Promoting Children’s Health: Issues, Impacts and Interventions

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The State of Our Children’s Health
What We Know

More than 60% of children and adolescents eat too much fat and saturated fat and not enough fruits and vegetables.

18 – 20% of calories consumed by children and adolescents come from added sugars.
The State of Our Children’s Health
What We Know!

Childhood obesity: alarming health problem

- Becoming a worldwide epidemic
  - 10% of school-age children globally
  - >25% of school-age children in USA and some other countries
  - 0.5% added to prevalence rates each year
Statistics

- Over 65% of U.S. population is overweight with 30% obese
- Illness related to overweight and obesity costs society over $117 billion annually
- 300,000 deaths/yr (second to tobacco)
- Without changes, 60% will be obese and costs will double by 2020
But....

- JAMA article May 28
- Study: 2 surveys (2003-04 and 2005-06) 8165 children
- From a statistical standpoint, obesity rate has not risen since 1999 (17%)
- In the ‘60s and ‘70s, it was ~5%
The State of Our Children’s Health
Why We Care!

- Physical, emotional and social consequences for children and families
- Implications for society
- Adulthood
Comorbidities for Overweight and Obese Children

PHYSICAL HEALTH
- Type 2 diabetes
- Fatty liver disease
- Glucose intolerance and insulin resistance
- Hypertension
- Dyslipidemia
- Sleep apnea
- Orthopedic problems
Comorbidities for Overweight and Obese Children

EMOTIONAL HEALTH

- Low self-esteem
- Negative body image
- Depression
Comorbidities for Overweight and Obese Children

SOCIAL HEALTH
- Stigma
- Negative stereotyping
- Discrimination
- Teasing and bullying
- Social marginalization
Implications for Society

- The CDC reports in one two-year period, U.S. taxpayers spent $127 million on hospital costs associated with caring for overweight children and adolescents.
- Overweight children enter adulthood with increased risk of adult obesity.
- Even when weight loss is achieved and maintained, evidence for increased mortality should be remembered.

Remember Gerald Doeksen’s comments.
The State of Our Children’s Health
What we DON’T know

- What society should do about it!
- How to prevent childhood overweight and obesity
- How to treat childhood overweight and obesity
- What interventions will meet with success
Contributing Factors

- Obesity Multi-faceted Disease
  - Genetics
  - Lifestyle
  - Environment
  - Metabolism

- Bottom line = energy imbalance
  - Diet
  - Physical Activity/Inactivity
Editorial Comments

● “There is increasing recognition that obesity is not just a personal responsibility, but a societal issue and that dealing with it will not be simple!”

What ENVIRONMENTAL issues lead to overeating?
Or “If I could change just 2 things”
What ENVIRONMENTAL issues lead to overeating?

- Ready access or availability of food
- High-fat diets
- Large portion sizes
- Energy dense foods
  - (calories per weight of food item)
- Stress
- Tradition/Social factors/Time
- Media/Marketing
- Not breastfeeding
INTERVENTIONS should be based on THEORY and MODELS

Social Cognitive Theory
Mediating Variable Model
Social Cognitive Theory

(Adapted from Bandura, 1997)
Interventions change **Mediators**
Changes in **Mediators** change **Behaviors**

Remember Deborah Thompson’s comments
RESEARCH should be QUALITATIVE and QUANTITATIVE
A Ground Level Weight Management Approach: Creating Healthy Home Environments

Karen W. Cullen, DrPH, RD

National Research Initiative Funding (CSREES)
How to Influence Dietary Behavior

- Modify the ENVIRONMENT where eating occurs
  - Availability of foods/beverages
  - Control of meal preparation practices
- Provide a MODEL of eating behavior
- INTERACT with children during eating
  - Socialization/talking about food
  - Reinforce dietary behaviors
  - Parenting style (give orders, choices, permissive)
Two formative research studies conducted at 3 Texas EFNEP sites:

- **Study #1**: client questionnaire
  - assessed family nutrition problems/barriers to healthy eating
  - identified preferred educational methods

