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Strategies elementary school children use to influence mothers' food purchasing decisions

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Abstract

This study aimed to understand the strategies elementary-school-aged children used to influence mothers' food purchasing decisions. Semi-structured qualitative interviews were conducted with 40 children aged 6–11 years and their mothers living in South Carolina. Strategies to influence mothers' food purchases were collected from children and their mothers separately. The interviews were audio-recorded, transcribed verbatim, and open-coded. The constant comparative method was used for data analysis. Coding matrices were used to compare children's and mothers' responses on the children's strategies. Children reported 157 instances of 25 distinct strategies to influence mothers' purchasing decisions. Mothers had concordance with 83 instances of these strategies. Mothers were more concordant with sons than daughters. The most common and successful strategies reported by children and mothers were repeated polite requests, reasoned requests and referencing friends. Other strategies included offers to contribute money or service, using other family members to pursue mothers for the item, writing a list and grabbing desired items. Mothers perceived that children had a large influence on food purchasing decisions. Children were aware of the strategies that would get positive reactions from mothers. They (children) could get their desired items a lot of times, often, or several times in a month from their mothers irrespective of the healthfulness of the items. Children's influence can be used as a change agent for improving mothers' food purchases if children prefer healthy foods. Efforts are needed for mothers and children to help address children's strategies to influence mothers to purchase unhealthy foods and make healthy foods more appealing to children.

KEYWORDS

elementary school-age children, food desire, food-purchase decisions, influence, mother-child dyad, mothers, strategies

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1 | INTRODUCTION

Children's diets in the United States conform poorly to dietary guidelines, and energy-dense nutrient-poor (EDNP) foods dominate (DeJesus et al., 2019; Hales et al., 2017; Liu et al., 2022; U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020). Children's excessive consumption of processed, pre-packaged, and ready-to-eat foods and low consumption of fruits and vegetables is alarming because unhealthy diets are associated with obesity and development of chronic diseases (Hales et al., 2017; World Health Organization, 2015). To reduce children's unhealthy food consumption and development of associated chronic conditions, investigating how elementary-school-aged children acquire desired foods and drinks from parents is important (Cohen et al., 2020; Eicher-Miller et al., 2015; Poti et al., 2013).

Elementary school age is crucial as children progressively learn to process information along with widening their environment from home to outside. Their abstract reasoning, cognitive and social skills further develop. They generally become more knowledgeable about outside foods, brands and marketing, which might affect their food choices (Ebster et al., 2009; Esmaeilpour et al., 2018). Reporting the current eating patterns of children aged 2–18 years old, the Dietary Guidelines for Americans, 2020–2025 showed gradual decline of the Healthy Eating Index scores throughout the childhood and adolescents starting from 5 years old. Out of 100, the scores were 61, 55, 52 and 51 for children aged 2–4, 5–8, 9–13 and 14–18 years old respectively (Dietary Guidelines for Americans, 2020–2025, p. 75).

Food consumption is a process that includes food desire and behaviours associated with acquiring food. People apply strategies to acquire desired foods (Blake et al., 2011; Sobal & Bisogni, 2009). Children's food acquisition depends on their parents in many ways. Home is their major source of energy consumption, and parents are the gateway for children to get foods.

Children's strategies to obtain desired foods from their parents also change as children age (Lawlor & Prothero, 2011; Schleepen & Jonkman, 2014; Powell et al., 2011). Young children (2–9 years old) often use pestering to get preferred foods and drinks during shopping, though little is known on how they negotiate with their parents (de Faultrier & Marshall, 2014; Huang et al., 2016; Lawlor & Prothero, 2011; Wilson & Wood, 2004). Children of elementary school age may use their developing analytic skills to argue for desired foods and drinks instead of pestering or nagging (Baldassarre et al., 2016; Ebster et al., 2009; McDermott et al., 2006; Nicholls & Cullen, 2004).

The strategies children used to influence parents' food purchase decisions have mostly been identified through observation of parent–child interactions in stores (Calloway et al., 2014; Wingert et al., 2014; Powell et al., 2011; Turner et al., 2006), but the rate of parents shopping with children could be as low as 17% (Page et al., 2018). Less is known about how much children interact with and influence their parents outside stores to get desired items. Strategies captured only in grocery stores do not reflect what children do at home to get desired foods and drinks. Most of what we know about children's strategies to influence parents is from parents' interviews (Calloway et al., 2014; Kelly et al., 2006; Wingert et al., 2014). To fully understand how children influence parents' food shopping, the strategies that children use to get desired items in different contexts, including location, food types, and children's presence or absence during shopping, should be examined.

Children influence parents' decision making on items specific to children, particularly toys, clothes or holiday destinations, but parents and children disagree on how much influence children have in their everyday food buying (Cicero & Teichert, 2018; Gram, 2007, 2010, 2015; Nørgaard et al., 2007). The extent of children's influences on parents' purchasing decisions has been identified either from parents' interviews or from observation of parent–child interactions that did not focus on how children perceived their own influence on their parents' food shopping (Calloway et al., 2014; Kelly et al., 2006; Turner et al., 2006; Wilson & Wood, 2004; Wingert et al., 2014).

To address these research gaps, this study aimed to understand (1) what strategies children 6–11 years old use to influence parents' food purchase decisions specific to children's consumption from both the children and their parents' perspectives and how concordant those strategies are, and (2) the extent of these children's influence on parents' food shopping both from the children's and parents' perspectives.

Key messages

- Repeated polite requests, reasoned requests, and referencing friends were children's most common and successful strategies to influence mothers.
- Mothers perceived that children had a large influence on their (mothers') food purchasing decisions.
- Children perceived that their mothers purchased their requested items a lot of time or often.
- Location did not contribute much to children's initiation of requests to influence mothers to purchase their (children's) desired items
- Most items mothers purchased, being actively or passively influenced by children's requests, were EDNP foods and drinks.

