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## Similarities and Differences between Families who have Frequent and Infrequent Family Meals: A Qualitative Investigation of Low-income and Minority Households

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### Abstract

**Introduction**—Numerous quantitative studies have examined the association between family meal frequency and child/adolescent weight and weight-related behaviors. However, limited qualitative research has been conducted to identify mealtime characteristics (e.g., child behavior during meals, rules/expectations, family dynamics) that occur during family meals that may explain why some families engage in frequent family meals and others do not. This is particularly important within racially/ethnically diverse households, as these demographic groups are at higher risk for weight-related problems. The current study aimed to identify similarities and differences in mealtime characteristics between households that have frequent and infrequent family meals within a low-income and minority population.

**Methods**—This qualitative study included 118 parents who participated in Family Meals, LIVE!, a mixed-methods, cross-sectional study. Parents (90% female; mean age = 35) were racially/ethnically diverse (62% African American, 19% White, 4% Native American, 4% Asian, 11% Mixed/Other) and from low-income (73% < \$35,000/yr.) households. Data were analyzed using inductive content analysis.

**Results**—Results indicated some similar mealtime characteristics (i.e., picky eating, involving family members in meal preparation) between households having frequent and infrequent family meals. Additionally, several differences in mealtime characteristics were identified between households having frequent (i.e., importance of family meals, flexibility in the definition of family meals, family meal rules, no pressure-to-eat feeding practices) versus infrequent family meals (i.e., pressure-to-eat parent feeding practices, family meals are dinner meals only, and difficult meal time behaviors).

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**Discussion**—Study findings may be useful for developing intervention targets for low-income and racially/ethnically diverse households so more families can benefit from the protective nature of family meals.

### Keywords

Family meals; childhood obesity; low-income; minority households; qualitative

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## 1. INTRODUCTION

Numerous quantitative studies have shown that having regular family meals is associated with higher diet quality,<sup>1–4</sup> fewer unhealthy weight control behaviors<sup>5</sup> and better psychosocial functioning<sup>6</sup> in children and adolescents. Furthermore, family meal frequency has been shown to be associated with lower child weight status in some studies.<sup>1,7–9</sup> However, limited qualitative research has been conducted to identify mealtime characteristics (e.g., child behavior during meals, rules/expectations, family dynamics) that may explain why some families have frequent family meals and others do not.<sup>10,11</sup> For example, identifying how family meals operate in households where these experiences occur frequently as compared to households in which they occur infrequently may help identify mealtime characteristics that are associated with child overweight/obesity and healthful dietary intake, and potentially inform targets for interventions.

The primary focus of previous qualitative studies on family meals has been to identify benefits of, or reasons why families engage in shared meals (e.g., family togetherness, communication),<sup>12–18</sup> or to identify challenges/barriers to having family meals (e.g., cost, busy schedules).<sup>12,15,19,20</sup> However, specific behaviors and mealtime characteristics occurring during family meals are understudied. There has also been a noticeable lack of qualitative research on this topic which includes low-income and minority samples.<sup>21</sup> However, prior quantitative studies have shown that family meals may operate differently in minority and low-income households.<sup>7,22–25</sup> For example, several quantitative studies have shown that family dinner meals are protective for weight and weight-related behaviors in White and middle class youth compared to other minority and lower income groups,<sup>24</sup> while other studies have found that family meals are more protective for weight and weight-related behaviors in African American youth.<sup>22,25</sup> More qualitative research is needed examining mealtime characteristics (e.g., parent feeding practices, family meal rules, media/screen time expectations, meal preparation behaviors, child behavior during family meals) with minority and low-income families in order to understand why family meals may be more protective for some children compared to other children.

The current study was designed to move the field forward in understanding potential key mealtime characteristics that may increase the frequency of family meals in racially/ethnically and socioeconomically diverse households. The main aim of the study was to qualitatively examine mealtime characteristics identified by parents/guardians having frequent and infrequent family meals. The two main research questions were: (1) What similar mealtime characteristics are described in both households having frequent family meals and households having infrequent family meals?, and (2) What different mealtime

characteristics exist in households having frequent family meals compared to households having infrequent family meals?

## 2. MATERIALS AND METHODS

### 2.1 Study Design

Family Meals, LIVE! is a 2-year mixed-methods, cross-sectional study designed to identify key family home environment factors related to eating behaviors that increase or minimize the risk for childhood obesity.<sup>10</sup> Families were recruited from four primary care clinics serving low-income and minority populations. A recruitment letter was sent to households with a child aged 6–12 years old inviting the family to participate in a study examining family and home influences on child eating behaviors and weight status. Children ages 6–12, or elementary-aged children, were intentionally recruited for this study because this is an important transitional period when children become more responsible for feeding themselves, while parents simultaneously become less involved. Thus, results from the study will allow for designing interventions targeting this important developmental timeframe. Families participated in two home visits ten days apart. During the first home visit, families were asked to record eight consecutive days of family dinner meals to capture both weekdays and weekends and a 24-hour dietary recall was conducted with the study child. During the second home visit a third 24-hour dietary recall was conducted with the child (a second recall was conducted over the phone in between home visit 1 and 2), parents/guardians filled out a survey and a qualitative interview was conducted with the primary caregiver.<sup>10</sup> For the current study, the qualitative data from the second home visit was utilized. Further details of the study design are published elsewhere.<sup>10</sup> The University of Minnesota's Institutional Review Board Human Subjects Committee approved the study.

### 2.2 Participants

This study included 120 children and their primary caregivers (Table 1). Children were between the ages of 6 and 12 (mean age = 9 years) and 47% were girls. Primary caregivers were mostly women (92%) with a mean age of 35 (SD: 7.5 years; range: 25–65 years). Parents/guardians (referred to as “parents” from this point forward) and children were racially/ethnically diverse (Parents: 62% African American, 19% White, 4% Native American, 4% Asian, 11% Mixed/Other; Children: 64% African American, 13% White, 3% Native American, 4% Asian, 16% Mixed/Other) and from low-income (73% < \$35,000/yr.) households. A little over 50% of the caregivers were unemployed or stay-at-home caregivers. For the current analysis, households were stratified by family meal frequency (i.e., frequent vs. infrequent; see analysis section) in order to learn more about successes and challenges with having family meals to inform the development of future intervention research to increase family meal frequency. The analytic sample in the current study is 118 parents (2 families did not complete the qualitative interviews).

