Parent-adolescent influences on everyday dietary practices: Perceptions of adolescent females with obesity and their mothers

Megan R. Winkler1 | Elizabeth D. Moore1 | Gary G. Bennett2,3 | Sarah C. Armstrong4 | Debra H. Brandon1,4

1 School of Nursing, Duke University, Durham, North Carolina, USA
2 Department of Psychology and Neuroscience, Duke University, Durham, North Carolina, USA
3 Duke Global Health Institute, Duke University, Durham, North Carolina, USA
4 School of Medicine, Duke University, Durham, North Carolina, USA

Correspondence
Megan R. Winkler, University of Minnesota, Division of Epidemiology and Community Health, 1300 S. 2nd Street, Suite 300, Minneapolis, MN 55454, USA.
Email: mwinkler@umn.edu

Funding information
National Institutes of Health, Grant/Award Number: F31NR014960.

Abstract
Parents demonstrate an important influence on adolescent obesity and dietary behavior; yet, family-based obesity interventions continue to exhibit limited success among adolescents. To further inform family-based approaches for adolescent obesity treatment, we examined the perceptions of adolescent females with obesity and their mothers of the influences experienced within the parent-adolescent relationship that affect everyday dietary practices. We conducted six focus group interviews (three adolescent female and three mother) among 15 adolescent (12–17 years old) females with obesity and 12 of their mothers. Content analysis techniques were used to analyze the transcribed interviews. Adolescent females with obesity discussed a diverse set of parental influences (controlling, supporting and cultivating, overlooking and tempting, acquiescing, providing, attending, and not providing and avoiding) on their daily dietary practices. Among mother focus groups, mothers discussed specific intentional and unintentional types of influences from children that affected the food and drink they consumed, prepared, and acquired. Findings provide a fuller view of the varied social influences on everyday dietary practices within the parent-adolescent relationship. They indicate the importance of examining both parent-to-child and child-to-parent influences and begin to illuminate the value of attending to the social circumstances surrounding dietary behaviors to strengthen family-based obesity treatment approaches.

KEYWORDS
adolescent female, Dietary Patterns, mothers, Obesity, parent–child relations, Social Factors

1 | INTRODUCTION

Obesity is a serious health problem for adolescent females. Up to 90% of adolescent females affected by obesity become women with obesity (Singh, Mulder, Twisk, van Mechelen, & Chinapaw, 2008). Moreover, in comparison to their male counterparts, adolescent females with obesity exhibit lower rates of obesity remission, a higher incidence of severe obesity (body mass index [BMI] ≥ 40), and a higher risk for all-cause mortality during adulthood (Gordon-Larsen, The, Adair, 2010; Must, Phillips, & Naumova, 2012; The, Suchindran, North, Popkin, & Gordon-Larsen, 2010)—signifying a persistent health vulnerability unique to adolescent females. Amongst the numerous contributors to adolescent female obesity, obesity-associated dietary practices (i.e., low meal frequency, greater fast food frequency, and increased daily calories and sugar-sweetened beverage consumption) play a particularly prominent role (Berkey, Rockett, Field, Gillman, & Colditz, 2004; Berkey et al., 2000; Ritchie, 2012; Thompson et al., 2004) and demonstrate significant influence from interpersonal relationships (Berge, Wall, Larson, Loth, & Neumark-Sztainer, 2013; de Vet, de Ridder, & de Wit, 2011; Salvy, Elmo, Nitecki, Kluczynski, & Roemmich, 2011; van der Horst et al., 2007). Therefore, examining interpersonal influences on everyday dietary behavior may serve as an important approach to inform efforts for modifying these adolescent females’ lifelong obesity and disease trajectories.

One interpersonal relationship demonstrating a pronounced influence on obesity-associated dietary practices is the parent-adolescent relationship. Parents through their communication and behaviors (i.e., types of foods consumed and family meal frequency)
display a significant influence on the weight and dietary practices of adolescents (Arcan et al., 2007; Berge et al., 2015; Burgess-Champoux, Larson, Neumark-Sztainer, Hannan, & Story, 2009; Campbell et al., 2007; Fulkerson, Neumark-Sztainer, Hannan, & Story, 2008). Some findings indicate that this parental influence is stronger or less healthful than the influences experienced from peers (Feunekes, de Graaf, Meyboom, & van Staveren, 1998; Salvy et al., 2011). Similarly, the prominent parental influence has been observed in the treatment of adolescent obesity, as both parental weight and weight loss remain the greatest predictors of adolescent BMI reduction and intervention retention (Hunter, Steele, & Steele, 2008; Jelalian et al., 2008; Sato et al., 2011; Xanthopoulos et al., 2013).

