Evaluating barriers and facilitators to making healthy food choices in the home environment

Angela Odoms-Young, Ph.D.
Assistant Professor, Department of Kinesiology and Nutrition, University of Illinois at Chicago
odmyoung@uic.edu

Marian L. Fitzgibbon, Ph.D.
Professor, Department of Medicine and School of Public Health, University of Illinois at Chicago
mlf@uic.edu
Presentation Outline

- Introduction
- Description of the Chicago Family Food Survey
- Potential barriers to meeting guidelines
Food Environments

- Diverse studies support the concept that nutrition environments influence eating behavior.
- In the context of an obesity epidemic, it is essential to improve our understanding of food environments.
- The home environment could be one of the most complex, yet understudied, food environments.
- Examining barriers in the home environment can provide a framework for understanding environments in child care homes.
Implications for dietary decisions

- Social/Environmental Context Matter
  - Women living in food insecure households are more likely to:
    - Consume high-calorie, but nutritionally poor food to avoid feelings of hunger
    - Eat irregular meals
    - Skip breakfast
    - Consume less milk, fruit, and vegetables

Implications (con’t)

- Short sleep duration is a risk factor for consumption of energy dense foods
- Television viewing has been associated with increased caloric consumption
- Stress increases energy intake for energy dense foods
- Stress not only increases overall consumption, but shifts food choices from lower to higher fat foods.
Chicago Family Food Survey

- NCI CA149400
- Longitudinal Study
- WIC participants surveyed before and after new food package introduced
Study Design
Chicago Family Food Survey

12 WIC Clinics

Baseline interview (N=298 parent-child dyads\(^a\))

New WIC food package introduced

6-month interview (N=295 dyads)

12-month interview (N=272 dyads)

18-month interview (N=266 dyads)

\(^a\) Only participants in longitudinal study included.
Factors Affecting Home Food Environment

v Microenvironment (Home)
  n Child Feeding Practices*
  n Parent/caregiver nutrition knowledge and food preferences
  n Shopping Patterns*
  n Home food availability
  n Household food security/insecurity*
Factors Affecting Home Food Environment (cont’d)

- Microenvironment (Home)
  - Children’s sleeping routines
  - Television viewing and computer availability
  - Level of stability within the home*
  - Stressful life events*
Additional Contextual Factors

- Macroenvironment
  - Availability of healthy vs. unhealthy food products*
  - Cost of healthy vs. unhealthy food*
Child Feeding Practices
Child Feeding Questionnaire

The Child Feeding Questionnaire (CFQ) was designed to assess parents' perceptions and concerns regarding child obesity, as well as child-feeding attitudes and practices (31 items, 7 factors).

Parental perception of child and parent weight, and concern about weight, which may elicit parental control in feeding.

- Perceived responsibility (3 items)
  - (e.g. ``When your child is at home, how often are you responsible for feeding her/him?)
- Parent perceived weight status (4 items)
- Perceived child weight status (3 items)
- Parents' concerns about child weight (3 items)
  - (e.g. ``How concerned are you about your child becoming overweight?'').
Child Feeding Practices
Child Feeding Questionnaire

Parents' attitudes and practices regarding their use of controlling child feeding strategies

- Monitoring (3 items)
  - (e.g., ``How much do you keep track of the high fat foods that your child eats?'')

- Restriction (8 items)
  - (e.g., ``I intentionally keep some foods out of my child's reach'')

- Pressure to Eat (4 items),
  - (e.g., ``My child should always eat all the food on her plate'').

Birch et al., 2001
Child Feeding Practices (cont’d)

- Additional Child Feeding Questions
  - How often does your child:
    - ...eat while watching television, videos, or DVDs?
    - ...eat his/her meals at a regular time?
    - ...share your food or eat food from your plate?
    - ...eat food from a fast food restaurant?
Shopping Patterns

- Please tell me the names and addresses of 2 stores where you or the main shopper in your household normally go to purchase food.
  - Any type of store: for example, supermarkets, grocery stores, corner or convenience stores, dollar stores, drug stores, liquor stores, and gas stations.