2 | METHODS

This study was conducted with elementary school-age children and their primary-food-shopping parent from low- and middle-income families in and near Columbia, South Carolina. Purposive criterion sampling was used. The specific criteria were the children must be between 6 and 11 years old, the parents were the primary food shoppers of their households, and the parent and the children were living in the same households. We reached saturation after interviewing 40 parent–child dyads which was aligned with sample

size recommendations from previous qualitative research (Mason, 2010; Marshall et al., 2013; Morse, 2000; Strauss & Corbin, 1998, p. 136; Hennink et al., 2017).

Participants were recruited through advertisements. Flyers were circulated in public libraries, churches, food banks and after-school programmes. Upon contact by a parent, eligibility was checked to recruit parent–child dyads who qualified for the study. Besides the three criteria mentioned above, other eligibility criteria for each parent–child dyad included that the annual household income of the participants was below $109,000 (200% of household median income of people living in South Carolina which was $54,336 in 2016 (U.S. Census Bureau), both the parent and the child could understand and speak English fluently, and the parent had purchased foods for the household in which the child lived within past 7 days. The research protocol was approved by the University of South Carolina Institutional Review Board. Written informed consent and verbal assent were collected from each participating parent and child, respectively.

For data collection, first, food receipts were collected from the participating parents on their food and drink purchases for the week before the interview date. Then, face-to-face in-depth interviews were conducted with a parent and one eligible child from each household on the same visit. For the two-parent households, the parent who was the primary food shopper of each household was interviewed and any food or drink purchased by the other parent was not included in the food list. The interviews with the parent and the child were conducted separately one after another with neither being present during the other's interview. Two different semi-structured interview guides were used for the parents and children. The interview guides were flexible, and participants were probed to elaborate their responses with further details. To develop an age-appropriate interview guide for children aged 6–11 years old and make the questions comprehensible at different reading levels, cognitive interviews were conducted with five children aged between 5 years 11 months to 10 years old. Necessary adjustments were made in the interview guide so that children could understand the questions. Interview guides were piloted and necessary modifications were made. The interviewer was the first author who had prior experience in qualitative research. The interview guides were developed with close consultation of the co-authors who had expertise in the field and qualitative research.

The face-to-face in-depth interview was conducted with the parent first and lasted approximately 1 h. The interviewer made a list of foods and drinks purchased during the previous week from the food receipts collected from the parents. Sharing the list, the interviewer asked them to identify which were for their participating children and which foods they purchased because the children requested. Then they were asked non-leading open-ended questions for describing children's influence on parents' food shopping decisions to acquire children's desired items and what strategies children used to influence the parents' recent food shopping decisions from different food shopping events during previous 1-week period. For example, Did your child try to get you to buy foods or drinks this week? Tell me about what he/she wanted. How did he/she try to get you to buy this food or drink? What did he/she say or do to try to get you to buy this food or drink? Then the parents were probed with follow-up questions, such as Was (the child) with you when you bought this food or drink? Tell me more about how he/she tried to get you to buy foods or drinks while he/she was with you during buying the food or drink? and Tell me about how (the child) tries to get you to buy him/her foods or drinks when he/she is not with you during buying foods?

Food shopping was counted as any food and drink purchased from any store including grocery stores, supermarkets, pharmacies, convenience stores, and fast-food restaurants, as well as food, drink, or meal purchases for the child from full-service dine-in restaurants, food delivery, and/or takeout. To identify children's influence on parents' food purchasing decisions, parents were asked about how much influence their corresponding children had on their purchase decisions. To identify children's strategies to influence parents' food purchasing decisions, parents were asked what their children did to inform them (parents) about desired foods and drinks that they wanted to consume, and how the children tried to get their desired foods and drinks when parents did not yield to requests.

After interviewing the parent, the same interviewer conducted an approximately 30-min face-to-face in-depth interview with the child. The children were asked to name the foods and drinks they requested their parents to buy during the past week followed by non-leading open-ended questions for describing how they influenced their parents' food purchasing decisions to acquire desired foods and drinks. They were probed from the list of foods purchased wherever needed. They were also asked how frequently their parents bought the foods and drinks that they requested. The children were asked the same questions as their parents to identify what strategies children used to influence parents' food purchasing decisions. No information collected from a parent's in-depth interview was shared with the child and vice versa.

The interviews were audio-recorded, and field notes were taken. Parents completed a brief questionnaire on sociodemographic and food security information (USDA, 2012). Race/ethnicity was assessed using the two items from the United States Office of Management and Budget. Each parent–child dyad received $30 incentive for participation. Data were collected from April to August in 2018. Interviews were transcribed verbatim.

2.1 | Data analysis

The constant comparative method (Strauss & Corbin, 1998) was followed for data analysis and open, axial, and selective coding steps were used. Data analysis was done simultaneously with the data collection. Field notes and memos were developed to provide interview contexts. Data quality was checked by the research team, and some minor modifications were made in the interview guides.

Five interviews for the children and five interviews for the parents were open coded first, and initial categories were developed. The first

author coded five sets of interviews, and two second coders coded one set of parent–child interviews independently from these five sets. The initial categories were discussed with the research collaborators and consensus was reached to code child and parent interviews together with the same code book. A preliminary codebook was developed from the codes derived from the interviews of those five parent–child dyads; additional codes, categories, and concepts were added in the codebook after each interview was analysed. The co-authors worked on the codebook and approved coding. The codebook was revised in an iterative process using the constant comparative method with progression of data collection and coding. After initial coding, the codes were organized into major themes and subthemes using axial coding. Through discussions with co-authors, major themes were identified. The inductive analysis resulted in identification of new emergent themes and themes consistent with the food choice process model, social power theory, theory of reasoned action, and choice theory (Fishbein & Ajzen, 2011; Flurry & Burns, 2005; Furst et al., 1996; Glasser, 2010). Interpretation of results used a selective coding process to finalize major themes, and expert peer review of themes and interpretations by the coauthors and an external group from the institution's nutrition research consortium. Coding matrices were used to compare parents' and children's responses on the extent of children's influences on parents' decision-making process and the strategies children used to influence parents' decisions. NVivo software (version 12) (https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home; currently (https://lumivero.com/products/nvivo/) was used for data organization, management, and analysis.

