



Construction of children's snacks and meals in food insecure households: purpose, context, and chaos

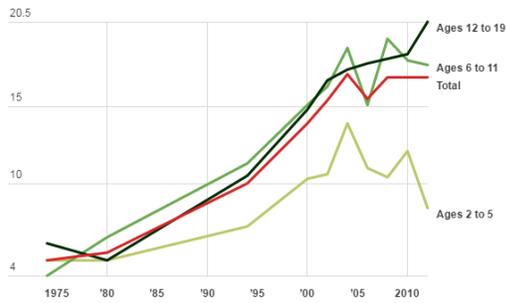
Christine Blake, PhD, RD
February 2, 2017



Overview

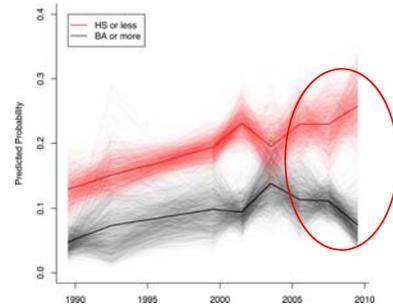
- Background
- Key findings from three projects
 - Snacking in Young Children
 - Altered Activities and Shame Among Children in Food Insecure Families
 - Midlands Family Study: Family Meals sub-study
- Discussion

U.S. Childhood Obesity Rates, 1974 - 2012



Source: CDC National Health and Nutrition Examination Survey

SES disparities in child obesity trends

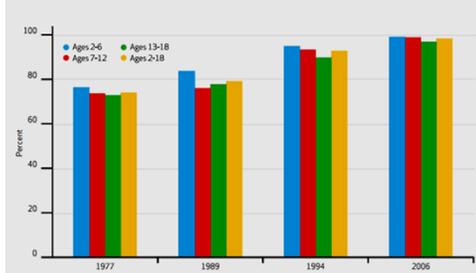


Frederick, Snelman, Putman, PNAS, 2014

Childhood obesity risk corresponds to shifts in child dietary intake



Percentage of U.S. Children Consuming Snacks Over A Two-Day Period, Selected Years 1977-2006



Among US preschoolers, increases since 1970s:

- Number of children who snack (76% → 99%)
- Frequency of snacking (1.4x/d → ~3x/day)
- Contribution to daily energy intake

Piernas, Popkin, Health Aff, 2010

The frequency and size of snacks has increased

	1977-1978	1989-1991	1994-1998	2003-2006
Ages 2-6 yrs				
Snacks/day	1.34 (.04)	1.59 (.06)	2.34 (.04)	2.75 (.05)
Grams/snack	126 (2.88)	137 (3.91)	159 (2.53)	155 (3.79)

- Increase from 8% to 27% daily energy intake

Piernas and Popkin, Health Affairs (2010)

7

Prevailing wisdom: snacks are essential

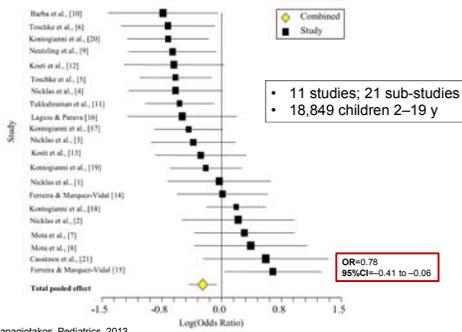
- Professional recommendations
 - AAP
 - USDA My Plate



Federally funded programs

- CACFP
- Head Start

Eating frequency and OW/OB



Kaisari, Yannakoulia, Panagiotakos, Pediatrics, 2013

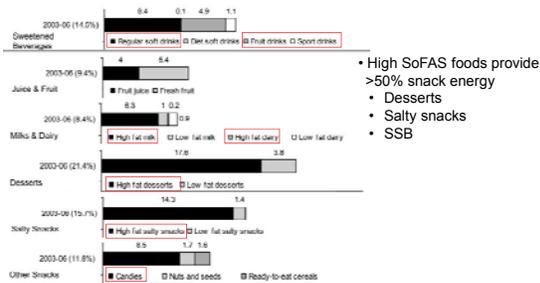
Contributions to nutrient intake among children 2-18 years, NHANES 2009-2010

- Calcium 19-32%
- Mg 24-31%
- Vit C 27-37%
- Vit D 14-29%
- Vit E 26-34%
- K 20-29%
- Vit A 15-25%
- Iron 18-21%



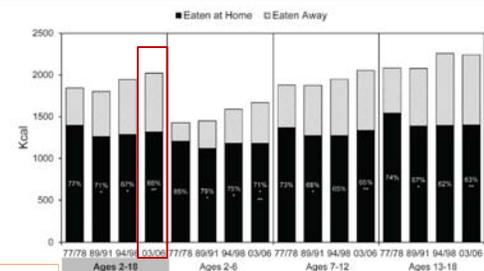
USDA, ARS. Snacks: Percentages of selected nutrients contributed by foods eaten at snack occasions, by gender and age. What We Eat in America, NHANES 2009-2010, 2012

Proportion of snacking calories from food groups among U.S. children 2-18 years, 2003-2006



Piernas, Popkin, Health Aff, 2010

Where are children eating?



