

Healthy Opportunities for Physical Activity and Nutrition: HOP'N Home Project

BACKGROUND



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Just a bit about Tanis...

- From Winnipeg, Manitoba
- Undergraduate: BS Exercise Science
- Graduate: MPH & PhD Human Nutrition
- Developed HOP'N Home curriculum in 2010-2011
- Evaluated curriculum in Kansas, Texas and New Mexico
- Currently an Associate Professor in Kinesiology & Public Health Education



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Background

- 31.9% of US children and youth are overweight or obese
- 13.9% of children 2-5 years are obese (almost tripled in last 30 years)
- There is an imbalance between energy consumed and expended
- The problem is multi-factorial



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Were kids ever this thin?



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5th graders in 1951



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4th graders in 1966



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4th graders in 1971



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4th graders in 1978



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4th graders in 1987



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4th graders in 1993



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4th graders in 2006

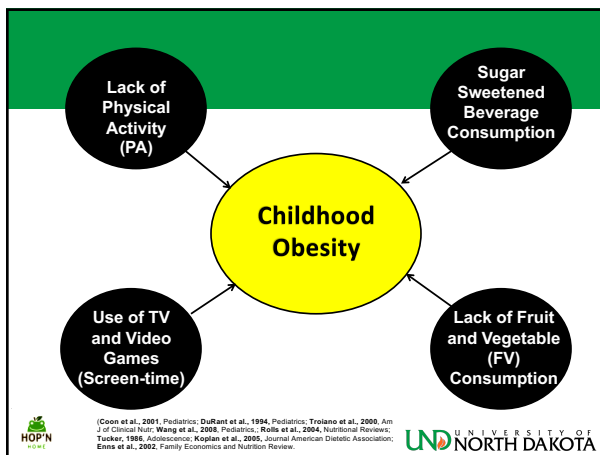


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4th graders in 2015



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Background

- **Physical Activity Recommendations** (No USDHHS Standards for Preschoolers)
 - At least 60 minutes of structured PA each day
 - At least 60 minutes of unstructured PA each day
 - Children are not meeting recommendations
- **Fruit and Vegetable Recommendations** (U.S. Dietary Guidelines)
 - Children 2-3 years = 1 cup fruit & 1 cup veg
 - Children 4-8 years = 1.5 cups fruit & 1.5 cups veg
 - Only 5.3% of boys and 9.8% of girls meet FV guidelines (Guenther et al., 2006)



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Environments



Why target parents & the home environment?

- Parents and the home environment are ideal places to intervene
- Young children have little to no control over their food, physical activity and television
- Families play an influential role in fostering children's eating and activity habits
- Overweight parents are more likely to have overweight children



Davies, 2004; Serdula et al. 1993; Whitaker et al. 1997

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Why target parents & the home environment?

- Parents are gatekeepers of children's eating and activities
- Parents are gatekeepers of the amount of television their child watches
- Parents have great potential to role model, to set limits, and to provide healthy options to influence their child's healthy behaviors and decrease their risk for obesity



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Home Environment

- Availability of television and other new media has increased
- Children spend 44.5 hours a week in front of a computer, television, and games screens, which is more than any other activity in their lives except sleeping (Kaiser, 2005)
- Exposure to television and other media is associated with adiposity in children (Crespo et al., 2001)



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Television and Media

- Impacts children's PA, FV and obesity
 1. Provision of opportunities for sedentary behavior and unhealthful eating and exposure to advertising for unhealthful food and sedentary toys
 - More electronic media is associated with lower levels of physical activity
 - More physical equipment in the home is related to higher levels of physical activity and associated with decreased BMI
 - Participating in sedentary behaviors at home allows for opportunities to eat unhealthful foods nearby



