



The HEROs Study Year 2: Engaging Families To Promote Healthy Eating And Activity Behaviors In Early Childhood

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STUDY OVERVIEW

The overall objective of HEROs (HEalthy EnviRONments) Study is to develop a companion, technology-based, interactive family intervention to assess the potential amplification of *The Food Friends* programs to promote healthy lifestyles for young children in both Head Start and family settings.

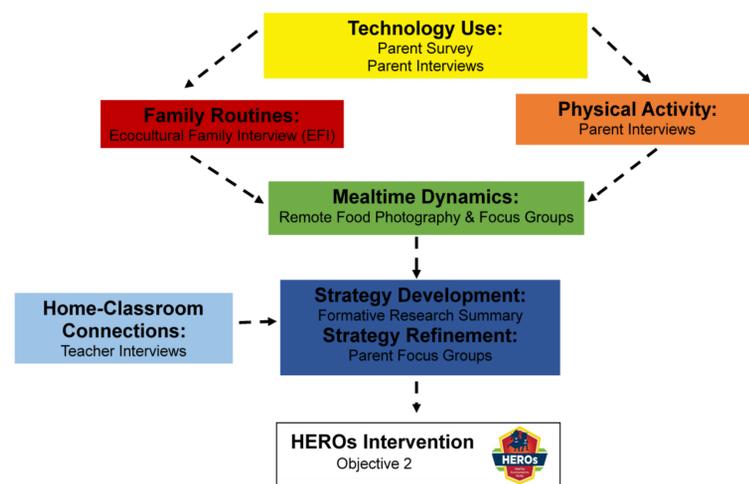
Study objectives are:

1. To understand behaviors, attitudes, facilitators and barriers to improving the home food and activity environments, through **formative research** with parents, Head Start staff and community stakeholders (Research Phase 1).
2. To **develop a family intervention**, employing electronic media, which will help children and parents learn together and build skills related to healthy eating and activity (Research Phase 2).
3. To **implement and evaluate the family-based program**, by conducting an intervention in rural Colorado with low-income families at increased risk for childhood obesity (Research Phase 3 and Extension).
4. To **advance childhood obesity prevention knowledge** by training future educators, health professionals and Extension educators (Education).

FORMATIVE RESEARCH – OBJECTIVE 1

- Formative research (Figure) was conducted to understand parents' values, attitudes, opinions, parenting strategies, interests in nutrition and PA behaviors, technology usage, family routines and preferred mode of programming and information dissemination.
- Participants were recruited from 5 Head Start/preschool programs serving low-income audiences in rural, eastern Colorado
- Majority of participants were mothers; ~40% Hispanic

Figure: Formative Research Plan



PRELIMINARY RESULTS

Technology Use

Parent Survey (n=191)

Content: Assessed frequency, content and context of children's smartphone and tablet usage, parent beliefs and comfort with mobile devices

Key Findings

- **Use:** Smartphone or tablet use was high among children in this population (92% have used some).
- **Activities:** 75% of children use devices occasionally or daily to play games to learn, play games for fun, or watch movies/videos/shows



Parent Telephone Interviews (n=29)

Content: Parental beliefs, opinions and rules regarding child smartphone and tablet use; content, frequency and purpose of child device use; feasibility of using mobile devices and apps to deliver nutrition and PA education for preschoolers.

Preliminary Findings:

Parents were in favor of:

- Their children using mobile devices to build **school readiness skills**
- **Balancing device use** with traditional play to help children be ready for a technology-driven world
- **Using an app to encourage PA** but less enthusiastic about app for child's nutrition and eating habits

Family Routines

Ecocultural Family Interviews (n=30)

Content: Daily routines of the family, especially related to mealtimes and PA; social and environmental factors that shape daily routines

Preliminary Findings:

- **Mealtime Challenges:** chaotic meal preparation, work/activity schedules prevent families from eating together, no space for tables for whole family to eat together, managing the variety and amounts children eat, keeping children at the table, child requests for "second dinner", and children picking up bad habits from other family members
- **Mealtime Strategies:** Use of rewards, screen time during meals, separate meals for children, only serving foods they know their children will eat, and regularly eating meals at extended family's home
- **Physical Activity:** Parents value the social and health-related benefits of PA. However, development of movement skills was not mentioned



PRELIMINARY RESULTS (CON'T)

Physical Activity

Parent Face-to-Face Interviews (n=31)

Content: Parent PA practices, self-efficacy, support of child's PA, enjoyment of adult and child PA, and perceived physical competence

Preliminary Findings:

- The majority of **parents do little PA**, with the majority of their PA coming from playing with their child(ren)
- Almost all parents mentioned the importance of their children learning skills to develop **confidence and self-esteem**
- **Few parents actively work with children on movement skills**; many believe that preschoolers learn these naturally



Mealtime Dynamics

Remote Food Photography Method (RFPM, n=32)

Content: Digital images of meals eaten for 6 days; maternal feeding styles and practices; nutrient intakes and quality of dinners consumed by mothers and preschooler

Preliminary Findings: Forthcoming

RFPM Focus Groups (7 groups; n=31)

Content: RFPM experience, mealtime-related successes, challenges and priorities; role-modeling related to eating; snacking.

Preliminary findings:

- Positive **family interactions** during dinner, including conversation and children eating and enjoying their food, are a high priority for parents
- Parents **intentionally role model behaviors** (e.g. consuming vegetables they don't like when with children)
- Parents see **snacking** as an opportunity for children to eat independently and a tool to tide children over between meals. Challenges include managing portion size, composition, frequency and timing



Home- Classroom Connections and Strategy Development and Refinement are forthcoming

INTERVENTION DESIGN – OBJECTIVE 2

- Findings from our comprehensive, mixed methods formative research phase will drive the development of intervention design during Year 3.
- Development is currently underway with prototypes for 2 apps: Movement and Tasting New Foods. Prototypes will be tested summer/fall 2017.