>Oral Health Attitudes</td>
<td>ECC prevention motivated oral hygiene behavior</td>
<td>Oral health is important and related to overall health</td>
</tr>
<tr>
<td>Skills &amp; Strategies</td>
<td>Storytelling, singing or playing song, showing child photos on phone, watching videos or television</td>
<td></td>
</tr>
<tr>
<td>Social Norms</td>
<td>Community Oral Health environment</td>
<td>Social environment</td>
</tr>
<tr>
<td></td>
<td>Health system characteristic</td>
<td></td>
</tr>
</tbody>
</table>

LESSONS LEARNED

• Mothers had strategies for overcoming brushing challenges, and were knowledgeable about ECC risk factors, and were motivated to brush
• Identified multiple influences on child oral hygiene behavior, at the child-, family-, and community- level.
• Informed the development of tailored oral health preventive care programs for EHS families in the HV program
• There are opportunities to enhance knowledge and skills around oral hygiene specifically, and involve other family members
• EHS HV are well positioned to assess needs and provide support, education, and resources to improve parental toothbrushing techniques and help parents overcome barriers and challenges to promote oral health in earliest childhood

TABLE 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Visits</td>
<td>0-12%</td>
</tr>
<tr>
<td>School Visits</td>
<td>0-23%</td>
</tr>
<tr>
<td>Dentist Visits</td>
<td>0-41%</td>
</tr>
<tr>
<td>Community Oral Health visits</td>
<td>0-36%</td>
</tr>
</tbody>
</table>

About Our Team

• Study took place at a predominantly (86%) home-based EHS program (11% family child care and 3% prenatal women services)
• Sociodemographic characteristics of the in-depth interview participants are summarized in Figures 2-4.
• Almost two-thirds (64%) of mothers were between the ages of 30-39
• 91% were born outside the United States
• Roughly one-third (36%) completed high school

REFERENCES