Television and Media

- Impacts children's PA, FV and obesity
 2. Exposure to advertising campaigns
 - Exposure to advertisements influences preferences, purchase requests, and consumption of 2-11 year old children
 - Evidence shows preschool-aged children that have been exposed to advertisements, preferred the tastes of foods and drinks they thought were from McDonald's even if they were healthy foods such as carrots

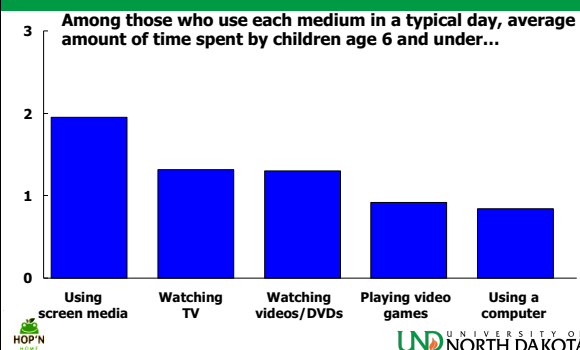


Television and Media

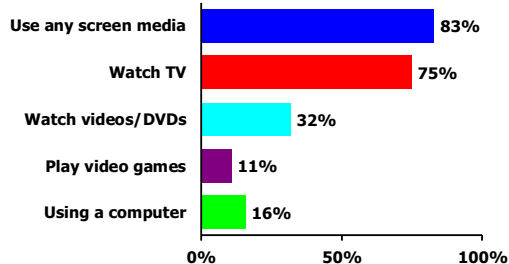
- Children's TV viewing is a strong predictor of purchase influence attempts (pestering)
- Children have more active role in family purchase-decision making, and parent-child communication has a stronger relationship with product purchases
- Thus, any program targeting the home environment must target the impact of media on both parents and children



Time Spent with Selected Media Types for Children Age 6 and Under, 2005



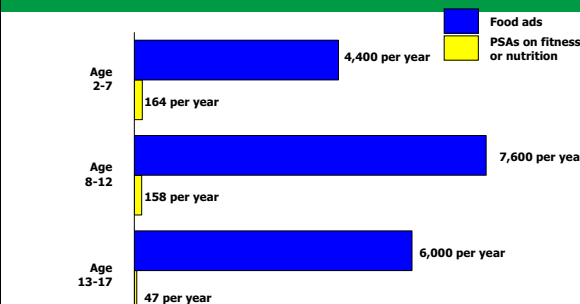
In a typical day, percent of children six and under who...



Kaiser Family Foundation, *The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers, and Their Parents*, May 2006.



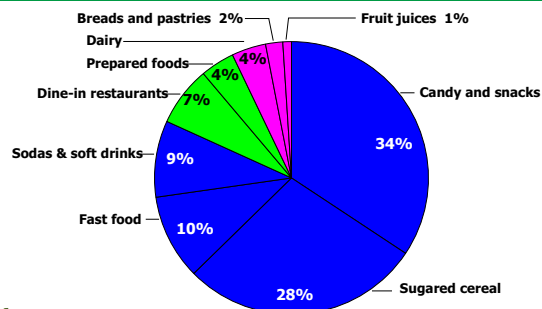
Average number of food ads and PSAs on fitness or nutrition seen by children per year by age:



Kaiser Family Foundation, *The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers, and Their Parents*, May 2006.



Among all food ads targeted to children or teens, percent that are for:



HOP'N HOME Kaiser Family Foundation, *The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers, and Their Parents*, May 2006. UND UNIVERSITY OF NORTH DAKOTA

What is **Primary Aim** of HOP'N Home?

- To evaluate the impact of the HOP'N HOME child care program on the prevention of childhood obesity through changes in the physical and social home environment in young children (aged 2.5-5 years).

HOP'N HOME

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What is the HOP'N Home Program?