Despite extensive evidence indicating the significant influence parents have on adolescent obesity and dietary behavior, family-based intervention approaches for adolescent obesity continue to display limited success (Hoelscher, Kirk, Ritchie, & Cunningham-Sabo, 2013; Steele et al., 2012). Some of this restricted effectiveness may be explained in part by the current research available to develop these family-based interventions. For instance, many investigations exploring parental influences on adolescent dietary behavior have recruited adolescent samples not specifically affected by obesity (Arcan et al., 2007; Basset, Chapman, & Beagan, 2008; Contento, Williams, Michela, & Franklin, 2006; Feunekes et al., 1998; Neumark-Sztainer, Story, Perry, & Casey, 1999). Additionally, behavioral studies have primarily operationalized parental influence using single unidimensional constructs (i.e., home food availability and parent intake of macronutrients) or employed approaches (i.e., surveys) that may not illuminate all potential forms of parental influence experienced by adolescents (Arcan et al., 2007; Feunekes et al., 1998; Rasmussen et al., 2006). Moreover, what (if any) influence parents experience from their adolescent children and how this may influence household and personal food patterns has to date been relatively unexamined. Therefore, a potentially useful step to developing more effective family-based adolescent obesity interventions, may be gaining greater understanding of the spectrum of influences within the parent-adolescent relationship that affect daily dietary practices.

The authors’ purpose was to describe the perceptions of both adolescent females with obesity and their mothers of the influences experienced within the parent-adolescent relationship that affect their everyday dietary practices. Everyday dietary practices were defined as the daily activities of food consumption, preparation, and acquisition. Mothers were selected as the parent for this investigation given that women engage in twice the amount of daily household food preparation as men (Bureau of Labor Statistics, 2015), and adolescents overwhelmingly report that 87% of household food planning and preparation is completed by their mother (Woodruff & Kirby, 2013).

2 | METHODS

2.1 | Design

A descriptive, exploratory design utilizing focus group interviews intended to capture the views of adolescent females with obesity (hereafter referred to as adolescents) and their mothers of the influences within the parent-adolescent relationship that affect everyday dietary practices. Focus groups are a valuable approach to using group processes to provide contextual data in exploratory projects (Culley, Hudson, & Rapport, 2007). By facilitating participants’ ability to share and compare perspectives, this method provides greater breadth and understanding of a phenomenon of interest and can elicit data that may not surface through other data collection forms (Morgan, 1998).

2.2 | Setting and participants

Participants were recruited from a pediatric weight-management program in the southeastern U.S., which treats children (0–22 years old) meeting the Centers for Disease Control and Prevention overweight (BMI-for-age and sex >85th–94th percentile) or obese (BMI-for-age and sex ≥95th percentile) classification. The program consists of: medical management of obesity-associated comorbidities; medical nutritional therapy; as needed referrals to physical therapy and mental health; targeted goal setting; and the use of motivational interviewing to create lifestyle modification in obesity-related dietary and activity behaviors for the child and family. Children and their families are seen monthly to bi-annually until the child reaches 23 years (Dolinsky, Armstrong, Walter, & Kemper, 2012).

To target adolescents living with their primary female caregiver, all female patients aged 12–17 years were approached to participate over the four-day recruitment period. Those interested identified their primary female caregiver who was also invited to participate. All adolescents identified their mother (adopted or biological) as their primary female caregiver. Of the 33 adolescents and mothers approached and who expressed interest, 27 participated in data collection and six did not attend the scheduled data collection. We recruited 26 of the 27 participating adolescents and mothers at the adolescent’s first program visit with the remaining recruited at a maintenance program visit. Ethical approval for the study was obtained from Duke University Institutional Review Board, and

---

**Key messages**

- Adolescent females with obesity perceived a diverse spectrum of influences from parents on their everyday dietary practices.
- Types of parental influences described range from supporting and cultivating to overlooking and tempting to controlling among others.
- Mothers perceived intentional influences from children that influence the food and drink they consume, acquire, and prepare.
prior to data collection, all participants provided written assent/consent.