2.2 | Ethics statement

The study was approved by the University of South Carolina Institutional Review Board (no. Pro00074596). Written informed consent and verbal assent were collected from each participating parent and child, respectively.

3 | RESULTS

3.1 | Description of sample

All parents studied were mothers (Table 1). Twenty-five children were girls and 15 were boys.

TABLE 1 Socio-demographic characteristics of the participants.

Responding parents	All mothers (n = 40)
Mean age of participating mothers (y)	36 (SD = 9.1)
Mean age of participating children (y)	8.2 (SD = 1.7)
	n (%)
Children living with both parents	23 (58)
Race	
African American	22 (55)
White	12 (30)
Asian	3 (7)
Hispanic	3 (8)
Children's education	
Kindergarten	3 (7)
1st grade	12 (30)
2nd grade	9 (23)
3rd grade	5 (13)
4th grade	5 (13)
5th grade	6 (15)
Children's siblings	
No sibling	3 (7)
One sibling	23 (58)
Two siblings	8 (20)
Three or more siblings	6 (15)
Mother's education	
Some college or associate programme or technical school	19 (47)
Undergraduate degree	10 (25)
Annual HH income <$35,000	24 (60)
Receives food assistant benefit	14 (35)
Food security category	
High or moderate food security	17 (43)
Low food security	19 (48)
Very low food security	4 (10)

3.2 | Strategies children used to influence mothers' food purchasing decisions

When children desired a food or drink, they described steps they took to influence their mothers' purchasing decisions. When mothers did not yield to the first request children made for a desired item, children tried different strategies. Children mentioned 25 distinct strategies and 157 instances of those strategies that they used to influence their mothers' purchases of foods and drinks (Table 2). Mothers mentioned 26 distinct strategies and 105 instances of those strategies that they (mothers) perceived their children used to influence them (mothers) to purchase children's desired items (Table 2). Of 157 instances of strategies identified from children's responses, mothers were aware of 83 instances of strategies.

Strategies did not differ by race, gender, and age of the children except throwing temper tantrums that was reported only by a few 6-year-old children and their mothers. Some salient strategies, derived from the analysis as major themes, that were frequently

TABLE 2 Strategies children used to influence mothers' food purchasing decisions identified from children's and mothers' responses.

Strategies		Description of strategies	# of children	# of mothers
Repeated polite requests		Children asked for the items again or kept asking for the item but nicely, asked for another day	30	8
Reasoned requests		Children mentioned why they were asking for those items	22	11
Giving hints		Children talked about TV commercials or YouTube video on foods, mentioned how much they would like the items without making a direct request	10	9
Waiting for mothers to ask first what the children wanted		Children knew their mothers would ask them what they wanted before going to grocery shopping, so they waited for that time to ask for their desired items	11	4
Service and monetary offerings		Children offered money to pay for the items or made service offerings like taking care of younger siblings	10	2
Referencing friends		Children mentioned their friends or classmates consumed a food or drink	6	10
Being tricky		Children asked for healthy items first and then ask for unhealthy or sweet items	7	2
Writing a list/sticky note or adding in grocery list		Children wrote the name of their desired item on a grocery list or sticky note	5	2
Texting or phone calls		Children texted the item's name or called their mothers to request the food	2	2
Doing household chores when mothers are not home		Children proactively did household chores in the absence of mothers and then asked for the items when mothers returned home	5	1
Behaving good		Children behaved good at school and home	4	1
Using family members to convince mothers	Children used their family members or teamed up with the family members to convince mother to purchase their desired foods	Teaming up with sibling	4	1
		Conveying request to mother through father	1	1
		Using grandmother to pursue mother	1	
		Asking father or Godfather	2	2
		Mentioning that siblings ate his share	1	
Buttering mother		Children showed extra affection to mothers and said all good things including how much they loved the mothers, and then asked for their desired items	5	3
Grabbing and sneaking		Children grabbed the item in store or sneaked the item in store or at home	3	10
Temper tantrums		Children threw temper tantrum	2	3
Discussion and negotiation		Children tried to discuss on a food or negotiate on a food item	4	3

(Continues)

TABLE 2 (Continued)

Strategies		Description of strategies	# of children	# of mothers
Showing expertise in food selection		Children mentioned different things about the food showing their expertise in food selection		3
Requesting mother to go to the store		Child requested mother to go to the store so that mother could bring child's desired item	1	1
Using different strategies inside store	Children used different strategies inside stores as given in the next column	Taking mother to food aisle	5	5
		Asking at registration checkpoint	1	2
		Bringing desired items to mother		1
		Helping mother in finding what child wanted	1	
		Taking own cart and filling out		1
		Picking first and then asking		1
		Being impulsive in store		1
Asking for alternate items	Children asked for something else, or alternate healthy items or any type of alternate option of desired item irrespective of healthfulness of item	Asking for something else	3	
		Asking for an alternate item that is healthy	2	
		Finding alternate option of desired item irrespective of healthfulness of item		1
Making suggestions	Children made different suggestions so that mothers bought the items, They also made dinner choices	Suggesting mother to go to a cheaper store	2	
		Suggesting small packs	1	
		Making Dinner choices		3
Begging		Children begged for the item	1	4
Asking without being specific to an item		Children asked items without being specific	1	2
Reminding mother how good the child was in study		Child reminded mother how good she was in study and doing well in tests	1	
Tracking pantry stock		Child checked pantry and informed mother which items were running low	1	
Asking for everything		Child asked for whatever he/she found in the grocery store		1
Mentioning the child was hungry		Children mentioned that they were hungry	2	2
Asking food as an allowance		Child requested food mentioning that as an allowance		1
Checking on where mother was going		Child asked mother where she was going so that he/she could ask for a food item		1
Total			157	105

(i.e., reported by at least 10 children or 10 mothers) mentioned by both children and their mothers and could influence mothers' decisions are described below.