- **Study #2**: client focus groups
  - assessed child/family healthy eating barriers/solutions
  - identified preferred methods
Study #1: Client Questionnaire

- n=149
- Mean age= 30 years (±10)
- Demographics
  - 85% Hispanic
  - 7% African-American
  - 4% white
  - 4% other

Study #2: Focus Groups

- 3 focus groups per site (total = 9)
- 55 participants
- 90% of participants Hispanic
Focus Group

3 Major question focus areas
- Home Eating Environments
- Food/Meal Planning
- Goal Setting/Class Formats

Questionnaire

Topic Areas

- Family eating/nutrition problems
- Barriers to healthy eating
- Usual solutions
- Preferred educational activities
- Preferred teaching methods
  - photo novella
  - video
Preferred Educational Methods:
Both Questionnaire and Focus Groups

- Video preferred over photo novella
- Format
  - Want materials to demonstrate how to make changes (i.e. modeling)
  - Requested interactive format

Don’t talk at us.
It has to be doable.
We have good ideas too!
Application of Formative Research

- Scripts for the 6-session EFNEP classes developed and critiqued by CNRC and Extension staff, and consultants.
  - Topic areas assigned for each class
- Six videos taped (English/Spanish)
  - Setting: Typical EFNEP class/Multi-ethnic participants
  - Length: about 4-5 minutes per video
  - Intermission for class discussion
Weekly Class Outline

- Introduction: Class content
- Class content/review previous week goal (~10 minutes)
- Video/Interactive Discussion (~20 minutes total)
  - Video segment to introduce topic (~3 minutes)
  - Video intermission/discussion (~5 minutes)
  - Video finish (~2 minutes)
  - Further class discussion on video content (~10 minutes)
- Homework assignment/goal (~ 1-2 minutes)
- Class activity/Food Prep (~20 minutes)
Program content

- Critical features for long term success
  - Tailored vs global solutions presented
  - Focus on shared responsibility for healthy eating (parent-child)
  - Self regulatory focus = goal setting/problem solving skills essential
    - Problem solving an active component (TALK)
  - Class discussion/sharing of ideas, using TALK
TALK
TALK

- T – Think about
- A - Ask
- L - Look
- K - Keep
6 Topics
(Each with Parenting Food Tips and Goals/Challenges)

- Portion Sizes/Labels
- Breakfast/Healthy Snacks
- Vegetable & Fruit
- Milk/Dairy/Meat
- Breads/Cereals/Pasta
- Planning/Food Dollars
Evaluation Study

- Randomized clinical trial-began 2/06
- 3 sites: Austin, Houston, San Antonio
- Class as unit of randomization and analysis (n= 100)
- Trained intervention staff and data collectors (2 day meeting in Houston.)
Measures*

- Anthropometrics - Client height and weight
- Diet - 24 hour recall
- Home availability of target foods
- Food-related parenting skills
- Home food purchasing behaviors
- Self-efficacy to make changes and help families eat healthy foods
- Home fat practices
- USDA Food Insecurity Questionnaire
- Process: class observations and teacher logs

*Measured at baseline, post-intervention, and 4 months post intervention
For More Information

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In conjunction with Texas AgriLife Extension for their cooperation

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Videos soon to be available on www.kidsnutrition.org
Feeding Patterns, Dietary Intake and Overweight in Minority Families with Preschoolers

Sheryl Hughes, PhD

National Research Initiative Funding (CSREES)
Purpose of this study

Determine the effect of parental emotional expression in feeding (e.g., smiling while serving vegetables) on the dietary intake of low-income Head Start children.
Research Design

**Home** observation of 200 parent/child dyads to assess parental feeding practices, emotional expression, and child’s dietary intake.
Participants

- 200 Head Start parents and their children
  - 100 African-American families
  - 100 Hispanic families

- Recruited from 2 Head Start districts
  - Gulf Coast Community Services Association
  - Neighborhood Centers Inc.
Eight Staff Hired, Trained and Certified (1)

- Conducting home observations
- Global coding of the emotional climate of the meal
- Behavioral coding of feeding practices
- Videotaping the dinner meal with 2 cameras for split screen
Eight Staff Hired, Trained and Certified (2)