- Child care program that targets parents and young children to improve the healthful nutrition and physical activity opportunities at home
- Improvement of parent's skills to make informed healthful food and physical activity purchase decisions
- Teach parents through child-care sites to prevent the effects of marketing designed to influence parent purchases of unhealthy food and sedentary toys by building skills in parents and children

HOP'N HOME

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Healthy Opportunities for Physical Activity and Nutrition:

HOP'N Home Project

CURRICULUM



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HOP'N HOME

Primary Aim

Link child care settings to home environments by developing children's skills to **ask** their parents for healthful home food and physical activity options.



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Goals

- Children will ask parents for healthy foods ("go foods") and healthy physical activities ("go activities")
- Parents will purchase healthy foods ("go foods") and physically active toys ("go activities") and avoid unhealthy foods and sedentary options (physical environment)
- Target parenting practices to improve the social home environment

HOP'N HOME







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HOP'N Home Curriculum Overview

- **12 week curriculum implemented by teachers**
 - Ecologically-informed Social Cognitive Theory – focus groups
- **Project-based learning approach**
- **Child knowledge**
 - Go & Slow: Food, Physical Activity/Toys, Advertisements

HOP'N HOME, 1998; Helm & Katz, 2001

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HOP'N HOME GO & SLOW FOODS		
<p>GO Foods – Great to eat anytime (Most often). They are lowest in fat and sugar; relatively low in calories; “nutrient dense” (rich in vitamins, minerals, and other nutrients important to health)</p> <p>SLOW Foods – To be eaten sometimes (Less often or not at all). They are higher in fat, added sugar, and calories.</p>		
Food Group	GO Foods (all the time)	SLOW Foods (sometimes)
FRUITS Recommend: 1 – 1.5 cups daily (1 cup = 1 cup of fruit or 100% fruit juice; ½ cup dried fruit)	<ul style="list-style-type: none"> • All fresh, frozen, or canned fruits without added fat or sugar • 100% fruit juice • Frozen 100% fruit juice bars • Dried fruit (raisins, dates, apricots, plums, figs) 	<ul style="list-style-type: none"> • Fruits canned in light or heavy syrup • Fruits with added sugar • Sherbet, sorbet • Fruit roll-ups • Dried fruit with added sugar • Fruit beverages and fruit drinks with added sugar 
VEGETABLES Recommend: 1 – 1.5 cups daily (1 cup = 1 cup of cooked or raw vegetables or 100% vegetable juice; 2 cups raw leafy greens)	<ul style="list-style-type: none"> • All fresh, frozen, or canned vegetables without added sugar or fat • 100% vegetable juice 	<ul style="list-style-type: none"> • Vegetables with added oil, butter, margarine, cheese sauce • Fried potatoes, French fries and hash browns 
BEVERAGES	<ul style="list-style-type: none"> • Water • Milk and juice as above 	<ul style="list-style-type: none"> • Soft drinks (regular and diet) • Sweetened tea and sports drinks • Beverages with added sugar 

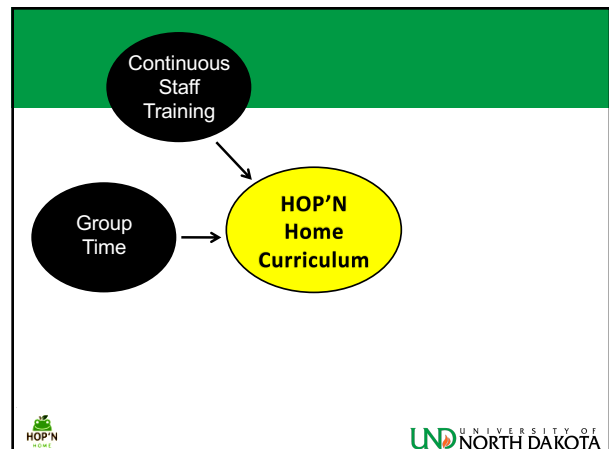
Adapted from CATCH: Coordinated Approach to Child Health, 4th Grade Curriculum, University of California and Playhouse, Inc., 2002. & We Can: Ways to Enhance Children's Activity & Nutrition and MyPyramid.gov