2.3 | Data collection

Focus groups were scheduled based on participants’ availability and held at the clinic immediately following their first weight-management program visit or at a convenient community site unrelated to the clinic 4–6 weeks after participant recruitment. Three focus groups for adolescents and three focus groups for mothers (Guest, Namey, & McKenna, 2016; Morgan, 1998) were separately conducted in private room settings and moderated by the first or second author, who were trained in focus group methodology. At the onset of each focus group, moderators gave an introduction to the session format, encouraged participants to express their views freely, and explained that the discussion would be audio-recorded and transcribed. Three overall questions guided the structure of the focus groups (Table 1) and were posed to generate discussion about interpersonal influences on participants’ everyday dietary practices (i.e., food consumption, acquisition, and preparation) and the relationships participants considered most influential. Discussions lasted 30–90 min, and following, participants completed a demographic form, which collected data on participants’ age, race/ethnicity, weight, height, and household composition.

2.4 | Data analysis

As the majority of adolescents (n = 12, 80%) identified parents as the most influential relationship on their everyday dietary practices and the majority of mothers (n = 8, 67%) identified children as most influential, we focused our analysis on the types of influences occurring within the parent–child relationship (See Supplementary Appendix). Using content analysis techniques (Miles, Huberman, & Saldaña, 2014; Sandelowski, 1995), transcribed focus group interviews were inductively coded with the aid of Atlas.ti (version 7.5; Berlin, Germany) qualitative analysis software. Types of influences from parents (as described by adolescents) and children (as described by mothers) were analyzed separately, and codes were organized into categories and sub-categories based on their interrelationships. Once distinguished, categories and sub-categories were evaluated for consistency across all relevant focus groups and to determine the presence of any variations due to focus group size, interactions, and characteristics. Additionally, both adolescents and their mothers continually spoke of these influences in the context of promoting either healthy or unhealthy dietary behavior; thus, each category was examined for its association to healthy and unhealthy dietary practices as perceived and contextualized by the participants. To ensure trustworthiness, authors discussed and reviewed all codes, hierarchical structuring of categories, and participants’ interpretations of healthy and unhealthy dietary practices at multiple stages in the analytic process. Additionally, methodological and theoretical memos were maintained to clarify coding decisions (Sandelowski, 1995).

3 | RESULTS

3.1 | Participant characteristics

Fifteen adolescents participated across three focus groups. Twelve of the adolescents’ mothers also participated in the study across three focus groups (one adolescent’s mother did not participate and two sets of adolescents had the same mother). Characteristics of the 15 adolescent and 12 mother participants are presented in Tables 2 and 3.

3.2 | Types of influences from parents

From the statements of the adolescent female focus groups, we identified several types of parent influences on adolescents’ everyday dietary practices: controlling; supporting and cultivating; overlooking and tempting; acquiescing; providing; attending; and not providing and avoiding. Except for one (see not providing and avoiding), all parental influences were discussed across all focus groups. Each parental influencing type is noted for its healthy or unhealthy effect as perceived and contextualized by adolescents.

3.2.1 | Controlling

The first type of parental influence, controlling, was described by adolescents as parental behaviors that restrict, direct, disapprove, or criticize their dietary practices. For most adolescents, parents used these influences to control the adolescent to consume healthy food items (e.g., “salads”) and avoid unhealthy items, (e.g., “deep fried Oreo’s,” “candy”). Parents also used these influences to regulate the amount of money adolescents could spend on food, consequently regulating the amount and types of foods purchased.

Restrictive approaches were the most described approach parents used to control adolescents’ dietary practices, and frequently were enacted by parents saying “no.” For example,

[If during grocery shopping I ask] for chips, or somewhat sweet cereal, or type of white bread that’s not 100% whole wheat, [my mom’s] like, ‘No.’ … Like she doesn’t approve of anything with sugar in it. (Focus Group [FG] 3)

This led some adolescents to no longer request their food preferences “cause I know [my mom is] gonna say, ‘No,’ anyways” (FG 2). Parents also restricted adolescents’ food consumption by preparing or acquiring specific food items—often healthy items—that adolescents described as something they do not enjoy and by hiding foods to either increase adolescent intake of certain foods or prevent their intake of others. For example,