### 2.3 Interview Development and Data Collection

An interview guide was developed based on peer-reviewed research on family meals, a panel of experts in the field of family meals, and findings from the Family Meals, LIVE! pilot study.<sup>15,26</sup> The interview script and questions were pilot tested with parents from a similar

population as the full study sample. Parents provided feedback on the interview questions and the interview guide was revised for the Family Meals: LIVE! full study sample.

The qualitative interview questions were designed to understand parents' perspectives regarding potential risk or protective factors for childhood obesity (e.g., family meals, healthful eating) in the home environment. Questions included: (1) what is your definition of a "family meal"?; (2) what are some reasons why you have family meals?; (3) what do you like/dislike about family meals?; (4) some families have spoken and unspoken rules during mealtimes, such as you can't leave the table until you have finished everything on your plate, or you don't have to eat everything that is served as long as you try it. What are some of your spoken and unspoken rules?; and (5) how does your family handle electronic devices, childhood misbehavior, or other distractions at mealtimes? Interviews were conducted with the primary parent (majority mothers) and lasted between 30–60 minutes. Children and other family members were not present in the room the interview was occurring.

**2.3.1 Research team members conducting the interviews**—The interviewers represented a combination of African American, Caucasian, and Hispanic racial/ethnic groups to match participant race/ethnicity. Interviewers were trained using standardized qualitative interview protocols<sup>27</sup> including, use of a semi-structured, open-ended question format with follow-up probing questions that elicit expansion of participant responses.<sup>27</sup> Interviewers passed certification levels including role-play enactments with research staff, pilot testing interviews with participants, and shadowing other certified interviewers before conducting interviews.

## 2.4 Data Analysis

Audio-recorded interviews (n=118) were transcribed verbatim and coded using an inductive content analysis approach.<sup>28–30</sup> Two members of the research team independently read and coded the interviews using NVivo 10 software (NVivo 10, 2014, QSR International Pty Ltd). Inter-coder reliability was established after coding 10% of the interviews and was maintained at 95%.<sup>31</sup> Any discrepancies were discussed between the two coders and the larger research team until 100% consensus was achieved.<sup>32</sup>

Using open coding, the researchers read through each interview line-by-line to establish initial codes, potential themes, and to capture key thoughts and concepts. Next, coding to reduce broad categories into subcategories was conducted and major concepts were identified. The major concepts were further defined, developed, and refined into main themes. After completing the coding, the interviews were stratified into households who had frequent family meals (>3 family meals/wk.) and infrequent family meals (≤3 family meals/wk.), based on the survey question, "During the past seven days, how many times did all, or most, of your family living in your house eat a meal together? [Never, 1–2, 3–4, 5–6, 7 times, more than 7 times]. This cut-off was determined based on prior research showing that family meal frequency ranges between 2–5 meals per week.<sup>33,34</sup> A total of 65 households had frequent family meals and 53 households had infrequent family meals.

Steps taken to improve the trustworthiness of the data included: using experts in the field to develop the interview questions, pilot testing of the interviews, interviewing all participants

in the study, coding all interviews, having more than one team member code interviews, establishing inter-rater reliability, and using consensus meetings for coders to resolve discrepancies.

### 3. RESULTS

Results are presented below according to the two main research questions regarding similarities and differences in family mealtime characteristics between households having frequent and infrequent family meals. All names within quotes have been changed to protect participant confidentiality. Table 2 shows additional quotes across the qualitative themes discussed below.

#### 3.1 Similarities Between Households Having Frequent or Infrequent Family Meals

There were two thematic similarities (i.e., picky eating, involving family members in meal preparation) between households having frequent family meals (referred to as “frequent households” from this point forward) and households having infrequent family meals (referred to as “infrequent households” from this point forward).

**3.1.1 Picky eating**—Over 50% of parents from both types of households stated that “picky eating”<sup>37</sup> was occurring during family meals. One mother (White, 28 yrs.) from a frequent household said, “One child will inevitably say, ‘I don’t want to eat that,’ or ‘do I have to eat that?’” Another mother (African American, 52 yrs.) from an infrequent household stated,

My 3 year old son often does not want to eat what I’ve made. We’ve had chicken, ribs, hamburgers and he’ll throw a little fit and say, ‘I’m not eating’ and he will go off into the living room. Now, I’ve been pretty lenient and just kind of been allowing the picky eating to happen and so sometimes it gets frustrating...but it’s my own fault.

**3.1.2 Involving family members in meal preparation**—Over 40% of parents from both household types identified that they included family members in meal preparation. One mother (African American, 44 yrs.) from a frequent household stated,

I do have my oldest son help cook, like if I’m cooking one thing, he’ll help with the cooking—if it’s pork chops, he’ll fry the pork chops. I also have the other kids help with setting the table up, putting out the plates and everything. Some of them, like if we’re going to have cornbread, then some of the smaller ones, I just put the ingredients out, and they will mix it together, stir it up. So they all help out.

One mother (African American, 36 yrs.) from an infrequent household said,

I find things they [kids] can cut that isn’t too dangerous with a big knife. So they’ll usually help me cut food. They’ll also set the table. They always clean off their own plates. They clean out the dishwasher. So they aren’t always cooking the food, but they’re always involved somehow in the meal, which includes the cleanup and the setup and stuff.

## 3.2 Differences Between Households Having Frequent or Infrequent Family Meals

There were several thematic differences regarding family mealtime characteristics in frequent households compared to infrequent households. There were four themes for families having frequent family meals (i.e., high importance of having family meals, flexibility in the definition of family meals, rules at family meals, and no pressure-to-eat parent feeding practices). There were three themes for families having infrequent family meals (i.e., child behavior during meals, dinner as the main family meal, and pressure-to-eat feeding practices).