HOP'N Home Curriculum Overview

- **12 week curriculum implemented by teachers**
- **Project-based learning approach**
- **Child knowledge**
 - Go & Slow: Food, Physical Activity/Toys, Advertisements
- **Child asking...**
 - Pestering: Ask mom or dad for/purchase...
- **Home routines**
 - Before school, after school, before bed, weekends

HOP'N HOME, 1998; Helm & Katz, 2001

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HOP'N HOME

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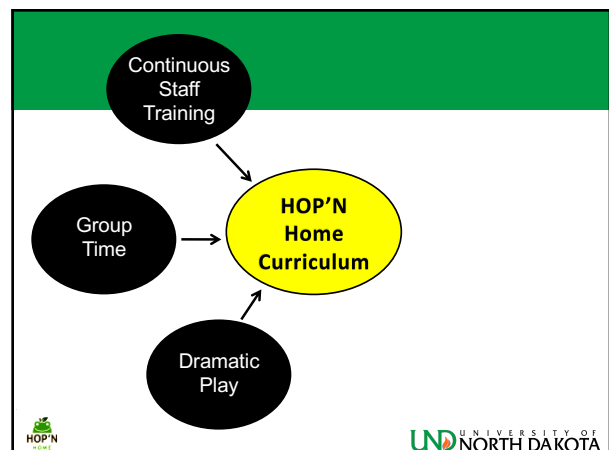
Curriculum Elements

- **Group Time**
 - Teachers will provide “group time” activities using the HOP'N Home Curriculum
 - 3 times per week for a minimum of 10 minutes per time (30 min/week)



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HOP'N HOME

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Curriculum Elements

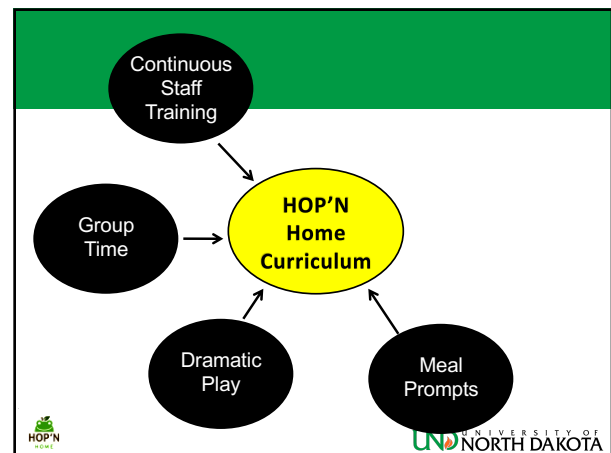
• Dramatic Play

- Teachers set up dramatic play area (home, grocery store, toy store, fast food, television/video camera)
- Everyday for a minimum of 30 minutes per day
- Teachers will use “go” and “slow” prompts at least one time per session



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Curriculum Elements

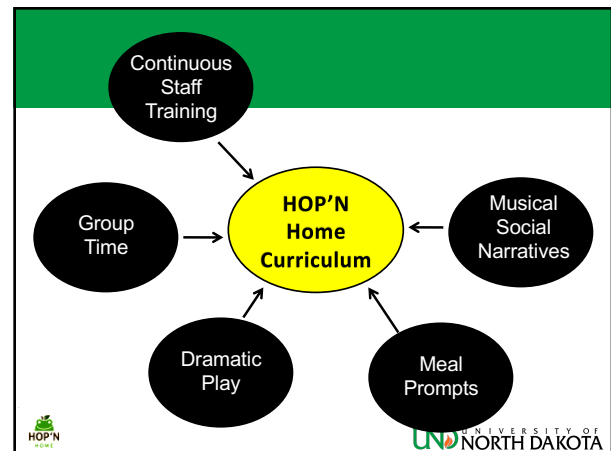
• Meal Prompts

- Teachers will PROMPT during Breakfast, Lunch and Snack
 - 5 times per week during meals/snack
 - 1 time per day, provider will prompt, “Is it a go or is it a slow? Is it healthy, yes or no?”