3.3 | Repeated polite requests

Asking repeatedly and politely was the most mentioned strategy that the children used to influence their mothers' food purchasing decisions. Children mentioned that they asked for the item again nicely, and five children reported that they kept asking for the item. After the children found their mothers rejecting their first direct requests, some children asked again nicely by saying 'please, please.' Some of them requested the item another time on the same day and some asked for the item another day. Children perceived that they could acquire their desired items by asking repeatedly and nicely. A child said: 'I ask for it nicely. I ask, "Please, ma'am."…And I say, "Can I get a Capri Sun please, ma'am?" She says, "Yes"' (6-year old girl).

Two mothers mentioned that children asked again nicely, and six mothers reported children kept asking. Mothers confirmed that they agreed to buy the item when children asked repeatedly. A mother described her daughter saying: 'Mommy, can I please have… Mommy can we please, please, please get cookies this time?' I've said no so many times, so I finally did give to her this week… We got some cookies. But she always asks nicely for… She said, 'Mommy, can we please have the cookies this time?' I said, 'Yes we'll get them but you can't have any today. Maybe after dinner or any right now. Maybe after dinner' (mother of 6-year old girl).

3.4 | Reasoned requests

Reasoned request was the second most frequently mentioned strategy that children used. Twenty-two children mentioned that they gave a reason to their mothers including how much a child liked that item and how beneficial the item could be for the mothers; for example, buying the items could give mothers relief from cooking. Children thought that giving reasons was an effective strategy to influence their mothers to yield to the children's request.

> I told her that they have some sweet things and there's some healthy things inside of them, so they can make… so I can have something sweet for dinner, like as dessert, and I can have something that is a real dinner for dinner. (8-year old girl)

Nine mothers mentioned that their children gave reasons for why they (children) asked for an item to influence the mothers to buy those items. Mothers reported that the reason was how much the child liked the item. Mothers paid attention to the request as the child explained that he/she liked the item. Children also requested their desired items mentioning something was running low.

3.5 | Giving hints

Mothers mentioned that their children gave hints by talking about television commercials and YouTube videos on food or drink items. Another way of giving hints was talking about a food with asking for directly and telling mothers how much the children liked the item.

> Yes so I'll do that sometimes when I really wanna get something, but I don't wanna tell her because she's not really in the mood at the time, so I'll just give her a hint and then sometimes she gets it for me and then sometimes she doesn't. So I'll be like, okay if she's not feeling well at the time, so let's see I'll be like, 'Mom I wish we could get something like a strawberry or like ice cream,' or something like that and she'll be like, 'Maybe we'll get it next time.' Or she'll get it for me. That's how I give her a hint. (9-year old girl)

3.6 | Service and monetary offerings

Children tried to influence their mothers to get their (children's) desired items by offering different services to mothers. The services included helping mothers at home, paying for the item, and being careful about the portion size of the item. Offers for helping at home included sibling care and doing household chores with mothers.

> … I think last week, we went shopping and I was like 'Mom can you please buy me…' I can't even remember what it was, and I'll be like 'I'll be- I'll take care of my sister for a week!'. (11-year old girl)

Some children offered to pay for the item. They mentioned that they selected the item in the store and asked their mothers to buy the items for them, and they paid for the item with their own money. Regarding the source of the money, children said that they paid from their allowances. One child said that he earned money by carrying his neighbours' trash. His mother was aware of this strategy as she also mentioned that her son generated his own earning to pay for his desired food item. According to the mother, the child carried their neighbours' trash and got $1 from each household for doing this job. He used that money to buy ice-cream.

> … In our neighborhood we got [a] ice cream truck, and he tends to try to go to the ice cream truck every day. So sometimes he [get], no sometime. He [go] ask my brother for a dollar. He'll still go to the ice cream truck. Or he [go] out and… Him and some of his little friends, they'll go out in the neighborhood and ask some of the elderly people can they take out their garbage. And they earn a dollar. So, he finds ways to get what he

[want]. He [do] this almost every day. (mother of a 6-year old boy)

3.7 | Waiting for mothers to ask before food shopping

Children mentioned that their mothers asked them (children) which foods and drinks they (children) wanted before mothers went for food shopping, and they waited for their mothers to ask. Three mothers from the same mother–child dyads asked their children what they wanted to have before going grocery shopping.

> I initiate it, because usually when things are going to be finished in the house, I like to know what it is they like me to purchase. So, I'll say 'Oh, it looks you guys really like the waffles.' 'Would you like me to buy them next week?'. (mother of a 10-year old girl)

3.8 | Referencing friends

Referencing friends eating the food or drinking the item was another strategy from the children's perspectives to influence their mothers' food purchasing decisions. Children told mothers that they found their friends eating those items in the schools or playgrounds.

> So, like I went up to her and was like 'Hey, like my friend had ramen noodles, can we buy them sometime?' and she's like 'Sure, when do you want to eat them?' I'm like 'I could eat them like before soccer, like after school.' She said, 'Okay I'll get them next time I go to the grocery store'. (11-year old girl)

Referencing friends and mentioning that the friend consumed a specific food or drink was the second most mentioned strategy that mothers reported their children used. Mothers mentioned that their children told them that their friends brought the items to school or their friends liked the foods, so they also wanted to buy the foods. Giving a friend's reference was also a common strategy when we matched the responses of children and their mothers according to dyads.

> He has requested Gatorade quite a lot because he has been playing baseball, like he's playing baseball now, so all the kids have some sort of sports drink. So, he requests one of those usually on game days. Like 'Can I have a Gatorade? All my friends are doing it, I want one too.' That's definitely a thing that's happened. (mother of a 7-year old boy)

3.9 | Grabbing and sneaking

A common strategy from mothers' perspective was that children grabbed the item when mothers refused to buy children's requested items, but only two children mentioned that they grabbed the item without their mothers' knowledge. Another child who reported that she took the desired item without her mother's knowledge described that act as sneaking. She said that when her mother rejected her request for a desired item during shopping in a grocery store, she sneaked the item and kept it in the cart without her mother's knowledge. The reason for sneaking was that the child knew that when the mother would find the item at the cash register, she would not send it back to the aisle.