### 3.3 Households with Frequent Family Meals

**3.3.1 Importance of family meals**—Of the families who had frequent family meals, 68% of parents reported that family meals were of high importance. Whereas, only 29% of families having infrequent family meals reported high importance of family meals. One mother (African American, 40 yrs.) from frequent households stated,

That's [family meals] one of the things that I can share if I don't have anything else to give them...a family meal, which...is the most intimate thing you can do as a family, and so that's why it's so important and why we intend to keep doing it.

Another mother (White, 28 yrs.) from a frequent household stated,

They [kids] need the structure in their life of family meals, they need to know that family is always there for you and that we do things together and that you should talk...family meals are important because they give you a time to stop and be with your family every day... when my family is together at the table for each meal, I feel complete.

One father (Hispanic, 29 yrs.) from a frequent household said,

My opinion, as far as family meals go, is that I believe they are really important because it gives your children a chance to speak up about what's going on in their life. I work with kids all the time...a lot of kids have different issues and maybe sometimes they're not being faced at home because they don't have the time to speak to their parents.

In contrast, a mother (African American, 30 yrs.) from an infrequent household stated, "I don't see family meals in the same way other people do...it's not like 'Oh, I'm dreaming about the kids, and us having a discussion' and all that. It's just food."

**3.3.2 Flexibility in the definition of family meals**—Over 60% of parents from frequent households and 23% of parents from infrequent households identified flexibility with regard to what constituted a family meal. First, parents from frequent households stated that *family meals can be breakfast, lunch or dinner*. One father (Native American, 41 yrs.) from a frequent household said, "A family meal for me is just being together. Breakfast, lunch, and dinner and snacks in between all count." One mother (White, 38 yrs.) from a frequent household said, "Every day is a family meal, breakfast, lunch or dinner. If we're going to sit down together and eat, it's all a family meal."

Second, parents from frequent households identified that *not everyone in the family needed to be at the meal to make it a family meal*. For example, one mother (African American, 35 yrs.) from a frequent household said,

Honestly, I think any time that we are eating something and sitting down together, even if it's just some of us, I think if it's at least two of us, I'd say that counts [as a family meal].

Another mother (White, 42 yrs.) from a frequent household stated,

Well, right now what we count for a family meal is just the four of us and when we get together and eat at the table...the older siblings may or may not come.

Third, parents from frequent households identified that *family meals could occur in the home or outside of the home*. One father (African American, 39 yrs.) from a frequent household said,

Honestly, the only thing you need to make it a family meal is your family. You might have dinner standing at the back of the car, go party tailgating, your dinner might come off the grill—it's a hot dog, but you're with your family, that's dinner. You can have dinner anywhere as long as you're with your family.

A mother (African American, 41 yrs.) from a frequent household said, "Whether we're at a restaurant, whether we're home, it's definitely a family meal for me. We don't necessarily always eat at the table."

Fourth, parents from frequent households indicated that *family meals didn't have to take a lot of time* to count as a family meal. One mother (Hispanic, 42 yrs.) from a frequent household said,

It's [family meal] never too hard. You know, we'll figure out a way to fit those 10–15 minutes in somehow, you know. It might not always be the five of us, but it gets worked in somehow, sometime before the kids go to sleep, we eat a family meal.

Another mother (African American, 35 yrs.) from a frequent household stated,

I don't really take the time to make you know, really complicated meals anymore. I keep it simple...it's just about being together. Family meals can be fast, like 15–30 minutes...that's all it takes.

**3.3.3 Rules at family meals**—In frequent households, over 50% of parents identified that they had rules about electronics and manners/responsibilities during family meals whereas, only 27% of parents in households with infrequent family meals identified rules during family meals. First, parents from households having frequent family meals identified that they had rules about electronic use during family meals. One father (White, 45 yrs.) from a frequent household said, "We don't allow TV...because watching TV is kind of distracting, not everybody focuses on the talking around the table, they focus on watching the movies. A mother (Hispanic, 43 yrs.) from a frequent household stated,

We don't allow electronic devices at meals...if the kids come to family meals with ipods or ipads they'd be texting back and forth and they'd have no idea what we're talking about or even if we're talking to them.

Second, parents from frequent households also indicated that they had rules about good manners and responsibilities during mealtimes. One mother (African American, 44 yrs.) from a frequent household said, "Everyone has certain things they have to do by preparing the food, setting up the table, cleaning up after the meal and having good manners during the meal."

**3.3.4 No pressure-to-eat feeding practices**—Over 40% of parents from frequent households and 15% of parents from infrequent households identified that they did not use pressure-to-eat (i.e., encouraging or forcing child to eat when they do not want to or are full)<sup>37</sup> feeding practices during family meals. One father (White, 50 yrs.) from a frequent household said, "I'm not a firm believer in the clean plate club. I think that it encourages overeating." One mother (African American, 55 yrs.) stated,

I don't have a clean plate mantra for them. If they're full, they're full. You know, I will tell them to try you know something new if I feel like it's going to be good for them...but other than that, I don't really, I don't make them stay at the table if they're done...if they're full, they're full.

### 3.4 Households with Infrequent Family Meals

**3.4.1 Difficult mealtime behaviors**—About 50% of parents from infrequent households reported difficult mealtime behaviors such as fighting and child distractions (e.g., playing), compared to 31% of parents from households having frequent family meals. First, one mother (African American, 33 yrs.) from an infrequent household said, "there's always some fighting during meals". One father (American Indian, 37 yrs.) stated, "The fighting and complaining is one thing I don't mind doing without at family meals."

Second, parents from infrequent households identified that children often played or were distracted during meal times. A mother (White, 47 yrs.) from an infrequent household said, "Jeremiah plays at the table, mostly with his cars, he brings them to the table, instead of eating he'd rather play."

**3.4.2 Family meals are dinner only**—Over 50% of parents from infrequent households and 14% of parents from frequent households said they defined family meals as dinner only. One father (African American, 25 yrs.) from an infrequent household said, "The important thing I think is the dinner, dinner meal." One mother (White, 42 yrs.) from an infrequent household stated,

I usually only count the dinners as an actual meal because it's the only time we're actually just sitting. You know like lunch could happen anywhere. We could be sitting waiting on a doctor's appointment when lunch happens. So when it comes down to what I consider a meal would be when we're all here and we're not doing anything and we sit down and we cook and we eat...I don't even necessarily



consider fast food meals, they're just kind of good substitutes when you're having a really bad—okay, I don't have time to make the chicken. Let's go buy it.