- How often do you or the person who is in charge of buying groceries or food shop there?
Home Food Availability

- Availability and accessibility of fruit, juice, and vegetables (39 items)
- Availability in the home in the last 7 days
- Form (fresh, frozen, canned)
- Cultural modifications (addition of Mango, Avocado, Nopales/Nopalitos (Cactus), Jicama)
- Low/high fat dairy; grain products.

Cullen, 2003
USDA Short Household Food Security Survey Module

- The food that we bought just didn’t last, and we didn’t have money to get more.
- We couldn’t afford to eat balanced meals.
- Did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?
  - How often did this happen?
- Did you ever eat less than you felt you should because there wasn't enough money for food?
- Were you ever hungry but didn't eat because there wasn't enough money for food?

Covers last 12 months
Environmental Confusion in Household: CHAOS Measure

1. There is very little commotion in our home.
2. We can usually find things when we need them.
3. We almost always seem to be rushed.
4. We are usually able to stay on top of things.
5. No matter how hard we try, we always seem to be running late.
6. It's a real zoo in our home.
7. At home we can talk to each other without being interrupted.
8. There is often a fuss going on at our home.

CHAOS Measure (cont’d)

9. No matter what our family plans, it usually doesn't seem to work out.
10. You can't hear yourself think in our home.
11. I often get drawn into other people's arguments at home.
12. Our home is a good place to relax.
13. The telephone takes up a lot of our time at home.
14. The atmosphere in our home is calm.
15. First thing in the day, we have a regular routine at home.

Contemporary Life Stressors
CRISYS Measure

- Potentially stressful life events during the past 6 months
- 63 items
- Overall CRISYS scale score and 11 subscale scores

CRISYS: Subscales and Sample Items

- Financial (11 items)
  - Did you go deeply in debt?
  - Did your income decrease by a lot?
  - Did you miss a rent or mortgage payment because you couldn't pay for it?
  - Was your telephone, electricity, or gas turned off?

- Legal (3 items)
  - Did anyone in your family get arrested?

- Career (4 items)
  - Did you begin a new job or get promoted?
  - Did you get laid off?
CRISYS: Subscales and Sample Items (cont’d)

- **Relationships (6 items)**
  - Did you get a divorce or break up with a partner?
  - Did your regular child care arrangements change in any way?

- **Safety in the home (3 items)**
  - Did you feel emotionally or physically abused?

- **Safety in the community (8 items)**
  - Did you hear violence outside your home?
  - Did you see drug dealing in your building or neighborhood?
  - Were you a victim of a crime while you were outside or away from your home?
CRISYS: Subscales and Sample Items (cont’d)

- **Medical issues, self (6 items)**
  - Did you/your partner have a baby?
  - Did you become ill or did you have a flare-up of a chronic illness?

- **Medical issues, others (4 items)**
  - Did your children become ill or did your children have a flare-up of a chronic illness?
  - Did another family member become ill?

- **Home issues (7 items)**
  - Did a relative or friend move into your home?
  - Did you move?
  - Did rats, mice, or insects bother you in your home?
CRISYS: Subscales and Sample Items (cont’d)

✓ Authority (4 items)
  n Did you have trouble with social service agencies?
  n Did you have trouble with medical or health professionals?

✓ Prejudice (4 items)
  n Did someone treat you unfairly because of your race?
  n Did someone treat you unfairly because you didn’t have a lot of money?

✓ Additional items, not in subscale (3 items)
  n Did you ever use alcohol or drugs to get through a day?
  n Did you have trouble reading or understanding something that was important to you?
Macroenvironment

✓ Neighborhood availability, selection, and cost (SW Chicago Food Store Audit Instrument- Zenk et al., 2006)

✓ Perceived neighborhood food availability (Moore et al., 2008)

  e.g., A large selection of fresh fruits and vegetables is available in my neighborhood.
Acknowledgments

✓ CFFS participants
✓ WIC center personnel
✓ NCI
Acknowledgments (cont’d)

- Cheryl Bittner
- Lara Blumstein
- Maria Cáceres
- Lupe Compean
- Sandra Gomez
- Kathryn O’Malley
- Summer Porter
- Christine Ranieri
- Leo Restrepo
- Aida Rodriguez
- Linda Schiffer
- Yolanda Vega
Thank You!