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Curriculum Elements

• Musical Social Narratives

- Teachers will teach children 3 songs following the HOP'N HOME Curriculum
- Teachers will provide children with the lyrics of the songs to take home and sing with parents (Week 6)
 - Song #1: The Play Song
 - Song #2: The Breakfast Song
 - Song #3: The GO & SLOW Song

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The “GO & SLOW” Song (tune: Skip to my Lou)

When I'm watching my TV
Commercials sell their things to me *Alt line: Commercials sell their (item) to me*
Before I ask for what I see
I need to ask a question:

(Chorus):
Is it a Go or is it a Slow (2x)
Is it healthy, yes or no?
Remember to ask the question!
(This is the section the children will learn to sing independently)

*Will it make my body strong?
*Keep me moving all day long?
Learn the words in this song
Remember to ask the question.
(These two lines are appropriate either for food or toys)

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The “Breakfast” Song (tune: Clementine)

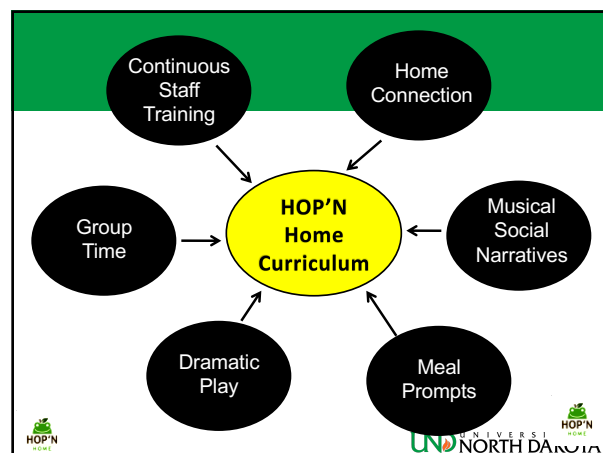
When I wake up in the morning
Before I go to school
When it's time to eat my breakfast
I can eat some healthy food.

I'll eat *(apples) or *(bananas)
Or *(peaches) oh so sweet
'Cause fruit is a “GO” food
It is good for me to eat.

When my mommy or my daddy
Makes my breakfast for the day
I can ask them for some fruit 'cause
I can eat fruit everyday.

I want *(fruit)
I want *(fruit)
I want *(fruit) with breakfast please. (2x)

**Have child name their favorite fruits for this verse*



Home Connection

- Teachers will hand out the HOP'N Home Connection note card weekly and newsletter biweekly
- Teachers will collect items from children and use them in dramatic play or group time
 - 1 item per week



Home Connection

- Parents will receive a weekly **HOP'N Home Connections Note Card**
 - Sent home on Friday of each week
 - Example: Week 1 = Friday, September 11th
 - Side 1 – Question of the Week (parent will ask child)
 - Question will be related to what the child is learning about in class
 - Side 2 – Family Activity (child will bring in item to class after the weekend: Monday/Tuesday)
 - Family Activity will be related to a classroom project to involve parents in the child's learning related to HOP'N Home



Home Connection

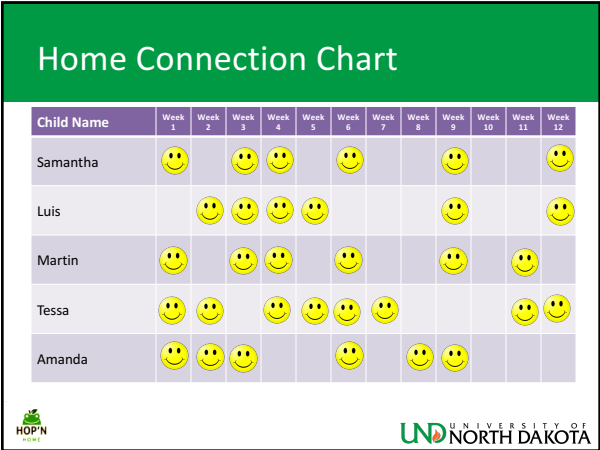
- Parents will receive a **bi-weekly newsletter** (send home every other Monday of curriculum)
 - Newsletter will provide knowledge to parents about HOP'N Home
 - Newsletter will provide a fun family activity for them to do at home