> I be sneaking on it. I will hide behind her and then, when she walks away, I'm just going to get it in the store. and keep in buggy and …then she buys that. (6-year old girl)

3.10 | Other successful strategies from both mothers' and children's responses

Some other successful strategies were using family members, for example, teaming up with siblings or pursuing mothers through father or grandmother, giving reminders by lists, sticky notes, phone calls, or texts, being tricky, and 'buttering up' mothers. Children mostly used strategies that were polite except two children, who were the youngest participants, threw temper tantrums. Both children and mothers mentioned the children throwing temper tantrums to get their desired items, but the nature of activities and locations mothers and children mentioned about children throwing temper tantrums were different. A mother mentioned that her daughter whined in the store until she (mother) gave her the item, but her child mentioned that she shook the cart and ran around the cart 'like a chicken with its head off.' Another child mentioned that she threw temper tantrums at home. She kicked on doors and banged her head on the door when her mother denied giving her the item she requested.

3.11 | Location of requests

Children initiated a direct face-to-face request to inform their mothers about the desired items; the requests were initiated either in a store or at home. Thirty-four children made a direct request for a food or drink in the store during the 1-week period for which we collected data on mothers' food purchases. Both mothers and children mentioned that even if children were not present in all shopping events for the week, they were present in at least one shopping event. Children (19/40) also made direct requests to their mothers for specific items when both were at home. Eleven children mentioned that when mothers were out of home and they (children) were not accompanying mothers, they (children) requested their

mothers to buy their desired foods and drinks by phone calls, texts or facetime calls. One child initiated the request inside the car. Three children wrote a list of desired items instead of making a verbal direct request. Mothers also mentioned that their children were expressive and informed them (mothers) about children's desired items by initiating direct requests.

3.12 | Concordance between mothers' and children's perspectives on children's strategies

Mothers were aware of 83 out of 157 instances of strategies that children mentioned (Table 2). Although there was concordance in the aggregate between mothers' and children's perspectives, the strategies were not always mentioned by the same mother–child dyads. Concordance was determined by matching the responses of the mothers and children dyad-wise from the same questions asked to them. When the strategies from both the children's and mothers' responses were matched dyad-wise, 18 mothers were aware of some of the strategies their children used (as the strategies mentioned by the mother and the child of the dyad matched) (Table 3). For 22 mother–child dyads, the strategies did not match at all dyad-wise. Sixty-seven percent of mothers had concordance with their sons' description of strategies (10/15) and 32% of mothers (8/25) had concordance with their daughters' description of strategies. The strategies like referencing a friend, let mothers ask first, reasoned request, and taking mother to the aisle were common for both mother–son and mother–daughter dyads. Boys offered spending own money whereas girls offered helping mothers in household chores. Boys would team-up with siblings or ask at check-out point, whereas girls tried to discuss or threw tantrums.

TABLE 3 Strategies concordant with the children and their mothers in dyads.

Strategies	Mother–child dyad composition	
	Mother–son dyad	Mother–daughter dyad
Polite requests	X	
Referencing friends	X	X
Waiting for mother to ask before going to grocery shopping	X	X
Reasoned requests	X	X
Keep asking	X	
Asking again		X
Discussion		X
Phone call	X	
Teaming up with siblings	X	
Adding in list	X	
Asking in store/checkout point	X	
Spending child's own money	X	
Household chore		X
Taking Mother to the food aisle	X	X
Throwing temper tantrum		X

3.13 | Children's influence on mothers' food purchasing decisions for children's foods and drinks

Children's influence on mothers' food purchases was captured by how often mothers purchased specific foods and drinks that children had requested. Children's responses on how often their mothers purchased those requested foods ranged from several times in a month or a lot/often to once or rarely (Table 4). For the foods and drinks that mothers did not purchase in that week, we asked the children if their mothers bought those items any other times, and 37 children (93%) responded that their mothers purchased those items other times. The foods and drinks that the children reported as their most requested ones and mentioned that they perceived their mothers purchased those items sometimes to a lot of the time, were EDNP in category (Table 4).

Most mothers mentioned their children having a lot of influence on their food and drink purchase decisions. Mothers' responses ranged from 30% to 100% influence that children had on mothers' food and drink purchasing decision for the children. Nine mothers (23%) perceived that their children had 100% influence on their food shopping and 23 mothers (58%) perceived the influence range was 50%–99%, 8 mothers perceived the influence was below 50% or between 30% and 33%, or little or not a big influence. One-third of the children perceived that their mothers purchased their requested items a lot of the time or often, and half perceived that their mothers purchased their requested items once in a week, a few days in a month or sometimes.

4 | DISCUSSION

Children applied different strategies to influence mothers, with a concordance between mothers and children on half of those strategies. Mothers perceived that children had a big influence on mothers' food purchase decisions when foods and drinks were bought for children. Children also perceived that their mothers purchased their requested items often. Location did not contribute much to children's initiation of requests; they could initiate a request equally in the in-store or out-of-store locations to influence their mothers and used strategies to achieve their desired items. Elementary-school-aged children go through the analytic developmental stage and can process information (Schleepen & Jonkman, 2014; Atik & Ozdamar Ertekin, 2013; John, 1999) from which they might be thoughtful about using strategies to acquire their desired items from mothers. The most mentioned strategy identified from both children's and mothers' responses was repeated polite requests followed by

TABLE 4 Extent of children's influence on mothers' food purchases from children's perspectives.