**3.4.3 Pressure-to-eat feeding practices**—About 40% of parents from infrequent households and 21% of parents from frequent households used pressure-to-eat feeding practices.<sup>37</sup> A mother (African American, 26 yrs.) from an infrequent household said,

You cannot say you do not like it until you have tried it. You cannot have dessert unless you eat as much as I tell you to...and you got to at least eat some of the meat.

Another mother (Hispanic, 29 yrs.) from an infrequent household stated,

Well, you have to have everything on your plate. Like even if you don't want it, I'm going to put it on your plate and I do expect you to try it, at least you know one bite or whatever. They can't have sweets until they have eaten their food. Sometimes I let them have something like juice but I don't allow them to drink it until they eat their meal.

One father (African American, 34 yrs.) from an infrequent household said,

You know, sometimes I'll make him sit there and it doesn't matter what he thinks he wants to do or not do, he doesn't have a choice. This is family dinner...even if he's not hungry, he's still going to sit there and eat something.

## 4. DISCUSSION

Results from the current study indicated some similarities and several differences regarding family mealtime characteristics in households having frequent and infrequent family meals. First, similarities (i.e., child picky eating, involving family members in meal preparation) identified in both types of family meal frequency households may suggest common mealtime characteristics to target in family meal interventions. For example, interventions targeting family meals may want to consider emphasizing the importance of addressing picky eating and involving children and family members in meal preparation in order to gain buy-in from parents for successful intervention delivery. Although some previous interventions<sup>35–37</sup> have targeted one of these elements, it would be important to consider addressing both picky eating and child involvement in family meal preparation to increase family meal frequency in households where family meals are not commonly occurring.

Second, differences between frequent and infrequent family meal households suggest potential intervention targets for increasing family meal frequency in households with infrequent family meals. For example, in the current study, families having frequent family meals had a more flexible definition of family meals including: (a) breakfast, lunch or dinner counted as family meals; (b) not everyone in the family needed to attend the family meal to count as a family meal; (c) the family meal could occur outside the home; and (d) the family meal could be short. Promoting more flexible definitions of family meals may increase the occurrence of family meals because parents may think they are more doable. Prior research supports a more flexible definition of family meals. For example, one study showed that family meals in households with nonoverweight children were as short as 20 minutes.<sup>10</sup>

Results regarding having rules at family meals around electronic devices and manners found in frequent family meal households may be another meal characteristic to target in family meal interventions with families who have infrequent family meals. Helping parents to set rules during a very specific context, such as family meals, may feel less overwhelming to parents and may in fact generalize to other settings, as suggested by Family Systems Theory.<sup>38</sup> In addition, addressing parent pressure-to-eat feeding practices would be another important area to intervene on in households having infrequent family meals, given previous research showing negative child weight and weight-related outcomes when engaging in these parent feeding practices.<sup>39–45</sup> Furthermore, the finding about difficult mealtime behaviors from infrequent family meal households (i.e., fighting, children playing versus eating) may suggest the need to intervene with families regarding creating a positive atmosphere at family meals and parental limit setting. Prior studies suggest that having a positive emotional atmosphere at family meals is associated with a reduced risk of child overweight.<sup>10,46–48</sup>

It would also be important to consider how to elevate the importance of family meals for infrequent family meal households. The language used in the qualitative quotes regarding the importance of family meals from frequent family meal households, such as “intimate”, “most important thing you can do for your child” suggests that the value of having family meals in these households reinforced the behaviors needed to carry out the family meal. Interventions using Motivational Interviewing<sup>49</sup> techniques, such as values generation statements, and discrepancy questions may help to start to build a values base for the importance of having family meals in infrequent family meal households. Some prior intervention studies have utilized Motivational Interviewing techniques to increase parent healthful parenting practices in the home to decrease obesity and increase diet quality.<sup>50,51</sup> These same Motivational Interviewing techniques may be useful in increasing family meal frequency.

This study has both strengths and limitations. First, rich qualitative data was gathered across many households (n=118). Second, the study was conducted with a low-income and minority population. Third, because of the large qualitative sample size, it was possible to stratify by family meal frequency, allowing for the identification of similarities and differences in households having frequent or infrequent family meals to inform intervention development. One limitation of the study is that the design was cross-sectional. Future research on family meals would benefit from using a prospective study design to allow for identifying temporal ordering of variables. Future research would also benefit from examining quantitatively the finding within frequent family meal households regarding having a flexible definition of family meals. For example, quantitative research could examine whether families benefit from family meals with regard to weight and weight-related behaviors regardless of whether the meal is breakfast, lunch, or dinner. Additionally, although the sample size (n=118) is considered large for a qualitative study, findings may not be generalizable to other racial/ethnic groups. Furthermore, the majority of the sample was comprised of single-headed households and mothers. Thus, findings from the current study may not be generalizable to dual-headed households or fathers.

## 5. CONCLUSIONS

Results from the current study overall suggest that parents from low-income and minority households and households with frequent and infrequent family meals have some similar and some different perceptions regarding family meals. Mealtime characteristics found in households having frequent family meals (i.e., importance of family meals, flexibility in the definition of family meals, rules at family meals, no pressure-to-eat feeding practices) may provide insight and potential intervention targets to increase the frequency of family meals so more families and children can benefit from the numerous previously found benefits of having regular family meals.<sup>1,7,17,20,52–61</sup> Additionally, mealtime characteristics found in households having infrequent family meals (i.e., pressure-to-eat feeding practices, difficult meal time behaviors, family meals are dinner only) may inform the development of interventions to reduce barriers to having family meals so that more families can benefit from the protective nature of family meals.