NFCS: 77-78
CSFII: 89-98
NHANES: 03-06

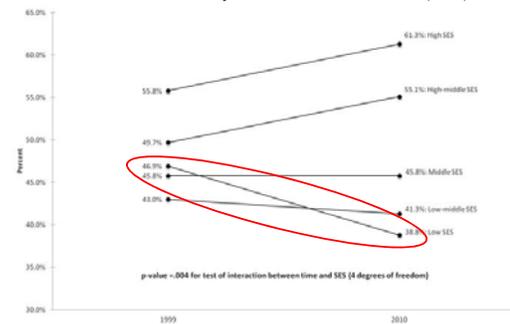
Poti, Popkin, JADA, 2011

Family meals

- Regular family meals may reduce risk of child obesity
- Family meal frequency associated with better diets and healthy development in children
- Positive family and parent interpersonal dynamics at family meals associated with reduced child obesity
- ... but not all children derive benefits from family meals

Videon and Manning, 2003; Eisenberg et. Al., 2004; Larson et. Al., 2007; Berge et. Al., 2015.

Percent of families eating a family meal ≥ 5 times/past week in 1999 and 2010 by socio-economic status (SES)



Neumark-Sztainer D, Wall M, Fulkerson JA, Larson N., 2013

Food insecurity (FI)

- ~16 million US households were food-insecure in 2015
- Including about 6.4 million children
- Children in FI households poorer diet quality
- Family meals regularity lower FI households

Jyoti et. al., 2005; Rose and Bodor, 2006; Casey et. Al., 2006; Kirkpatrick and Terasak, 2008; USDA ERS, 2016

Food insecurity and child obesity

- Child food insecurity (household) not associated with child obesity
- Personal food insecurity associated with obesity among children aged 6 to 11 years
- Personal food insecurity involves specific behaviors, conditions, or actions of the reference child

Kaur, J., M.M. Lamb, and C.L. Ogden, 2015.

Household chaos

- Food-insecure households experience more **chaos**, defined as exhibiting:
 “unpredictable, non-routine, inconsistent, and non-contingent physical and social surroundings.”
- ...which might disrupt children’s snacks and family meals

Widome R, Neumark-Sztainer D, Hannan PJ, Haines J, Story M. Am. J. Public Health 2009;99(5):822-828; Fiese BH, Winter MA, American Psychological Association; 2010:49-66; Fiese BH, Winter MA, Botti JC. Child Dev. 2011;82(1):133-145.

What do we know?

- Home-based snacks and meals contribute to child obesity
- Snack and family meal frequency might be protective but...
 - Not all snacks are “healthy”
 - Family meal experiences vary
- Food-insecure households experience more chaos and less family meal planning, but how does this affect child diet?
- Personal food-insecurity associated with higher risk of child obesity, but not household level
 - Why? How?

Our work seeks to...

- Understand how caregivers in food insecure households construct children's snacks and family meals
- .. and how these constructions shape eating experiences
- ...to influence child dietary intake and well-being related to obesity



Snacking in young children: parental definitions, goals, and feeding practices

NIH NICHD R21 HD074554

Co-Investigators:

Jennifer O. Fisher Temple University
Kirsten K. Davison Harvard University
Christine E. Blake University of South Carolina

Students and Support Staff:

Nicolas Younginer
Alex Orloski
Rachel Blaine
Heather Hamtil
Yasmeen Bruxton



Goal: To develop an empirically-driven definition of child snacking, its goals and feeding practices from low-income HA, White, and AA parents' perspective

Schema theory

- Mental representations of concepts, like "child snacks" that are constructed and shaped through experience
 - Vary in complexity
 - Can have abstract and concrete elements
 - Are influenced by culture and upbringing
 - Are dynamic in nature



Schank and Abelson, 1977; Baldwin, 1992; Nishida, 1999; Holmberg and MacKenzie, 2002

What is snacking?

- Self-defined in epidemiological diet studies¹
- Definition variable and may reflect²⁻⁴:
 - Time of day
 - Types of foods eaten
 - Context in which foods are consumed
 - Characteristics of the individual
- Poorly understood from parental perspective
- Parents' snack schemas and practices likely play a strong role in child snacking behaviors

¹Piernas, Popkin, *Health Aff*, 2010

²Chamonjin, Pretzer, *Appetite*, 2003

³Gregori et al. *International Journal of Food Sciences and Nutrition*, 2010

⁴Johnson, Anderson, *Critical Reviews in Food Science and Nutrition*, 2010

Participants

- Sixty low-income parents of children aged 3-5
 - 17 White
 - 23 Black
 - 20 Hispanic
- 56 mothers and 4 fathers
- 47% High-school education or less
- 60% Single-headed household
- <185% of poverty or SNAP/WIC eligible