- Taking digital photos of dinner plates
- Measuring plate waste
- Obtaining recipes for family meals
- Instructing parents to complete parent-report measures
Methods and Procedures

- Observations are conducted in the homes of the Head Start families
- 3 separate observations per family within a two week period
- Observations began in February 2007 and will continue until May 2009
- Currently have completed 40 AA families and 58 H families (3 per family) for a total of 294 observations and videotapes
Initial Procedures

- In-home videotaping
- Digital photography
- Parent-report measures
Home Visits for each Family

Visit 1: Live Coding (observational checklist and global coding)
- Videotaping
- Recipes for Visit 1
  - Digital photos of food and plate waste (parent and child)
  - First third of the parent-report measures*

Visit 2: Live Coding (observational checklist and global coding)
- Videotaping
- Recipes for Visit 2
  - Digital photos of food and plate waste (parent and child)
  - Second third of the parent-report measures*

Visit 3: Live Coding (observational checklist and global coding)
- Videotaping
- Recipes for Visit 3
  - Last third of the parent-report measures*
  - Digital photos of food and plate waste (parent and child)
  - Height and weight measures on parent and child

* These measures include a number psycho-social questionnaires (child temperament, parent affect, parent feeding styles).
Measures for Live Coding

- **Observational Checklist**
  - 31 feeding behaviors exhibited by parent

- **Global Coding of the Emotional Climate**
  - Positive emotion associated with patient, sensitive parenting; early parent-child bonding
  - Negative emotions underlie insensitive, coercive parenting
  - Positive emotions produce more harmonious interactions among parents and children.
Parental Emotional Expression

- **Child-centered** (the use of verbal softeners and minimally intrusive ways of getting children to comply with parental demands)

- **Parent-centered** (the use of external control to get children to comply with parental demands)
Positive Affect

- Interested
- Excited
- Enthusiastic
- Inspired
- Attentive
- Proud
Negative Affect

- Distressed
- Upset
- Scared
- Hostile
- Irritable
- Nervous
Observational Checklist

Feeding behaviors are grouped into categories for ease in coding:

- Modeling
- Situational Management
- Verbal Directives
- Threats/Bribes
- Scolding/Praise
- Permissive behaviors

Feeding behaviors correspond to the parent-report Caregiver’s Feeding Styles Questionnaire (CFSQ)
Digital Photography

- Reference pictures
- Field plates
Reference Pictures
Reference Pictures

Tripod

- Measured angles
- Adjustable height
Estimations

Field Plate

Reference Pictures
Caregiver’s Feeding Style Questionnaire

- Available at CNRC website
  - www.kidsnutrition.org
  - www.kidsnutrition.org/faculty/hughes.htm

- Scoring methods
  - Typological approach (research)
  - Dimensional approach (clinical)
Caregiver’s Feeding Style Questionnaire (CFSQ)
For More Information

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- In conjunction with the University of Delaware for their cooperation

Funding provided by USDA/CSREES NRI

Visit Just in Time Parenting at www.parentinginfo.org
Nutrition & Your Child

What Is Your Infant Telling You About Feeding?

Growing healthy infants are feeding signals to self-regulate how much they eat. Infants also have a "knob" when they are hungry and when they are full. These signals can be communicated to their parents and caregivers, which may help them better understand their eating behavior.

Dr. Eric Hedges, a post-doctoral fellow at the University of Texas Southwestern Medical Center (UT-SWMC), is studying this issue. He hypothesizes that infants can be taught to identify their hunger and fullness levels.

The Children's Eating Laboratory at CNRC

The Children's Eating Laboratory at CNRC is one of the few laboratories in the nation to study the development of eating behavior in infants. The laboratory is designed to create a child-friendly environment where infants can eat without distractions.

Inside This Issue

- Understanding Real Lifespan
- Promote Healthy Diet
- New EPI-Parents of 2015
- Year-Old Influence What Their Children Eat
- Using GIS and Other Methods in Determining Physical Activity Opportunities for Adolescents

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Questions/Comments/Thoughts

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