<table>
<thead>
<tr>
<th>Questions</th>
<th>1. In general, why do you eat what you eat?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. In your day-to-day life, who influences what, when, and how you eat?</td>
</tr>
<tr>
<td></td>
<td>2.1. Probe: How do the people identified influence your daily eating, food shopping, and/or cooking?</td>
</tr>
<tr>
<td></td>
<td>2.2. Question: How do the people identified influence your daily eating, food shopping, and/or cooking?</td>
</tr>
<tr>
<td></td>
<td>2.3. Question: Lastly, who do you think influences you the most?</td>
</tr>
<tr>
<td></td>
<td>3.1. Probe: Why do you think they most influence your daily eating, food shopping, and/or cooking?</td>
</tr>
</tbody>
</table>

TABLE 1 | Focus group questions and exemplar probes posed by moderators
Parents also controlled adolescents’ food consumption through verbal direction to consume healthy foods. In some cases, parental direction to consume certain foods resulted in adolescents losing complete control over food choices.

My mother says most of the time ‘You need to get something healthy.’ ‘Get this, get that’ or she says, ‘She would like a salad.’ Just orders it for me. (FG 3)

Lastly, parents controlled adolescents’ dietary practices by verbally disapproving or criticizing food selections made by adolescents and were used to influence adolescents to no longer select certain food. At times, parents used the adolescent’s weight-management program as the justification for why particular foods should not be purchased. For example,

[My mother] sent me and my cousin into the store. Well I actually had a little change left over so I got me [a] candy bar. And [my mother] looked at the receipt and was like, ‘Why did you get this candy bar?! You know it’s not part of the [program]. You do not need it. (FG 3)

Note. Dashes indicate data that were either not reported or not applicable to participants in the focus group. Complete demographic data were not provided by all 12 focus group participants. BMI = body mass index.

aNumber and percentage of participants in the particular focus group reporting each demographic characteristic

bRace category written on form; does not include participants who identified as mixed race

cOther household members include only children

dOther household members include husband and children

My mother says most of the time ‘You need to get something healthy.’ ‘Get this, get that’ or she says, ‘She would like a salad.’ Just orders it for me. (FG 3)

Lastly, parents controlled adolescents’ dietary practices by verbally disapproving or criticizing food selections made by adolescents and were used to influence adolescents to no longer select certain food. At times, parents used the adolescent’s weight-management program as the justification for why particular foods should not be purchased. For example,

[My mother] sent me and my cousin into the store. Well I actually had a little change left over so I got me [a] candy bar. And [my mother] looked at the receipt and was like, ‘Why did you get this candy bar?! You know it’s not part of the [program]. You do not need it. (FG 3)
3.2.2 | Supporting and cultivating

Another type of parental influence described by adolescents were supporting and cultivating influences. Supporting influences referred to descriptions of parental behaviors and verbal encouragement for adolescents’ healthy eating and parental adoption of some of the new dietary strategies learned at the weight-management program. Some parents modeled behaviors, such as drinking water, while other parents changed their own behavior once their daughter started the program. As one adolescent commented,

> Once I stopped [drinking soda my mom] kinda did the same thing...I guess because she wanted to influence me not to backtrack. (FG 1)

Similarly, parents demonstrated support by verbally encouraging their adolescent daughter to consume healthier and/or try new foods.

Parents also demonstrated influences that cultivate the adolescents’ development for healthier food consumption practices and learning food preparation. Some parents cultivated healthy consumption practices by encouraging their daughter to listen and respond to personal eating cues,

> If I’m eating something and we’ll be at a restaurant...I get like...really full [but] I really want to finish my plate... [My mom’s] like ‘Oh you’re getting full’ and I’m like ‘Yeah.’ And she’s like ‘Let’s get a to-go-box...if you’re full, we’ll just take it home. (FG 2)

However, the primary manner parents displayed cultivating influences was through promoting the development of adolescents’ food preparation skills by requesting and/or encouraging the adolescent to help cook. A few adolescents detailed how this encouragement for food preparation transitioned across childhood from a forbiddance to enter the kitchen at younger ages to presently being asked to cook more. Some also cited how these experiences provided them with gratification and a feeling of bonding with their mothers,

> Like you’re in the kitchen with your mom...and...you’re like over there with the measuring cups and pouring... and you’re happy because you’ve actually gotten good [at food preparation]...and then when the finished product comes out the oven...you’re happy because you had a part in doing that and you did it with your mother. (FG 1)