Extent of influence measured by the frequency of mothers usually buys the children's desired items	# of children	Name of foods and drinks children requested that mothers purchased (reported by children)
A lot of time	8	Bananas, chips, lunchables, cheetos, McDonalds happy meal, ice-cream, Mountain Dew
Often	5	Popsicle, candies, pizza, Ramen noodles
Once a week	7	Chips, pickles, lunchables, chicken mini, M&M, yogurt, ice-cream
'Not often' referring to few days in a month	5	Lunchables, green juice, fruit snacks, Skittle, Marshmallow
Sometimes	8	Oranges, granola bars, chocolate chip cookies, blueberry ginger ale, pepsi, chocolate drinks
Once in 2 weeks	1	Lunchables
Once in a month	2	Pizza, Mac N cheese
Very little/rarely/one time	4	English muffin, fanta, dirt cake, KFC fried chicken

reasoned requests, referencing friends, giving hints, offering services, and teaming up with siblings. Children understood that if they asked repeatedly, annoying their mother, the mothers would not purchase the items. Hence, when mothers rejected children's requests the first time, children asked nicely or politely. Referencing friends was an effective strategy that children used. Mothers mentioned that when their children requested particular items, citing that their friends consumed those foods, mothers considered buying them (foods) because they did not want their children feel left out in schools or afterschool programmes. In contrast to our findings that children mostly used polite strategies, previous studies on children of elementary school age or below reported strategies like pestering, nagging, keeping items in shopping carts, carrying them to the cash register, and pointing to the items (Calderon et al., 2017; Calloway et al., 2016; Haselhoff et al., 2014; Turner et al., 2006; Wingert et al., 2014). Children were also thoughtful about the price of the items, so they tried to find ways to reduce the cost by suggesting mothers to go to a cheaper store, buying a smaller pack, or even offered money to pay for their desired items. They tried to acquire their desired items by being affectionate and caring, such as saying how much they loved their mothers or how mothers can get some relief from cooking. Children exhibited their social power by citing friends and using family members to convince mothers to acquire their desired items.

From children's perception on frequency of mothers purchasing children's requested foods, even if mothers were not exclusively influenced by the children's requests, they were passively influenced by the children to purchase those items. Children 6–11 years old may have had difficulty in accurately answering the question about how much they influence their mothers' food purchasing decisions. We asked the children to name an item that they requested and that their mothers bought for them. Then, we asked the children how often their mothers purchased the items they requested. Prior researchers have attempted to measure the extent of children's influence in terms of how many requests children initiated in stores and how many items parents purchased from those requests; others have used a four-item scale to measure children's perceived influence on parents' purchases, though the items were not specific to foods (Calloway et al., 2016; Caruana & Vassallo, 2003; Huang et al., 2016; Lively et al., 2017; Waddingham et al., 2018). Our results suggest that children often can change their mothers' food purchasing decisions and get their desired foods by communicating their food requests in certain ways. Further research on how to best measure the extent of children's influence on parents' food purchasing decisions is warranted.

Most items requested by children that they perceived their mothers purchased sometimes to a lot of the time were EDNP in category except two nutrient-dense fruits (Table 4). This finding is aligned with previous research that showed that most child requests were for energy-dense foods (Calloway et al., 2016; Castro et al., 2017; O'Dougherty et al., 2006), which is concerning because 80% of the mothers in this study mentioned that children had a lot of influence on their food purchase decisions specific to children's consumption. Mothers' acknowledgement of children's influence and frequent purchase of children's requested EDNP foods may help explain children's access to EDNP foods, which is a leading contributor to children's obesity. Mothers may need resources to help them not yield to children's request for unhealthy foods even if they feel emotional about children's peer pressure and not purchase those items on children's requests. Reducing children's access to the EDNP foods, by not purchasing those items, may help children consuming healthy foods and drinks as well as meeting dietary guidelines.

Both mothers and children were asked the same questions to identify the strategies children used to influence mothers' food purchases from their own perspectives. More than half of the mothers were not aware of the strategies that their children were using. More concordance on strategies children used to get requested food items occurred in mother–son dyads than the mother–daughter dyads. This study did not have scope to identify the underlying reasons for such gender differences. One possible explanation is that boys may tend to use more overt or memorable

strategies than girls like offering to spend their own money. Given that obesity prevalence is higher in 6–11-year-old boys than the girls of the same age group (22.9% vs. 18.5% in the United States) and boys had higher unhealthy food intake than girls, the gender difference in the mother–child concordance needs further investigation (Stierman, et al., 2021; Fryar et al., 2018; Anderson & Whitaker, 2018; Centers for Disease Control and Prevention, 2012).

Children initiated requests for their desired foods almost equally in store and out-of-store locations including their home, a family member's home, or in the car to influence their mothers actively or passively. Children did not need to be physically present in store to influence parents; they could initiate a request from any location and influence their mothers actively or passively as Flurry and Burns (2005) described using social power theory (Calloway et al., 2014; Schleepen & Jonkman, 2014; Nicholls & Cullen, 2004; Sick et al., 2019, 2018). According to the social power theory (Flurry & Burns, 2005), to exert active influence, an individual assesses his/her social power capabilities, chooses an influence attempt consistent with his/her sources of social power, and exerts action toward achieving his/her desired outcome. Active influence was evident in our study where children used their social power by making repeated polite requests, referencing friends, teaming up with family members, giving reasons for their requests, or expressing their knowledge of different food items. Passive influence occurs where there is no evidence of speech or overt action on the part of the child (Flurry & Burns, 2005). Children giving hints about TV commercials, discussing foods, making dinner suggestions, buttering mothers showing extra affection, taking mothers to an aisle of the store, or checking pantry and informing mothers what was getting low, were the passive influences as presented in social power theory.

This study captured children's strategies and extent of influence on mothers' food purchases although the study design was not focused on mothers only. The study was designed targeting primary food shopping parents, but we had only mothers participating in the study. Besides the 17 children living with single mothers, for children living with two parents (23/40), mothers were the primary food shoppers aligning with the common social structure of two-parent households (Blake et al., 2009). Hence, information is lacking on how children influence fathers' food purchasing decisions and fathers' concordance with children on strategies to influence fathers. Khandpur et al. (2016) identified that fathers responsible for child feeding used a variety of diversified food parenting practices including supporting children's autonomy and setting food rules, but there was no indication of how fathers were influenced by their children. Regarding concordance between mother and child reported instances of strategies, the mother's interview happened before, and was independent of, the child's interview. We did not follow up with mothers to check about instances that the child mentioned, some of which mothers might have remembered, and so concordance may have been underestimated.