Data collection

- Qualitative in-depth interviews integrated with card-sorting tasks (~60 minutes)
- Audio-recorded and transcribed verbatim
 - Spanish interviews translated and verified



Cards



- Derived from dietary intake data of a multiethnic sample of ~250 Children
- Depicted 65 typical preschooler snacks
 - 29 double sided with high versus low SoFAS versions of the same foods
- Varied in SoFAS (Solid Fats Added Sugars) content
- Included foods and beverages
- Included text in English and Spanish

Interview process

Define Snack

(e.g. "When I say the word snack what do you think of?")
Sort Cards by snack/not snack/outside of meals

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(e.g. "How do you decide what snacks your child gets?")
Sort cards by snack purpose

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Snack Context

(e.g. "In what places/situations does your child eat snacks?")
Sort cards by snack context

Interview process

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Snack Purpose

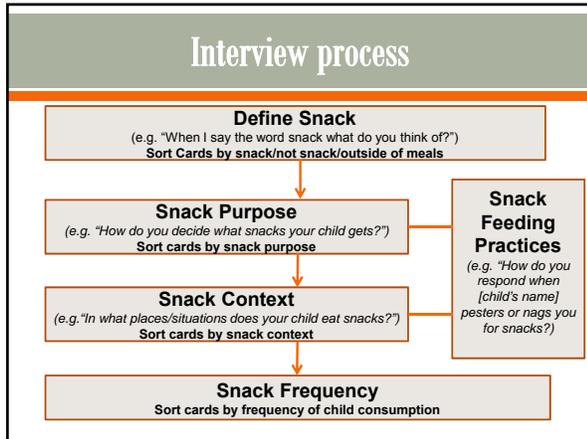
(e.g. "How do you decide what snacks your child gets?")
Sort cards by snack purpose

Snack Context

(e.g. "In what places/situations does your child eat snacks?")
Sort cards by snack context

Snack Feeding Practices

(e.g. "How do you respond when [child's name] pesters or nags you for snacks?")



Analysis qualitative interview data

- Thematic coding of transcripts for snack...
 - *Definitions*
 - *Purposes*
 - *Contexts*
 - *Feeding practices*
- Emergent coding with Nvivo 10
 - developed node lists of main themes
- Double coding of transcripts to ensure trustworthiness
- Sub-coding of main themes
- Comparison of themes and sub-themes and participant attributes using matrices



Analysis card sort data



- Card sort data managed using Excel spreadsheets
- Calculation of average Sofas values for each card
 - SoFAS estimated using exemplar items from USDA Food Patterns Equivalents Database 2009-2010 (Mean=10.8)
- **Snack Definitions:**
 - Comparison of foods classified as snack, outside meals, and not snack
 - Calculation of average Sofas values for each category
- **Context and Purpose:**
 - Card sort labels summarized to identify predominant contexts and purpose categories
 - Calculation of average Sofas values for each category
- Results compared across racial-ethnic groups



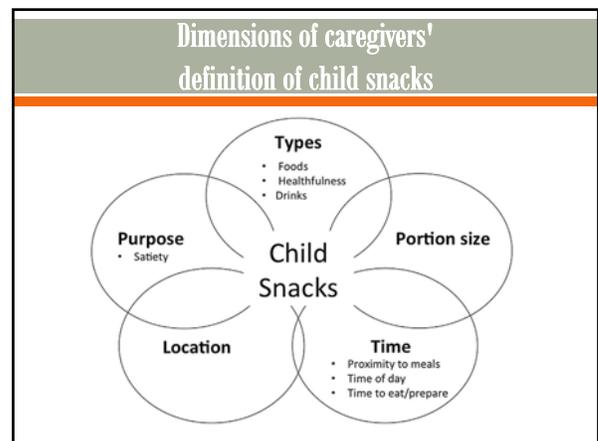
1. Not all foods children eat between meals are considered snacks by caregivers... and this has implications for child dietary intake and obesity risk.

Blake, Christine E., Fisher, Jennifer Orlet, Gehre, Claudia, Youngner, Nicholas A., Orloski, Alexandra, Blaine, Rachel E., Bruton, Yasmeen, Davison, Kirsten K. A qualitative study of parents' perceptions and use of portion size strategies for preschool children's snacks. *Appetite*, 2015, doi:10.1016/j.appet.2014.11.005.
Youngner, Nicholas A., Blake, Christine E., Davison, Kirsten K., Blaine, Rachel E., Ganter, Claudia, Orloski, Alexandra, and Fisher, Jennifer O. "What do you think of when I say the word 'snack'?" Towards a cohesive definition among low-income caregivers of preschool-age children. *Appetite*, 2016, 98: 35-40

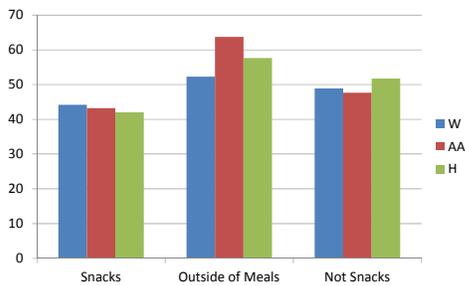
Snack definition

A small portion of food that is given in-between meals, frequently with an intention of reducing or preventing hunger until the next mealtime.