3.2.3 | Overlooking and tempting

Another parental influence perceived by adolescents, overlooking and tempting, involved parent behaviors that failed to notice or consider the adolescents’ desires or requirements for healthier food consumption. Rather, these influences increased adolescents’ temptation for unhealthy eating and subsequently increased their challenges to remain committed to the weight-management program’s dietary changes. For example,

> My mom was doing the [program] diet with me. But she stopped... And it gets really difficult because she is eating everything I want to eat. And...I get to the point like yesterday I was just like ‘Forget it.’ And I ate whatever I wanted. So I mean it gets hard. (FG 2)

Parents most commonly demonstrated this influence by acquiring, preparing, and/or consuming foods that adolescents perceived they are “not supposed to eat” (e.g. soda and “cake”). In some instances, adolescents were provided these foods, and in other instances parents would consume the food in front of the adolescent and not supply her with the same item,

> Like what my mom does she’ll usually go buy something like candy, chips, or cake and I’ll be in the car. She’ll eat it in front of me...when she doesn’t want me to eat or I’m not supposed to. I think it’s somewhat unfair cause [she] shouldn’t eat it either. (FG 3)

Parents also exhibited overlooking influences by not considering adolescents’ feelings when they complained about healthy foods the adolescent prepared and bought or when adolescents attempted to apply healthy eating behaviors, such as regulating their intake of unhealthy foods. As one adolescent commented,

> I’ll try to portion myself and say, ‘Ok, I’ll eat a doughnut right now, and then we’ll have doughnuts at the end of the week, so maybe on Friday I’ll have a doughnut.’ And then I wake up [on Friday] and all the doughnuts are gone [because my mother ate them]. Sort of comes to when we have sweet things in the house I wanna eat it all the time so I make sure that I have it too. (FG 2)

3.2.4 | Acquiescing

Adolescents also described an acquiescing type of influence, which involved parent behaviors that reluctantly but eventually accept adolescent coaxing and ploys for primarily unhealthy food items. As a result, adolescents described this influence promoted a greater intake of unhealthy foods. Typically, parents demonstrated this influence by “giving-in” during food shopping,

> If I ask to get something [during food shopping] usually I have to talk [my dad] into it...he usually gives in once I ask (FG 3).

Adolescents described similar reactions from parents to their other approaches, such as sneaking food into the shopping basket or placing items on the conveyer belt. For example,

> When it’s checkout time [mom’s] like ‘Oh where did all this come from?’ We’re like, ‘We don’t know.’ So [my sister and I] end up getting...all [our food] anyway. (FG 2)

3.2.5 | Providing

Another influencing type adolescents frequently described was a providing influence, involving parents’ simple acts of making the daily need of food available to adolescent daughters. Across their descriptions, adolescents did not explain any parental intention to influence their
dietary practices to be healthy or unhealthy. Instead, adolescents described how many of the foods they eat were because the food was made available by the parent through food preparation and/or acquisition. When asked why she ate what she did yesterday, one adolescent replied,

I mean it was there. It was like at my house...my mom cooked it so...I ate it. (FG 1)

Some adolescents also mentioned how this influence impacted their own food preparation, predominantly what food they would pack for school lunches, such as "leftovers," "veggie chips," and frozen dinners.

### 3.2.6 Attending

Parents were also described by adolescents to give attending influences that signified parent behaviors that were mindful of their adolescent's preferences and desires about food. Similar to providing, these influences were not perceived by adolescents as intending to sway them to eat healthy or unhealthy and were rather described as a way their parents demonstrate regard for their opinions and needs. Parents demonstrated these influences by requesting adolescents' meal preferences ("What do you want to eat?" or "What do you guys want for dinner?") or by preparing food adolescents enjoy,

When we're doing family dinners...[my mom will] try to add something my sister likes, and then something I like...so we'll have something we like instead of just something [one of us] likes. (FG 2)

### 3.2.7 Not providing and avoiding

The final parental influencing type adolescents cited were not providing and avoiding influences, which was the only type not discussed across all focus groups. Two adolescents from separate focus groups (FG 2 and FG 3) described parents as simply not providing food for the household or adolescent and at times refusing to participate in these preparation and acquisition activities. This left the adolescent to assume responsibility for her own food.