We did not characterize mothers with different parenting styles (Kiefner-Burmeister & Hinman, 2020; O'Connor et al., 2017). Home food availability and children's accessibility to their desired foods may differ by different parenting styles (Lopez et al., 2018; Blissett, 2011). For example, parents with authoritative parenting style (where parents are high demanding and high responsive) actively negotiate with children to make healthy food choices whereas parents with authoritarian parenting style (where the parents are high demanding and low responsive) set parent-centric rules and want their children to eat certain foods and avoid other foods (Blissett, 2011; Lopez et al., 2018; Shloim et al., 2015). Indulgent parents (low responsive and high demanding) set few food rules; permit their children freedom to eat what they prefer and their home food availability showed a larger portion of foods contributing to obesity than the home of an authoritative parent (Johnson et al., 2012). In future studies, mothers with different parenting styles should be examined to see what strategies children use in different types of parents and how much concordance was there between the mothers and children.

5 | CONCLUSION

To acquire desired foods and drinks from mothers, children were aware of and used strategies to get the desired reactions from their mothers. Mothers were aware of numerous strategies children used, and more concordance was observed between mothers and sons than between mothers and daughters. Mothers acknowledged that children influenced their food purchasing decisions. Most items mothers purchased, which were actively or passively influenced by children requests, were EDNP foods and drinks.

To improve the healthfulness of foods and drinks mothers purchase for children's consumption, efforts are needed to help mothers anticipate and respond to children's use of strategies for influencing their purchase of less healthy items. As many EDNP foods requested by children are consumed as snacks, the provision of information may help guide mothers' decision-making about when or under what circumstances it is appropriate or recommended to provide a snack (Davison et al., 2015). Mothers also need support to develop alternative strategies to make healthy items appealing to children, so that they request for those items too. Mothers' acknowledgement of children's influence on their food purchase decisions suggests that children can serve as change agents for improving mothers' food purchases but only if children prefer healthy foods and drinks.

AUTHOR CONTRIBUTIONS

Nazratun N. Monalisa led the design of the study, collected data, conducted data analysis, developed the manuscript drafts, and made final revisions; Edward A. Frongillo provided technical guidance during the process; Edward A. Frongillo, Christine E. Blake, Susan E. Steck, and Robin B. DiPietro critically reviewed and contributed to the revisions of the study design, data collection tools, analysis, and manuscript. All authors read and approved the final manuscript.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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REFERENCES

Anderson, S. E., & Whitaker, R. C. (2018). Association of self-regulation with obesity in boys vs girls in a US National Sample. *JAMA Pediatrics*, *172*(9), 842–850.

Atik, D., & Ozdamar Ertekin, Z. (2013). Children's perception of food and healthy eating: Dynamics behind their food preferences: Children's perception of food. *International Journal of Consumer Studies*, *37*(1), 59–65.

Baldassarre, F., Campo, R., & Falcone, A. (2016). Food for kids: How children influence their parents purchasing decisions. *Journal of Food Products Marketing*, *22*(5), 596–609. https://doi.org/10.1080/10454446.2016.1141143

Blake, C. E., Devine, C. M., Wethington, E., Jastran, M., Farrell, T. J., & Bisogni, C. A. (2009). Employed parents' satisfaction with food-choice coping strategies. Influence of gender and structure. *Appetite*, *52*(3), 711–719.

Blake, C. E., Wethington, E., Farrell, T. J., Bisogni, C. A., & Devine, C. M. (2011). Behavioral contexts, food choice coping strategies, and dietary quality of a multiethnic sample of employed parents. *Journal of the American Dietetic Association*, *111*(3), 401–407.

Blissett, J. (2011). Relationships between parenting style, feeding style and feeding practices and fruit and vegetable consumption in early childhood. *Appetite*, *57*(3), 826–831. https://doi.org/10.1016/j.appet.2011.05.318

Calderon, J., Ayala, G. X., Elder, J. P., Belch, G. E., Castro, I. A., Weibel, N., & Pickrel, J. (2017). What happens when parents and children go grocery shopping? An observational study of Latino dyads in Southern California, USA. *Health Education & Behavior*, *44*(1), 5–12. https://doi.org/10.1177/1090198116637602

Calloway, E. E., Ranjit, N., Sweitzer, S. J., Roberts-Gray, C., Romo-Palafox, M. J., McInnis, K. A., & Briley, M. E. (2016). Exploratory cross-sectional study of factors associated with the healthfulness of parental responses to child food purchasing requests. *Maternal and Child Health Journal*, *20*(8), 1569–1577. https://doi.org/10.1007/s10995-016-1956-6

Calloway, E. E., Roberts-Gray, C., Ranjit, N., Sweitzer, S. J., McInnis, K. A., Romo-Palafox, M. J., & Briley, M. E. (2014). Method of assessing parent–child grocery store purchasing interactions using a micro-camcorder. *Appetite*, *83*, 1–9.

Caruana, A., & Vassallo, R. (2003). Children's perception of their influence over purchases: The role of parental communication patterns. *Journal of Consumer Marketing*, *20*, 55–66. https://doi.org/10.1108/07363760310456955/full/html

Castro, I. A., Calderon, J., & Ayala, G. X. (2017). Who is influencing whom? Latino parent–child request interactions and product purchases in food retail environments. *Social Marketing Quarterly*, *23*(2), 155–168. https://doi.org/10.1177/1524500416686038

Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2012). September Division of Nutrition, Physical Activity and Obesity. Overweight and Obesity. South Carolina - State Nutrition, Physical Activity, and Obesity Profile. CDC.gov. https://www.cdc.gov/obesity/stateprograms/fundedstates/pdf/south-carolina-state-profile.pdf

Cicero, L., & Teichert, T. (2018). Children's influence in museum visits: Antecedents and consequences. *Museum Management and Curatorship*, *33*(2), 146–157.

Cohen, D. A., Bogart, L. M., Han, B., Williamson, S., & Castro, G. (2020). High consumption of energy-dense nutrient-poor foods among low-income groups in the Mississippi Delta and Alabama. *Public Health Nutrition*, *23*(6), 1067–1075.