Youngner, Nicholas A., Blake, Christine E., Davison, Kirsten K., Blaine, Rachel E., Ganter, Claudia, Orloski, Alexandra, and Fisher, Jennifer O. "What do you think of when I say the word 'snack'?" Towards a cohesive definition among low-income caregivers of preschool-age children. *Appetite*, 2016, 98: 35-40

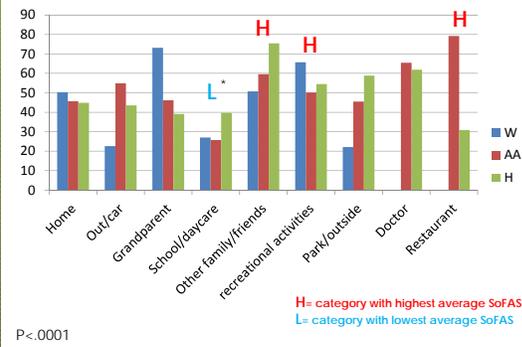


Mean SoFAS kcal/100 grams for snacks included in Outside Meals, Snack, and No Snack categories

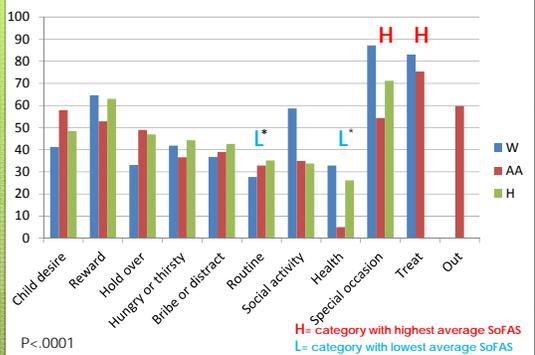


2. The nutritional quality of snacks varies by context and the purposes for which they are given.

Sofas kcal/ 100 gm of snacks by context



Sofas kcal/100 gm of snacks by purpose



3. Parenting around child snacking includes strategies likely to influence risk of childhood obesity but measures are lacking.

Parenting around child snacking (PACS)

• 20 practices in 4 overarching dimensions

Structure	Coercive Control	Autonomy Support	Permissiveness
<ul style="list-style-type: none"> • 54 caregivers • 280 references • 5 practices 	<ul style="list-style-type: none"> • 54 caregivers • 278 references • 7 practices 	<ul style="list-style-type: none"> • 47 caregivers • 126 references • 4 practices 	<ul style="list-style-type: none"> • 37 caregivers • 115 references • 4 practices

Davison, Kirsten, Blake, Christine E., Blaine, Rachel E., Younginer, Nicholas*, Orloski, Alexandra, Hamtli, Heather A., Ganter, Claudia, Bruton, Yasmeen P., Vaughn, April, and Fisher, Jennifer O. Food parenting specific to child snacking: exploring low-income caregivers' perspectives through qualitative inquiry and developing a conceptual model. *International Journal of Behavioral Nutrition and Physical Activity*, 2015, 12:109

Parenting around child snacks

Structure

⇒

- Availability of healthy snacks
- Accessibility of healthy snacks
- Moderate snack rules and limits
- Monitoring and awareness of snacks
- Snack planning and routines

“Like I got-I got ‘em on a schedule so he know that he gonna get a snack at this time.”

(African American father of a 3-year-old boy)

Parenting around child snacks

Coercive Control

⇒

- Snacks to reward behavior
- Snacks to manage behavior
- Snacks to occupy child
- Unilateral decision making
- Excessive monitoring of snacks
- Restriction of snacks
- Pressure to eat

“I give it to him with no choice, like he has to eat these or he eats nothing at all. He gets no snack.”

(African American mother of a 3-year-old boy)

Parenting around child snacks

Autonomy Support

⇒

- Role modeling healthy snacking
- Reasoning and support for healthy snacks
- Child-centered provision of snacks
- Praise and encouragement of healthy snacks

“I’m trying to get her to eat broccoli. . . Like, I was started to sit down with her like, “Look, this is good, Mami. Hey look at Mommy eating it.”

(Hispanic mother of a 4-year-old girl)

Parenting around child snacks

Permissiveness

⇒

- No involvement with snacks
- No snack rules or limits
- Context-driven provision of snacks
- Emotion-based feeding of snacks

“Oh, he’s eating throughout the day. I mean, it’s not like only certain times or anything. It’s like when he wants a snack, I’ll give him a snack. I don’t ever want to deny him something, you know, be mean to him, be the hateful father.”