My mom doesn't cook...my mom's just like, 'ah, you know what you two [my older sister and I] take care of it. I don't want to do it. (FG 2)

Adolescents did not describe whether this influenced them to eat healthier or unhealthier.

### 3.3 Types of influences from children

From the statements of mother focus groups, we identified two types of child influences that impact mothers' everyday dietary practices: intentional and unintentional influences. Both types crossed all focus groups. Each parental influencing type is also noted for its healthy or unhealthy effect as perceived and described by mothers.

#### 3.3.1 Intentional

The first type of influence, intentional, referred to behaviors from children that involved a deliberate motivation to impact the mother's food consumption, preparation, or acquisition in some way. These influences were frequently initiated by the child and primarily involved modes of communication, including requesting, persuading, complaining, and questioning.

As described by mothers, children used requests and persuasions to influence the mother's food acquisition and preparation and to ultimately affect the food available to consume. Requests were described as suggestions or asking specific foods be purchased or prepared without coaxing. Foods requested varied from what mothers perceived as unhealthy, such as "fast food," to healthy, such as "turkey bacon." In contrast, persuasions were often used to sway mothers to prepare or buy unhealthy food items (e.g. "dessert") or convince mothers to make food immediately available to eat. For example, one mother described the numerous persuasions she hears when she picks her children up from school,

'Vere hungry. We can't wait till Dad cooks. Is it already marinated? You know, so I feel pressure to just stop and get something. Or..., 'We haven't eaten. See you had a late lunch. We ate at 11 so we're starving.' And I look—yeah, it's 4 o'clock. Ok I can see they're hungry, you know. (FG 3)

While requests and persuasions were intended to influence the mother's food acquisition or preparation, they subsequently influenced the mother's own consumption.

My kids like desserts, so that's where they influence me.... my kids for supper seem to think they need dessert after every meal. So I'll be like, 'Fine.' So I'll make them something or whatever...so I definitely eat different when I'm away from my kids than when I'm with my kids. (FG 2)

Another intentional influence from children was complaining, which often comprised of expressions of dissatisfaction from children regarding food the mother prepared or suggested the child try. The foods that received this type of child response were typically perceived as healthy items, including "ground turkey," "tilapia," "salad," and "broccoli." When parents prepared or suggested children try these foods, children responded, "Oh I don't like turkey...I'm not going to eat that" (FG 3), "You better not bring that in this house" (FG 3), and "Ugh...I don't want that stuff" (FG 1). Over time, these complaints resulted in some mothers changing their food preparation, acquisition, and own consumption,

If I say something about fish, [my daughter's] nose goes up and then we have this argument about what to eat. So her being picky stops me from being as healthy as I would in my eating. (FG 1)

A second way complaining was used by children was to express their frustration and opinion of the lack of desired food in the home, such as snacks and sweets. For example, one mother described her adolescent daughter's reaction to the food available,

She'll be standing in [the kitchen] saying, 'There's nothing to eat.' When there's tons of healthy things. She just doesn't want it. (FG 3)
A final intentional influence described by a few mothers was questioning, which children raise doubt about the mother’s own unhealthy food selections. Mothers described this influence as occurring in the context of a current illness (e.g., hypertension) or as a way children attempted to help the mother eat healthier,

When I’m stress eating and [my daughters] see me on this roll [they’ll say], ‘Mom, do you really need that?’ (FG 3)

### 3.3.2 | Unintentional

The second type of influence was unintentional, which involve child behaviors and characteristics that did not appear to have a particular purpose or active involvement by the child. Rather these influences consisted of observations by mothers about a child’s dietary practices, awareness by mothers about their child’s food preferences, and daily routines of childhood and adolescence that mothers identified as somehow influencing their dietary practices.

As described by mothers, observations made about their children’s food consumption practices ended up influencing their own food preparation, acquisition, and consumption to be overall healthier. Most mothers described observations of children eating too much “junk,” “cereal,” “ramen noodles,” or “soda,” which subsequently influenced their food preparation and purchasing to help children avoid these perceived unhealthy foods. Some mothers would no longer purchase the food items,

I don’t buy the sodas in the house. If I had sodas [my daughter] would be drinkin’ all day. (FG 3)

Other mothers would cook and plan meals to occur a particular way to prevent overeating of these foods. As one mother described,