Home Connection

- To encourage children to participate in the Home Connection weekly activities, providers are encouraged to have a chart posted in the classroom with each child's name, and have the child place a sticker when they participate each week





IMPLEMENTATION:

Kansas, Texas, New Mexico



RESULTS

Results

Hypothesis 1: BMI does not increase posttest to pretest

BMI did not change ($p>0.05$)

Hypothesis 2: Increase in asking for FV and PA

Increased in asking to play outside, decreased in asking for TV and video games ($p<0.05$)

Hypothesis 3: Improvements to physical and social home environment

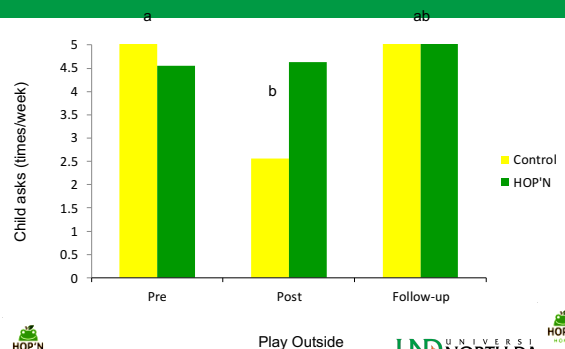
Increased fruit availability ($p<0.05$)

Hypothesis 4: Increase in FV & PA behaviors

Increased in park visits per week, decreased in screen minutes per day, decreased in fast food restaurant visits per week ($p<0.05$)



During a usual week, how often does your child ask for...
(0=never, 7=daily)



Teacher Implementation

Weekly Checklist Implementation of HOP'N Home Quality Elements

	100%	50%	Not Covered
Group Time (3x/week)	98	2	0
Dramatic Play (5x/week)	100	0	0
Physical DP Environment	92.7	2.4	4.9
Teacher Prompts	93.3	6.7	0
Child Role-Playing	38.7	38.7	22.6
Meal Prompts (5x/week)	100	0	0
HOP'N Home Connection	YES	NO	
% children that brought item	16.7	83.3	
Discuss Home Connection	45.5	54.5	



Table 3.4: Process evaluation of parent HOP'N Home participants

Parent Question	Study 1	Study 2
HOP'N Home Program, %		
Satisfied with HOP'N Home program	90.9	97.4
Made changes in home	90.9	76.9
Newsletter, %		
Received	100	76.6
Read	81.8	67.6
Did family activity	36.4	46.2
Home Connection, %		
Received	81.8	78.9
Read	72.8	71.1
Asked child questions	72.8	47.4
Did family activity	36.4	44.7
Brought item to school	36.4	47.4
HOP'N Home Music CD, %		
Received	72.7	86.5
Listened to CD at home (at least 1x/wk)	72.7	67.6
Child sang HOP'N songs (at least 1x/wk)	63.6	70.3



Discussion

- HOP'N Home children did not improve BMI
- We were able to increase child asking and behavior
- Teachers were successful at implementing the HOP'N Home quality elements
- HOP'N Home very well received by children, parents, and child care teachers
- Novel study and targeting children attending child care can be a practical way to influence home environments



Conclusions

- Children engage in unhealthful behavior: too much screen time, sedentary behavior, sugar sweetened beverages
- Programs should target children as agents of home environmental change
- "Positive Pestering"



Questions???



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