(White father of a 3-year-old boy)

Parenting around child snacking (PACS) questionnaire

- 20 themes
- 105 items
- 4 response: Not like me-> Like me

Construct Definition

⇒

Item Generation

⇒

Expert Panel Review

⇒

Cognitive Testing

Next Steps...

factor structure, reliability, and validity of new measure

Child snacking conclusions

- Not all foods given to children outside of meals “snacks”
 - Energy-dense main courses
 - Beverages
- SofAS content of snacks varies by purpose and context
- Low-income caregivers parenting practices for snacking
 - broadly align with current child feeding measures
 - but some differences unique to snacking
 - Permissiveness



Altered daily activities and shame resulting from children experiencing food insecurity in rural South Carolina and Oregon

Funded by the Economic Research Service of the US Department of Agriculture through the RIDGE Center for Targeted Studies at Purdue University.

Co-Investigators:

Edward A. Frongillo
Jennifer Bernal
Elizabeth Adams
Christine E. Blake



Students and Support Staff:

Elizabeth Massey
Tiara Rosemond



Goal: Understand how alterations of child's activities and feelings of shame associated with food insecurity and how these altered activities and shame in turn may result in adverse behavior, social interactions, and school performance.

Methods

- In-depth qualitative interviews 20 parent-child dyads (n=40)
 - Children ages on 9 and 15
 - Food-insecure at screening (18-item USDA module)
- Parents and children interviewed separately
- Interviews transcribed verbatim
- Analyzed using a grounded theory approach and constant comparative method

Participant demographics

	Parent (n=20)	Child (n=20)
Mean Age (SD)	41.9 (1.8)	12.7 (0.5)
Gender		
Female	90.0% (18)	50.0% (10)
Male	10.0% (2)	50.0% (10)
Race/Ethnicity		
NH White	25.0% (5)	10.0% (2)
NH Black	75.0% (15)	75.0% (15)
NH Mixed Race	-	15.0% (3)
Relationship to Child		
Mother	85.0% (17)	
Father	10.0% (2)	
Grandparent	5.0% (1)	
Household Food Security Status		
Low Food Security (LFS)	50.0% (10)	
Very Low Food Security (VLFS)	50.0% (10)	
Household Income		
<\$16,000	25.0% (5)	
\$16,000 - \$34,999	50.0% (10)	
\$35,000 - \$49,999	10.0% (2)	
\$50,000 - \$74,999	15.0% (3)	
Mean Household Size	4.18 (0.4)	



4. Family meals are valued in food insecure households but chaos is a major driver of structure, frequency, and quality.

Rosemond, Tiara,* Blake, Christine E., Bernal, Jennifer, Burke, Michael P., and Frongillo, Edward A. Strong Interpersonal Relationships Buffer the Impact of Chaos on Quality of Family Meal Interactions in Food-insecure Households. Oral presentation at the annual meeting of the American Society for Nutrition, Experimental Biology Conference, San Diego, CA, April, 2016.

Caregivers value family meals

"...In my head, that's what families do [eat together] (P113)."

"It just make me feel good as a mom, to know that at dinner time my boys sitting at the table, we together. They're not in the street." (P111)."

Slide 54

CB22 Note that i added "on family meal interactions"
Christine Blake, 4/1/2016

Children value family meals

"[Eating together] is really important, because that's the time when, like, none of us are doing anything. We're all just sitting together, like, talking with each other and talking about, like, what goes on in each other's lives..." C101

Household chaos a major feature

Household Chaos

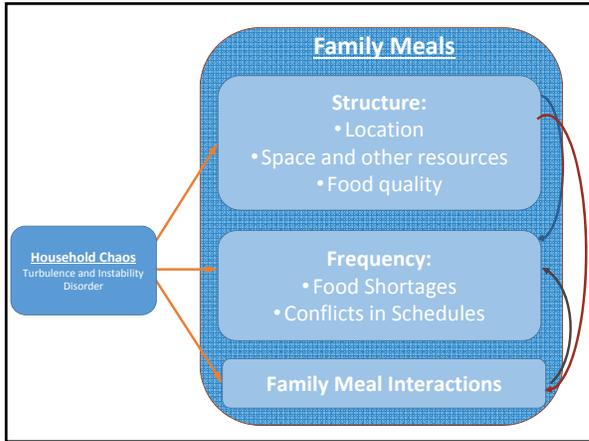
Turbulence and Instability

- Experiencing food shortages
- Conflicts with work and afterschool schedules
- Disruptions due to illness (both chronic and acute)
- Strategies for reducing poverty and improving food security (e.g., working extra hours or seeking food assistance)
- Children visiting multiple homes, particularly when food was limited