Every morning I wake up and [my children] get breakfast. They get eggs, bacon, sausage, toast. Like they get…the brain food. They go to school…Then they’ll come home, and I’ll give them more [brain food]. Like my main thing is proteins…It keeps them fuller longer. I feel like if they eat a bunch of crap they’re back in my kitchen sooner. And I’m like, ‘Get out of my kitchen.’ (FG 2)

In addition to unhealthy food consumption observations of children that influenced their food acquisition and preparation, a few mothers described healthy consumption observations of their children, which successively influenced their own consumption. For example,

A couple of years ago it was my son first; he decided he was not going to have sodas anymore and went straight to water. Well then my husband and daughter…took on that action…and then [my other daughter] did a little bit more, so she doesn’t have soda. And then that last February I adopted that. So kind of a family kind of thing that influenced me, but the girls did it, and I guess I was the last to come on board. (FG 3)

A second unintentional influence from children frequently described by mothers was an awareness of their children’s food preferences. Being knowledgeable of or cognizant to ask their children for their preferences predominantly influenced what food mothers would purchase or prepare. Awareness of child preferences did not appear to influence the healthfulness of mothers’ dietary practices, but rather was performed to make their lives more trouble-free,

I ask [my children what they want to eat]. It makes it a whole lot easier. (FG 2)

Mothers discussed how they prepared foods tailored to their children, and how food shopping could be dictated by their children’s preferences. As described by one mother,

Mostly everything that’s in that [grocery] cart is for [my children]. Cause you know that they’re gonna eat it. (FG 1)

Additionally, many mothers identified particular foods that their children liked or disliked (e.g., “eggs,” “dessert,” and “bananas”) and commented how they would adjust food preparation and acquisition to accommodate those known or requested preferences.

The final unintentional influence from children was the daily routines of childhood and adolescence, which impact mothers’ preparation, acquisition, and consumption—particularly children’s busy schedules. Several mothers discussed extra-curricular activities that their children participated in and how this limited meal options for their children and themselves,

A lot of times [cooking is] dictated by-by my daughter’s schedule…depends on what I have to do for her. Where I’m running to. (FG 3)

Mothers repeatedly discussed how eating out after games, such as at fast food drive-thrus, was often the only option to avoid consuming food too “late,” and how planning healthy meals that work around children’s extra-curricular schedules was challenging.

### 4 | DISCUSSION

Among a sample of adolescent females with obesity and their mothers, the researchers found that a wide range of influences exist within the parent-adolescent relationship affecting everyday dietary practices. Adolescents described a diverse set of influences from parents, including controlling, supporting and cultivating, overlooking and tempting, acquiescing, providing, attending, and not providing and avoiding. Consistent with previous studies, these adolescents described parental influences of control, as expressed through verbal direction, restriction, and food regulation (Bassett et al., 2008; Contento et al., 2006; Feunekes et al., 1998; Neumark-Stzainer et al., 1999); support, as demonstrated through verbal coaching and encouragement (Bassett et al., 2008); and providing, by assuring home food availability (Bassett et al., 2008; Contento et al., 2006; Feunekes et al., 1998; Neumark-Stzainer et al., 1999). However, these findings show that several other influences occurred, such as overlooking and tempting, cultivating, and not providing and avoiding, which deserve further exploration.

Among mothers of adolescent females with obesity, two types of influences from children were described—intentional and unintentional—and similar findings, such as the mother’s awareness about their children’s food preferences, have been found in other investigations
(Johnson, Sharkey, & Dean, 2011; Stratton & Bromley, 1999). However, our findings extend these by describing a number of processes which originated from children (e.g., complaining) versus mothers (e.g., observations of children). While previous investigations have found mothers to describe a significant influence from children on decisions about food for themselves and their families (Bassett et al., 2008; Johnson et al., 2011; Stratton & Bromley, 1999), the ways children exert this influence has remained limitedly examined. This study helped to illuminate some of the ways children and adolescents actively contribute to the household and parent dietary patterns; though, additional investigations are needed to identify whether the influences from children on parent dietary practices have any implications for the children’s own food consumption.