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## References

1. Larson NI, Neumark-Sztainer D, Hannan PJ, Story M. Family meals during adolescence are associated with higher food quality and healthful meal patterns during young adulthood. *Journal of the American Dietetic Association*. 2007; 107:1502–1510. [PubMed: 17761227]
2. Gable S, Lutz S. Household, parent and child contributions to childhood obesity. *Family Relations*. 2000; 49(3):293–300.
3. Gillman MW, Rifas-Shiman SL, Frazier AL, Rockett HRH, Camargo CA, Field AE, Berkley CS, Colditz GA. Family dinner and diet quality among older children and adolescents. *Archives of Family Medicine*. 2008; 9:235–240.
4. Neumark-Sztainer D, Hannan PJ, Story M, Croll J, Perry C. Family meal patterns: associations with sociodemographic characteristics and improved dietary intake among adolescents. *Journal of the American Dietetic Association*. 2003; 103(3):317–322. [PubMed: 12616252]
5. Neumark-Sztainer D, Eisenberg ME, Fulkerson JA, Story M, Larson NI. Family meals and disordered eating in adolescents: Longitudinal findings from Project EAT. *Archives of Pediatrics and Adolescent Medicine*. 2008; 162:17–22. [PubMed: 18180407]
6. Eisenberg ME, Olson RE, Neumark-Sztainer D, Story M, Bearinger LH. Correlations between family meals and psychosocial well-being among adolescents. *Archives of Pediatrics and Adolescent Medicine*. 2004; 158:792–796. [PubMed: 15289253]
7. Fulkerson JA, Neumark-Sztainer D, Hannan PJ, Story M. Family meal frequency and weight status among adolescents: Cross-sectional and five-year longitudinal associations. *Obesity*. 2008; 16:2529–2534. [PubMed: 18719674]
8. Fulkerson JA, Neumark-Sztainer D, Hannan PJ, Story M. Family meal frequency and weight status among adolescents: Cross-sectional and five-year longitudinal associations. *Obesity*. 2008; 16(11): 2529–2534. [PubMed: 18719674]
9. Gable S, Chang Y, Krull JL. Television watching and frequency of family meals are predictive of overweight onset and persistence in a national sample of school-aged children. *Journal of the American Dietetic Association*. 2007; 107(1):53–61. [PubMed: 17197271]
10. Berge JM, Rowley S, Trofholz A, et al. Childhood obesity and interpersonal dynamics during family meals. *Pediatrics*. 2014; 134(5):923–932. [PubMed: 25311603]

11. Jacobs MP, Fiese BH. Family mealtime interactions and overweight children with asthma: Potential for compounded risks? *Journal of pediatric psychology*. 2007; 32(1):64–68. [PubMed: 16951307]
12. Fulkerson JA, Story M, Neumark-Sztainer D, Rydell S. Family meals: perceptions of benefits and challenges among parents of 8- to 10-year-old children. *Journal of the American Dietetic Association*. 2008; 108(4):706–709. [PubMed: 18375230]
13. Fulkerson JA, Neumark-Sztainer D, Story M. Adolescent and parent views of family meals. *Journal of the American Dietetic Association*. 2006; 106:526–532. [PubMed: 16567147]
14. Neumark-Sztainer D, Story M, Ackard D, Moe J, Perry C. Family meals among adolescents: Findings from a pilot study. *Journal of Nutrition Education*. 2000; 32:335–340.
15. Berge JM, Hoppmann C, Hanson C, Neumark-Sztainer D. Perspectives about family meals from single-headed and dual-headed households: a qualitative analysis. *Journal of the Academy of Nutrition and Dietetics*. 2013; 113(12):1632–1639. [PubMed: 24238144]
16. Skafida V. The family meal panacea: exploring how different aspects of family meal occurrence, meal habits and meal enjoyment relate to young children's diets. *Sociology of Health & Illness*. 2013; 35(6):906–923. [PubMed: 23551143]
17. Utter J, Denny S, Robinson E, Fleming T, Ameratunga S, Grant S. Family meals and the well-being of adolescents. *Journal of Paediatrics and Child Health*. 2013; 49(11):906–911. [PubMed: 24251656]
18. Cason KL. Family mealtimes: More than just eating together. *Journal of the American Dietetic Association*. 2006; 106(4):532–533. [PubMed: 16567148]
19. Fulkerson JA, Kubik MY, Rydell S, et al. Focus Groups with Working Parents of School-aged Children: What's Needed to Improve Family Meals? *Journal of Nutrition Education and Behavior*. 2011; 43(3):189–193. [PubMed: 21367663]
20. Fiese BH, Hammons A, Grigsby-Toussaint D. Family mealtimes: A contextual approach to understanding childhood obesity. *Economics & Human Biology*. 2012; 10(4):365–374. [PubMed: 22652025]
21. Neumark-Sztainer D, Larson NI, Fulkerson JA, Eisenberg ME, Story M. Family meals and adolescents: what have we learned from Project EAT (Eating Among Teens)? *Public Health Nutrition*. 2010; 13(07):1113–1121. [PubMed: 20144257]
22. Rollins BY, Belue RZ, Francis LA. The Beneficial Effect of Family Meals on Obesity Differs by Race, Sex, and Household Education: The National Survey of Children's Health, 2003–2004. *Journal of the American Dietetic Association*. 2010; 110(9):1335–1339. [PubMed: 20800125]
23. Fulkerson JA, Pasch KE, Stigler MH, Farbaksh K, Perry CL, Komro KA. Longitudinal Associations Between Family Dinner and Adolescent Perceptions of Parent–Child Communication Among Racially Diverse Urban Youth. *Journal of Family Psychology*. 2010; 24(3):261–270. [PubMed: 20545399]
24. Fulkerson JA, Larson N, Horning M, Neumark-Sztainer D. A review of associations between family or shared meal frequency and dietary and weight status outcomes across the lifespan. *J Nutr Educ Behav*. 2014; 46(1):2–19. [PubMed: 24054888]
25. Berge JM, Wall M, Hsueh TF, Fulkerson JA, Larson N, Neumark-Sztainer D. The Protective Role of Family Meals for Youth Obesity: 10-Year Longitudinal Associations. *J Pediatr*. 2014
26. Berge JM, Trofholz A, Fong S, Blue L, Neumark-Sztainer D. A qualitative analysis of parents' perceptions of weight talk and weight teasing in the home environments of diverse low-income children. *Body image*. 2015; 15:8–15. [PubMed: 25978273]
27. Crabtree, B., Miller, W. *Doing qualitative research*. Vol. 3. Newbury Park, CA: Sage Publications; 1992.
28. Elo S, Kyngas H. The qualitative content analysis process. *Journal of advanced nursing*. 2008; 62(1):107–115. [PubMed: 18352969]
29. Lauri, S., Kyngäs, H. *Developing nursing theories*. Dark Oy, Vantaa: Werner Söderström; 2005.
30. Chinn, PL., Kramer, MK. *Theory and nursing a systematic approach*. 1983.
31. Miles, MB., Huberman, AM. *Qualitative data analysis: An expanded sourcebook*. Sage; 1994.
32. Crabtree, BF., Miller, WL. *Doing qualitative research*. Sage Publications; 1999.