Disorder

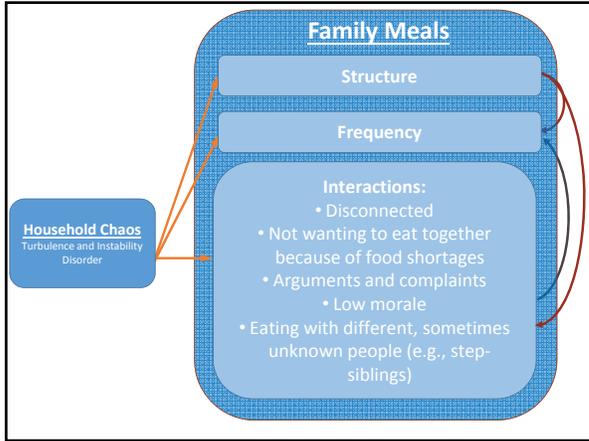
- Inconsistent rules (or enforcement of rules) among different households and caregivers
- High levels of ambient noise (e.g., loud neighbors, arguing)

"[My day is] like a fire..." P106

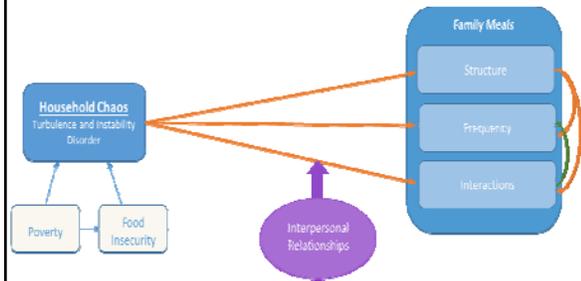



Household chaos, family meal structure, and frequency

"Usually the times when we don't get together [for a family meal] is when mom is doing overtime or when like we're kind of mad at each other for something. So, I like go eat in my room and then mom eats in a living room." C116

Household chaos and family meal interactions: the importance of interpersonal relationships



Dysfunctional interpersonal relationships

"[Eating together] sometimes it reveals – or reminds me of what some of our dysfunctions are and how we deal with each other and the kids and raised voices from frustration and stuff like that." P108

Strong interpersonal relationships

- Family meals are a way to bond and communicate while escaping the "busyness" or chaos of life.
 - An important part of "being a family"
 - Communication was highly valued
 - Strong sense of unity among family members



Strong interpersonal relationships buffer chaos

"For me, it [eating together], you get away from the cares of the world, you know? You're getting away from the worries and the cares and you just enjoy being with your family, with your wife and your children." P101



Chaos and family meals conclusions

- Chaos negatively impacts family meal structure, frequency, and interactions
- Strong interpersonal relationships may buffer the negative impact of household chaos on family meal experiences



5. Television viewing while eating serves many functions in food insecure households ... not all negative.

Blake, Christine E., Rosemond, Tiara N.*, Bernal, Jennifer, Frongillo, Edward A. The role of television during family meals: Enable or disrupter of communication. Oral presentation at the Experimental Biology Conference, San Diego, LA, April, 2016.
Blaine, Rachel E., Fisher, Jennifer O, Blake, Christine E, Orloski, Alexandra, Youngner, Nicholas*, Bruton, Yasmeen, Ganter, Claudia, Rimm, Eric B, Geller, Alan C, Davison, Kirsten K. Conditioned to eat while watching television? Low-income caregivers' perspectives on the role of snacking and television viewing among pre-schoolers. *Public Health Nutrition*, 2016, Jan 22:1-8.

Television and child dietary intake

- Television (TV) viewing while eating is associated with higher calorie intake, lower diet quality, more sedentary hours, and higher obesity risk
- TV viewing during family meals may also disrupt communication and bonding between family members
- BUT children who experience family meals with TV have better outcomes compared to no family meals at all

Gable, Chang, and Krull, 2007; Feldman et al., 2007; FitzPatrick, Edmunds, and Dennison, 2007; Roos et al., 2014; Chitakumyea and MacLeranb, 2014; Davis et al., 2016

Snacking and TV

- 78% caregivers described preschoolers' snacking while viewing TV viewing
- 4 reasons given



1. Prompts eating

Children expect snacks when watching TV

"I think they ask more for the junk foods 'cause they see other kids eating a lot of it. You see it a lot on TV, on commercials, so they ask for it . . ."

2. Behavior management

Allows parent time to cook, clean, work OR keep child occupied/content

"And keeping her busy is more of sitting down watching TV like the popcorn, the waters, the hard pretzels, candy and just to keep busy. . . I mean there's really no nutrition, but it keeps her occupied."

3. Feeding strategy

TV used as a distraction to increase food intake

"I can give her the more healthy options when she's watching TV because she's kind of distracted by that and like, you know, not thinking of like the candy bar that she probably would want you know, if she wasn't distracted by having the TV"

4. Social time with family

Encourage bonding and share food with parents or siblings

"You know, we tend to sometimes have snacks together. Sit down, me and his brother, and just talk or if we're watching a movie we'll have a little bit of popcorn. So it's more like a bonding type of thing for us, too."

Family meals and television viewing

- TV viewing during family meals common for most participants (14/20).