The findings add to a growing literature examining the parental and household influence on adolescent dietary practices. Collecting data directly from those experiencing the interpersonal influence rather than the self-perceptions of one’s own behavior (i.e., asking a parent how they behave towards their children) is an advantage, as it may have helped in this study to identify a wider range of influences. Future obesity and dietary research would benefit from collecting data from both parents and adolescents to obtain fuller views of the family/household food patterns and relationship influences—a recommendation noted by other investigators (Bassett et al., 2008). Additionally, to gain greater understanding of their associations with obesity-associated dietary practices, research is needed to evaluate how the various influencing types identified in this investigation relate to dietary practices collected via validated measures (e.g., food frequency questionnaires and dietary records). Finally, it is unclear whether the novel parental influences this study identified (e.g., overlooking and tempting and not providing and avoiding) are unique to the sample of adolescent females with obesity enrolled in a pediatric weight management program; thus, investigations are needed to examine whether similar influences occur across other pediatric population groups (e.g., age, weight statuses, and gender).

The findings of this study also provide a number of interesting insights for clinicians and dietitians. As previously mentioned, family-based childhood obesity interventions demonstrate little success in adolescent populations (Hoelscher et al., 2013; Steele et al., 2012). Though it is unclear all the potential reasons for this occurrence, these results suggest that attention should be paid to the social circumstances surrounding adolescent females’ dietary behaviors—particularly those from parents. However, interventions should not only target parent-to-child influences, but assist parents and adolescents to ascertain the ways in which each influences the other’s daily dietary practices and those of the household (Bassett et al., 2008). Working with parent-adolescent dyads to identify these social influences and how to increase those viewed as facilitators to healthy eating and decrease those framed as hindrances may help improve the effectiveness of family-based weight management programs.

5 | LIMITATIONS

Study participants were restricted to a population enrolled in a pediatric weight-management program, indicating that mothers and/or adolescents had high motivation for change. While future investigations should explore if similar influences occur among non-treatment seeking adolescents with obesity and their parents, this particular population did represent a group currently attentive to their food experiences supporting a more in-depth examination of these. Additionally, nutrition education from registered dietitians to patients and families begins at the first visit to the weight-management program. Collecting data from participants following their first program visit may have contributed to the way participants perceived various interpersonal influences as affecting healthy and unhealthy dietary practices. Lastly, mothers were the selected parent for this investigation and the majority of adolescent females (53%) came from mother-headed households. As a result, there may have been an under-representation of specific examples for how fathers influenced adolescent females’ everyday dietary practices.

6 | CONCLUSION

From this study, the authors provided the unique insights of adolescent females with obesity and their mothers of how influences within the parent-adolescent relationship shape their everyday dietary practices. These findings highlight the wide-ranging approaches used by parents to influence adolescents’ dietary practices and the various tactics used by children to affect mothers. Though subsequent investigations are required to expand on these preliminary findings, the social circumstances surrounding everyday food consumption, preparation, and acquisition deserve greater attention by clinicians and dietitians during obesity treatment. Additional research into the social processes occurring between parents and children, which influence everyday dietary practices, may not only provide important insight into how obesity develops and persists but a foundation for the next generation of family-based obesity interventions.

ACKNOWLEDGMENTS

We thank the participants for making this study possible.

SOURCE OF FUNDING

Research reported in this publication was supported by the National Institutes of Health under Award Number F31NR014960 and the Duke University School of Nursing PhD Student Research Fund. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

CONTRIBUTIONS

MW secured funding for the project, collected data, conceptualized the research topic, conducted the analyses, and produced the initial manuscript draft. EM collected data, conducted the analyses, and revised the manuscript. GB contributed to the conceptualization of the research topic, assisted with securing funding, and revised the manuscript. SA contributed to data collection and revised the manuscript.

CONTRIBUTIONS

MW secured funding for the project, collected data, conceptualized the research topic, conducted the analyses, and produced the initial manuscript draft. EM collected data, conducted the analyses, and revised the manuscript. GB contributed to the conceptualization of the research topic, assisted with securing funding, and revised the manuscript. SA contributed to data collection and revised the manuscript.
manuscript. DB contributed to the conceptualization of the research topic, assisted with securing funding, contributed to data analyses, and revised the manuscript. All authors critically reviewed and approved the submitted manuscript.

REFERENCES


**SUPPORTING INFORMATION**

Additional Supporting Information may be found online in the supporting information tab for this article.

**How to cite this article:** Winkler MR, Moore ED, Bennett GG, Armstrong SC, Brandon DH. Parent-adolescent influences on everyday dietary practices: perceptions of adolescent females with obesity and their mothers. *Matern Child Nutr.* 2017,e12416. doi: 10.1111/mcn.12416