33. Berge JM, Wall M, Hsueh TF, Fulkerson JA, Larson N, Neumark-Sztainer D. The protective role of family meals for youth obesity: 10-year longitudinal associations. *J Pediatr*. 2015; 166(2):296–301. [PubMed: 25266343]
34. Larson, N., Story, M. Family meal patterns and eating in children and adolescents. In: LDABAD, et al., editors. *Obesity Prevention: The Role of Brain and Society on Individual Behavior*. London, UK: Elsevier; 2010.
35. Fulkerson JA, Rydell S, Kubik MY, et al. Healthy Home Offerings via the Mealtime Environment (HOME): Feasibility, acceptability, and outcomes of a pilot study. *Obesity (Silver Spring, Md)*. 2010; 18(Suppl 1):S69–74.
36. Tanas R, Marcolongo R, Pedretti S, Gilli G. A family-based education program for obesity: A three-year study. *BMC Pediatr*. 2007; 7:33. [PubMed: 17953755]
37. Golley RK, Perry RA, Magarey A, Daniels L. Family-focused weight management program for five to nine year olds incorporating parenting skills training with healthy lifestyle information to support behaviour modification. *Nutrition and Dietetics*. 2007; 64:144–150.
38. Whitchurch, GG., Constantine, LL. Systems theory. In: Boss, PG.Doherty, WJ.LaRossa, R.Schumm, WR., Steinmetz, SK., editors. *Sourcebook on family theories and methods: A contextual approach*. New York, NY: Plenum Press; 1993.
39. Berge JM. A review of familial correlates of child and adolescent obesity: what has the 21st century taught us so far? *International journal of adolescent medicine and health*. 2009; 21(4):457–483. [PubMed: 20306760]
40. Birch LL, Fisher JO. Mothers' child-feeding practices influence daughters' eating and weight. *American Journal of Clinical Nutrition*. 2000; 71:1054–1061. [PubMed: 10799366]
41. Fisher JO, Mitchell DC, Smiciklas-Wright H, Birch LL. Parental influences on young girls' fruit and vegetable, micronutrient, and fat intakes. *Journal of the American Dietetic Association*. 2002; 102:58–64. [PubMed: 11794503]
42. Fisher JO, Birch LL. Eating in the absence of hunger. *American Journal of Clinical Nutrition*. 2002; 76:226–231. [PubMed: 12081839]
43. Loth KA, MacLehose RF, Fulkerson JA, Crow S, Neumark-Sztainer D. Are food restriction and pressure-to-eat parenting practices associated with adolescent disordered eating behaviors? *The International journal of eating disorders*. 2014; 47(3):310–314. [PubMed: 24105668]
44. Loth KA, MacLehose RF, Fulkerson JA, Crow S, Neumark-Sztainer D. Food-related parenting practices and adolescent weight status: a population-based study. *Pediatrics*. 2013; 131(5):e1443–1450. [PubMed: 23610202]
45. Berge J, Tate A, Maclehose R, Trofholz A, Conger K, Neumark-Sztainer D. Sibling Eating Behaviors and Parent Feeding Practices with Siblings: Similar or Different. *Public Health Nutrition*. in press.
46. Berge JM, Jin SW, Hannan P, Neumark-Sztainer D. Structural and interpersonal characteristics of family meals: Associations with adolescent body mass index and dietary patterns. *Journal of the Academy of Nutrition and Dietetics*. 2013; 113(6):816–822. [PubMed: 23567247]
47. Moens E, Braet C, Soetens B. Observation of family functioning at mealtime: A comparison between families of children with and without overweight. *Journal of pediatric psychology*. 2007; 32(1):52–63. [PubMed: 16801324]
48. Jacobs MP, Fiese B. H. Family mealtime interactions and overweight children with asthma: Potential for compounded risks? *Journal of pediatric psychology*. 2007; 32(1):64–68. [PubMed: 16951307]
49. Miller, WR., Rollnick, S. *Motivational interviewing : Preparing people for change*. 2. New York: Guilford Press; 2002.
50. Sherwood NE, French SA, Veblen-Mortenson S, et al. NET-Works: Linking families, communities and primary care to prevent obesity in preschool-age children. *Contemporary clinical trials*. 2013; 36(2):544–554. [PubMed: 24120933]
51. Neumark-Sztainer D, Bauer KW, Friend S, Hannan PJ, Story M, Berge JM. Family weight talk and dieting: how much do they matter for body dissatisfaction and disordered eating behaviors in adolescent girls? *Journal of Adolescent Health*. 2010; 47(3):270–276. [PubMed: 20708566]