“We do [watch TV with dinner]. My husband is ... he gonna sit in front of the TV.”

P103



Some had a No TV rule... but...

“No, no electronics at the table, is supposed to be the rule, and, ...I used to have a very solid rule about no – **the TV was not on during mealtime, but since things have become so chaotic and people eating at different times, I kinda slacked up a little bit.**”

P102

TV viewing and communication

- Participants described TV viewing during family meals as either an **enabler or disruptor** of communication.



TV as enabler

“**...we are family oriented.** Watch a lot of TV together. We eat together.... And we express ourselves.”

P111

“Everybody sits around and watches TV, kinda talks, but mostly it's centered around a TV. Like, my dad, ...will put on a show, where we can kind of **all enjoy it as a family.**”

P108

TV as disruptor

“Sometimes they can [watch television during the family meal], but for the most part, I like to turn it off because that's the only thing you're doing, **you're not talking, you're not socializing, you're just kind of paying attention to that.**”

P112



TV as deliberate disruptor

- ∞ One child explained that **he preferred to eat family meals in front of the TV** because of how eating together made him feel.

“...the only other thing we do [during family meals] is we just sit there, and eat, and not talk whatsoever....[if] We talk, and awkward silence. That's really all that happens. ...I can't really describe [how it feels]. Um, stressed. [I'd keep] everything [with my families meals] except the arguing.... because already it makes me really stressed. It adds to the stress I already have with school.”

C102- age 10 boy

TV to distract from hunger

“I watch TV a lot when I don’t eat [enough], because it takes my mind off of it.”

C103- age 10 girl

TV with Snacks and Meals Conclusions

- TV is a central feature of many snacks and family meals
- TV viewing serves multiple functions
 - Keep children occupied during snacks
 - Get children to eat more
 - Enable communication/socialize
 - Watching TV during meals to deliberately disrupt
 - stressful communication
 - feelings of hunger due to food shortages

Berge et al., 2014; Offer, 2013; Chitakunyea and Maclaranb, 2014;



6. Household Chaos is negatively associated with child diet but positive interactions at family meals might buffer some (but not all) of the negative impact.

Midlands Family Study

Child Hunger Task Order I Funding from UK PRC
University of Kentucky Center for Poverty Research through funding by the US Department of Agriculture, Food and Nutrition Service, Contract No. AG-3198-B-10-0028.

Co-Investigators:

Sonya Jones
Angela Liese
Christine Blake
Darcy Freedman
Bethany Bell
Jan Probst



Family Mealtime Sub-Study

Dissertation Committee

Student: Michael Burke
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Edward Frongillo
Maryah Framm

Students and Support Staff:

Nicolas Younginer
Carrie Draper
Michael Burke
Lauren Martini
Sherretta Thomas

Dissertation Committee

Student: Tiara Rosemond
Christine Blake
Edward Frongillo
Michael Burke
Cheri Shapiro

Data collection

Midlands Family Study (n=521)

- Demographics
- Household Food Security Status
- Household Chaos
- Food Choice Coping Strategies (meal planning, quick meals, and use of convenience foods)

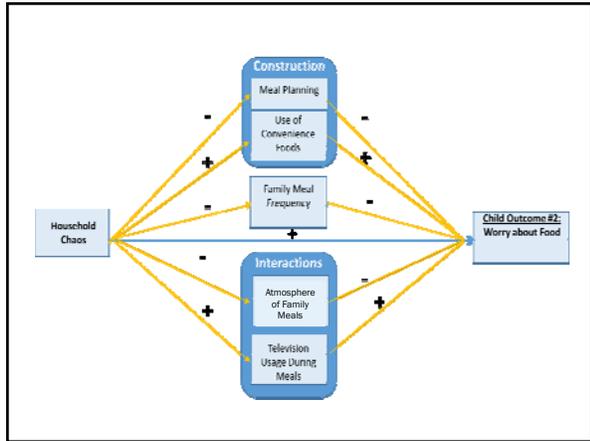
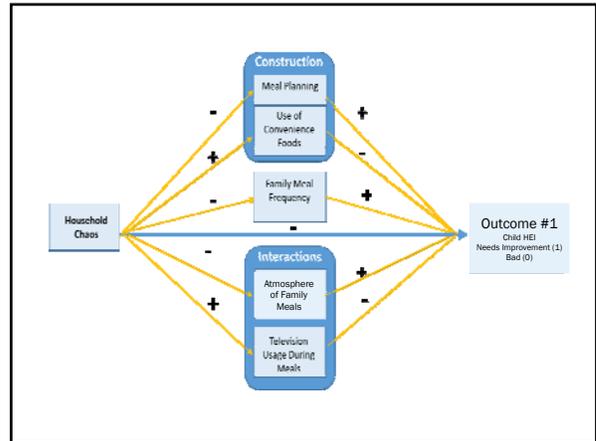
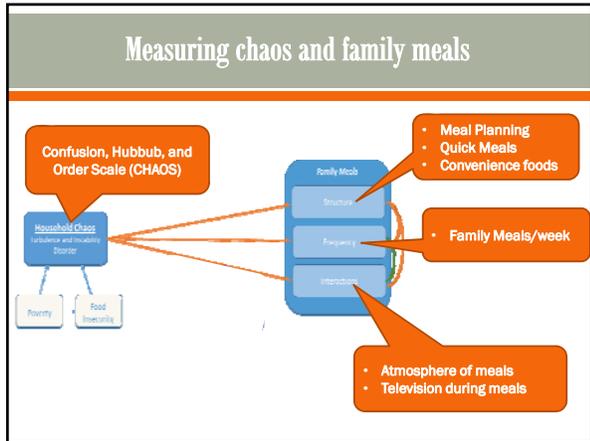
Family Mealtime Study (n=179)