52. Berge JM, MacLehose RF, Loth KA, Eisenberg ME, Fulkerson JA, Neumark-Sztainer D. Family meals. Associations with weight and eating behaviors among mothers and fathers. *Appetite*. 2012; 58(3):1128–1135. [PubMed: 22425759]
53. Christian MS, Evans CEL, Hancock N, Nykjaer C, Cade JE. Family meals can help children reach their 5 A Day: a cross-sectional survey of children's dietary intake from London primary schools. *Journal of epidemiology and community health*. 2013; 67(4):332–338. [PubMed: 23254183]
54. Eisenberg ME, Neumark-Sztainer D, Fulkerson JA, Story M. Family meals and substance use: Is there a long-term protective association? *Journal of Adolescent Health*. 2008; 43(2):151–156. [PubMed: 18639788]
55. Neumark-Sztainer D, Eisenberg ME, Fulkerson JA, Story M, Larson NI. Family meals and disordered eating in adolescents: Longitudinal findings from Project EAT. *Archives of pediatrics & adolescent medicine*. 2008; 162:17–22. [PubMed: 18180407]
56. Miller DP, Waldfogel J, Han W-J. Family Meals and Child Academic and Behavioral Outcomes. *Child development*. 2012; 83(6):2104–2120. [PubMed: 22880815]
57. Chan JC, Sobal J. Family meals and body weight. Analysis of multiple family members in family units. *Appetite*. 2011; 57(2):517–524. [PubMed: 21763740]
58. Sobal J, Hanson K. Family meals and body weight in US adults. *Public Health Nutrition*. 2011; 14(09):1555–1562. [PubMed: 21356147]
59. Neumark-Sztainer D, Hannan PJ, Story M, Croll J, Perry C. Family meal patterns: associations with sociodemographic characteristics and improved dietary intake among adolescents. *Journal of the American Dietetic Association*. 2003; 103(3):317–322. [PubMed: 12616252]
60. White J, Halliwell E. Family Meal Frequency and Alcohol and Tobacco Use in Adolescence: Testing Reciprocal Effects. *The Journal of Early Adolescence*. 2011; 31(5):735–749.
61. Fiese BH, Foley KP, Spagnola M. Routine and ritual elements in family mealtimes: Contexts for child well-being and family identity. *New Directions for Child and Adolescent Development*. 2006; (111):67–89.

**Highlights**

- Families having frequent family meals had flexible definitions of family meals
- Families having frequent family meals had rules/expectations at family meals
- Families having frequent family meals thought family meals were important
- Families having infrequent family meals had more controlling feeding practices
- Families having infrequent family meals had difficult child behaviors at meals

**Table 1**

**Demographic Characteristics of Parents and Children in Family Meals, LIVE!**

Frequent Family Meal Households		Infrequent Family Meal Households	
Target Child	% (n=65)	Target Child	% (n=53)
Sex			
Female	47% (31)	Female	45% (24)
Male	53% (34)	Male	55% (29)
Race			
African American/Black	64% (42)	African American/Black	63% (33)
White	13% (8)	White	15% (8)
Mixed/Other (Hispanic, American Indian, Asian)	23% (15)	Mixed/Other (Hispanic, American Indian, Asian)	22% (12)
Age (years)		Age (years)	
mean (sd)	8.9 (2)	mean (sd)	8.9 (2)
Primary Caregiver			
	% (n)		% (n)
Sex			
Female	91% (59)	Female	90% (48)
Male	9% (6)	Male	10% (5)
Race			
African American/Black	62% (40)	African American/Black	65% (34)
White	19% (13)	White	18% (10)
Mixed/Other (Hispanic, American Indian, Asian)	19% (12)	Mixed/Other (Hispanic, American Indian, Asian)	17% (9)
Age (years)		Age (years)	
mean (sd)	34.8 (7)	mean (sd)	35.0 (6.1)
Relationship Status			
Single	28% (18)	Single	27% (14)
Married	26% (17)	Married	27% (14)
Cohabiting	18% (12)	Cohabiting	19% (10)
Dating, Not Living Together	17% (11)	Dating, Not Living Together	16% (8)
Divorced	6% (4)	Divorced	5% (3)



Frequent Family Meal Households		Infrequent Family Meal Households	
Target Child	(n=65)	Target Child	(n=53)
	%		%
Separated	4% (2)	Separated	6% (3)
Widowed	1% (1)	Widowed	0% (0)
Educational Attainment		Educational Attainment	
Middle School or Junior High	1% (1)	Middle School or Junior High	0% (0)
Some High School	8% (5)	Some High School	9% (4)
High School or GED	41% (27)	High School or GED	42% (21)
Vocational, Technical, Trade or Other Certification Program	23% (15)	Vocational, Technical, Trade or Other Certification Program	22% (11)
Associate Degree	13% (9)	Associate Degree	10% (7)
Bachelor Degree	5% (3)	Bachelor Degree	8% (4)
Graduate or Professional Degree	5% (3)	Graduate or Professional Degree	5% (3)
Other	2% (1)	Other	1% (1)
Missing	2% (1)	Missing	3% (2)
Household	(n)	Household	
	%		
Number of people living in house		Number of people living in house	
2	13% (8)	2	14%
3-4	36% (23)	3-4	35%
5-6	40% (27)	5-6	42%
7	11% (7)	7	9%
Work		Work	
Full Time	31% (20)	Full Time	33% (17)
Part Time	17% (11)	Part Time	15% (8)
Unemployed/Stay at Home	51% (33)	Unemployed/Stay at Home	52% (28)
Caregiver		Caregiver	
Missing	1% (1)	Missing	0% (0)
Socio-Economic Status		Socio-Economic Status	
Low (<\$20,000)	52% (33)	Low (<\$20,000)	50% (27)
Low-Middle (\$20,000 to <\$35,000)	21% (14)	Low-Middle (\$20,000 to <\$35,000)	22% (12)
Middle (\$35,000 to <\$50,000)	11% (7)	Middle (\$35,000 to <\$50,000)	10% (5)



**Table 2**

**Additional Quotes Regarding Similarities and Differences in Mealtime Characteristics Between Households Having Frequent or Infrequent Family Meals\***

<b>Similarities in Mealtime Characteristics Between Households that have Frequent or Infrequent Family Meals</b>	
<b>Themes Occurring in Both Households Having Frequent and Infrequent Family Meals:</b>	<b>Example Quotes:</b>
<b>Picky eating</b>	Picky eating...is something that happens almost each meal, with at least one person in the family...it can be really frustrating for the person who cooked the meal (frequent household, African American, female, 42 yrs.)
<b>Involving Family Members in Meal Preparation</b>	There is always someone who is picky and doesn't want to eat what is served (infrequent household, Hispanic, female, 31 years) I prepare most of the food but the kids help. My daughter, yeah, my daughter, she likes to help, she likes to help when I'm cooking. She likes to season the meat or get the plates down, so yeah she does a lot of help (infrequent household, African American, female, 29 yrs.)
	Yeah, my son chops some vegetables, he likes to grate the cheese, he helps with the menu planning, stirs things as things need to be stirred. Stove is still a little too high so he doesn't really do a whole lot of that sort of thing yet. He clears his dishes. One of these days he's going to start doing the dishwasher... I'm looking forward to that (frequent household, White, male, 33 yrs.)
<b>Differences in Mealtime Characteristics Between Households that have Frequent or Infrequent Family Meals</b>	
<b>Themes Occurring in Households Having Frequent Family Meals:</b>	<b>Example Quotes:</b>
<b>Importance of Family Meals</b>	Family meals are really important to our family. I don't know for other families but in our family, like we spend all, most of our day apart until pretty much dinner time and a lot of the time I don't know what's going on, I don't know what's going on with Jules until she gets home. I don't know what's going on with Albert until he gets home. So when we do sit down for dinner, that is a time for us to find out how everybody's day went, good or bad (frequent household, African American, male, 30 yrs.) I think they do matter, just because I am a single parent myself and I do have a daughter and I do tend to worry that she's going to you know feel like she's, not getting the proper attention at home because she doesn't have the second parent...whether she eats with me, or me and grandmother or whoever, I feel like at family meals we get the opportunity to show our child that there is love in this home, you know, regardless, so it's very important...for all children, but especially for girls, because I was a young girl without a father (frequent household, African American, female, 27 yrs.) I believe family meals matter so much because you can get that one-on-one with your child, you know even if there's mom, dad, cousins, brothers— whoever's at the table...that's the time where they should feel that they can say whatever they want and not be judged, because a lot of kids are afraid of being judged, you know. This is your family. This is your dinner table. This is your food. This is your house. You should be able to say whatever you feel, you know, whatever's bothering you, whatever, so I think that that, you know, having that moment is very important to every child (frequent household, White, female, 25 yrs.)
<b>Flexibility in the Definition of Family Meals</b>	
<i>Breakfast, lunch or dinner counts</i>	Anytime where we're sitting all around the table to me is considered a family meal—it may be breakfast, lunch, or dinner as long as we're all around the table, to me that counts...anytime we prepare anything together and sit down (frequent household, White, female, 21 yrs.) I can't say necessarily they [breakfast, lunch, dinner] differ because it doesn't matter really what kind of food you're eating, you know, it's really about the togetherness. We'll eat breakfast for dinner. My kids love to have bacon and pancakes for dinner. You know, so, I mean, the type of food or time of day doesn't really specify the meal, you know, but I think it just comes down to, you know, us being together and sitting at the table together (frequent household, Hispanic, female, 30 yrs.)

<b>Similarities in Mealtime Characteristics Between Households that have Frequent or Infrequent Family Meals</b>	
<b>Themes Occurring in Both Households Having Frequent and Infrequent Family Meals:</b>	<b>Example Quotes:</b>
<i>Attendance at meal</i>	We are all sitting at the table or some of us...me and Bella are sitting at the table eating together or all of us eating together. Sometimes Tamika and I just eat together when Bella's at school (frequent household, African American, female, 43 yrs.)
<i>Place of meal</i>	During the weekday, the boys eat breakfast while I get their lunches ready and their backpacks so in a way it's a family meal because they're eating while I'm next to them getting stuff ready and packing their backpack or we're studying homework or doing a practice spelling test. So that's technically to me a family meal, even if one of the parents isn't eating (frequent household, African American, female, 35 yrs.)
<i>Amount of time for meal</i>	More often than not, our top goal is to all sit down at the table, all in the dining room. But a lot of times, even if we go out to eat it counts...as long as we are talking and connecting (frequent household, White, female, 42 yrs.)
<b>Rules at Family Meals</b>	Even if we just spend 10 minutes together, you know, because we're all so busy, I count that as a family meal (frequent household, African American, male, 44 yrs.)
<i>Electronics</i>	I don't give kids electronic devices...I mean, that's foolishness...especially during meals (frequent household, African American, female, 40 yrs.)
<i>Manners/Responsibilities</i>	They need to help prepare the food, set the table, eat the meal and clean up. These are skills they're going to need to know when they grow up, and move out (frequent household, White, male, 36 yrs.)
<b>No Pressure-to-eat Parent Feeding Practices</b>	We're not the clean your plate kind of people. If you're absolutely not hungry, I never force my kids to eat, but if they're like "Oh, I don't know, if I really like this" then you know, we'll make a smaller portion and say "You'll at least have to try because you don't know if you don't like it until you try it." We stay pretty positive (frequent household, White, female, 26 yrs.)
	And we don't really have a rule that she needs to finish everything, but she knows that she can't just have anything else in the kitchen (frequent household, Hispanic, female, 22 yrs.)
<b>Themes Occurring in Households with Infrequent Family Meals:</b>	<b>Example Quotes:</b>
<i>Difficult Mealtime Behaviors</i>	Fighting...that is one of the biggest issues during family meals (infrequent household, White, male, 25 yrs.)
<i>Child playing when they should be eating</i>	They'll (children) get distracted and just play with their toys or tease each other and then I have to get down on them to focus and eat their dinner (infrequent household, African American, female, 29 yrs.)
<b>Family Meals are Dinner Only</b>	Dinner's the only time we basically have the family meal, so it's, yeah, end of the day when everybody can come together...usually because mornings is kind of up in the air, everybody is on their own little routine in the mornings and on the weekend...so nobody eat at the same time in the mornings (infrequent household, African American, female, 44 yrs.)
	Just mainly dinner, the only time we might have a family meal because everybody has gone to school or off to you know work and things like that. Other than the weekend—well, no, probably not the weekend either...just dinner (infrequent household, Hispanic, female, 36 yrs.)
<b>Pressure-to-eat Parent Feeding Practices</b>	You have to at least try what is on your plate...you're not leaving until you have tried it (infrequent household, African American, female, 41 yrs.)
	Everyone at the table has to eat what I prepare, I spent my time doing it, so they have to eat it (infrequent household, White, female, 39 yrs.)

\* All names have been changed to protect confidentiality.