- Children 9-15
- Demographics
- Family Meal Structure
- Family Meal Frequency
- Family Meal Interactions
- Child Diet 24-hour recall
 - (Healthy Eating Index)
- Child Worry about Food

Only participants who completed both studies included.
n=132

Participant characteristics

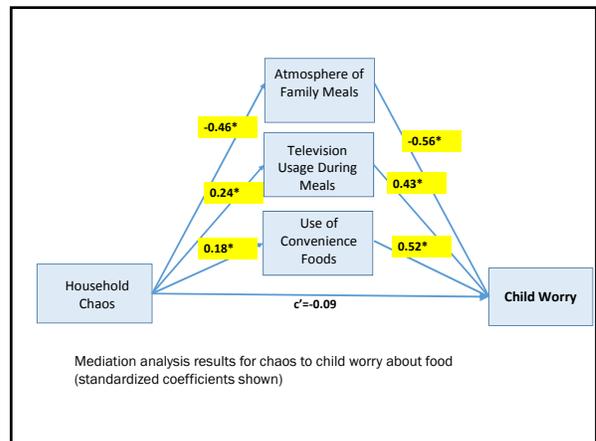
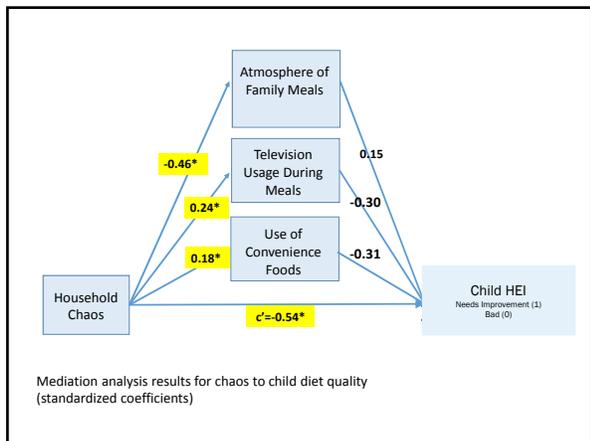
- Children
 - Mean age = 12 years (s.d. 2.0)
 - 50% Female
 - 84% Non-Hispanic Black
- Caregivers
 - Mean age = 40 years (s.d. 10.6)
 - 95% Female
 - 86% Non-Hispanic Black
 - 58% Low Food Secure/ 42% Very Low Food Secure
 - 28% Married/ 28% divorced or separated/ 43% never married
 - 48% Employed at least part time
- Mean household size = 4.4 persons (s.d. 1.4)
- 80% of households receive SNAP



Data analysis

- Multiple mediator model with bias corrected bootstrapped confidence intervals (5,000 replications)
- Chaos → Child Dietary Quality (HEI)
- Chaos → Child Worry about Food
- Mediators*: Atmosphere of meals, television viewing during meals, and use of convenience foods

*Family meal frequency and meal planning were not significantly associated with any of the independent or dependent variables



Conclusions: chaos, family meals, and child outcomes

- Household chaos negatively impacts child diet quality
 - Family meals did not mediate this relationship
- Children in chaotic households are less likely to report worry about food with family meals that include
 - High quality interactions
 - Less television during meals
 - Fewer convenience foods

Summary

1. Not all foods parents give between meals are “snacks”
2. Nutritional quality of foods parents provide children between meals varies by context and purpose
3. Parenting around child snacking includes strategies likely to influence risk of childhood obesity but measures are lacking
4. Family meals are valued but negatively impacted by household chaos
5. TV while eating serves many functions, not all negative
6. Household chaos associated with child diet and worry but family meals might buffer some (but not all) of the negative impact

Discussion

- Interventions to reduce child obesity in food insecure families requires an understanding of caregivers' constructions of children's snacks and family meals
 - Structure, Frequency, Interactions
- Frequency of snacks and meals may be less important than..
 - Snacks: Purpose and context drive quality
 - Family meals: Household chaos and meal-time interactions
- Addressing household chaos in food insecure households should be foundational to any nutrition intervention



Thank you!