Davison, K. K., Blake, C. E., Blaine, R. E., Younginer, N. A., Orloski, A., Hamtil, H. A., Ganter, C., Bruton, Y. P., Vaughn, A. E., & Fisher, J. O. (2015). Parenting around child snacking: Development of a theoretically-guided, empirically informed conceptual model. *International Journal of Behavioral Nutrition and Physical Activity*, *12*(1), 109.

de Faultrier, B., & Marshall, D. (2014). Co-operation in the supermarket aisle: Young children's accounts of family food shopping. *International Journal of Retail & Distribution Management*, *42*, 2091–2103.

DeJesus, J. M., Du, K. M., Shutts, K., & Kinzler, K. D. (2019). How information about what is "healthy" versus "unhealthy" impacts children's consumption of otherwise identical foods. *Journal of Experimental Psychology: General*, *148*, 2091–2103.

Ebster, C., Wagner, U., & Neumueller, D. (2009). Children's influences on in-store purchases. *Journal of Retailing and Consumer Services*, *16*(2), 145–154. https://doi.org/10.1016/j.jretconser.2008.11.005

Eicher-Miller, H., Fulgoni, V., & Keast, D. (2015). Processed food contributions to energy and nutrient intake differ among US children by race/ethnicity. *Nutrients*, *7*(12), 10076–10088.

Esmaeilpour, F., Heidarzadeh Hanzaee, K., Mansourian, Y., & Khounsiavash, M. (2018). Children's food choice: Advertised food type, health knowledge and entertainment. *Journal of Food Products Marketing*, *24*(4), 476–494.

Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. Taylor & Francis.

Flurry, L. A., & Burns, A. C. (2005). Children's influence in purchase decisions: A social power theory approach. *Journal of Business Research*, *58*(5), 593–601.

Fryar, C. D., Carroll, M. D., & Ogden, C. L. (2018). Prevalence of overweight, obesity, and severe obesity among children and adolescents aged 2–19 years: United States, 1963–1965 through 2015–2016. https://stacks.cdc.gov/view/cdc/58669

Furst, T., Connors, M., Bisogni, C. A., Sobal, J., & Falk, L. W. (1996). Food choice: A conceptual model of the process. *Appetite*, *26*(3), 247–266.

Glasser, W. (2010). *"Choice theory": A new psychology of personal freedom* (latest ed). Harper Collins.

Gram, M. (2007). Children as co-decision makers in the family? The case of family holidays. *Young Consumers*, *8*(1), 19–28.

Gram, M. (2010). Self-reporting vs. observation: Some cautionary examples from parent/child food shopping behaviour. *International Journal of Consumer Studies*, *34*(4), 394–399.

Gram, M. (2015). Buying food for the family: Negotiations in parent/child supermarket shopping: An observational study from Denmark and the United States. *Journal of Contemporary Ethnography*, *44*(2), 169–195.

Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2017, Oct). *Prevalence of obesity among adults and youth: United States, 2015–2016*. NCHS Data Brief (pp. 1–8).

Haselhoff, V., Faupel, U., & H. Holzmüller, H. (2014). Strategies of children and parents during shopping for groceries. *Young Consumers*, *15*(1), 17–36.

Healthy Diets. (2015). *Fact Sheet: World Health Organization 2015*. World Health Organization. http://www.who.int/mediacentre/factsheets/fs394/en/

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation: How many interviews are enough? *Qualitative Health Research*, *27*(4), 591–608.

Huang, C. Y., Reisch, L. A., Gwozdz, W., Molnár, D., Konstabel, K., Michels, N., Tornaritis, M., Eiben, G., Siani, A., Fernández-Alvira, J. M., Ahrens, W., Pigeot, I., & Lissner, L. (2016). Pester power and its consequences: Do European children's food purchasing requests relate to diet and weight outcomes? *Public Health Nutrition*, *19*(13), 2393–2403. https://doi.org/10.1017/S136898001600135X

John, D. R. (1999). Consumer socialization of children: A retrospective look at twenty-five years of research. *Journal of Consumer Research*, *26*, 183–213.

Johnson, R., Welk, G., Saint-Maurice, P. F., & Ihmels, M. (2012). Parenting styles and home obesogenic environments. *International Journal of Environmental Research and Public Health*, *9*(4), 1411–1426. https://doi.org/10.3390/ijerph9041411

Kelly, J., Turner, J. J., & McKenna, K. (2006). What parents think: Children and healthy eating. *British Food Journal*, *108*(5), 413–423.

Khandpur, N., Charles, J., Blaine, R. E., Blake, C. E., & Davison, K. K. (2016). Diversity in fathers' food parenting practices: A qualitative exploration within a heterogeneous sample. *Appetite*, *101*, 134–145.

Kiefner-Burmeister, A., & Hinman, N. (2020). The role of general parenting style in child diet and obesity risk. *Current Nutrition Reports*, *9*(1), 14–30.

Lawlor, M.-A., & Prothero, A. (2011). Pester power—A battle of wills between children and their parents. *Journal of Marketing Management*, *27*(5–6), 561–581.

Liu, J., Steele, E. M., Li, Y., Karageorgou, D., Micha, R., Monteiro, C. A., & Mozaffarian, D. (2022). Consumption of ultraprocessed foods and diet quality among US children and adults. *American Journal of Preventive Medicine*, *62*(2), 252–264.

Lively, K., Babawale, O., Thompson, D. M., Morris, A. S., Harris, J. L., Sisson, S. B., Cheney, M. K., & Lora, K. R. (2017). Mothers' self-reported grocery shopping behaviours with their 2-to 7-year-old children: Relationship between feeding practices and mothers' willingness to purchase child-requested nutrient-poor, marketed foods, and fruits and vegetables. *Public Health Nutrition*, *20*(18), 3343–3348. https://doi.org/10.1017/S1368980017002142

Lopez, N. V., Schembre, S., Belcher, B. R., O'Connor, S., Maher, J. P., Arbel, R., Margolin, G., & Dunton, G. F. (2018). Parenting styles, food-related parenting practices, and children's healthy eating: A mediation analysis to examine relationships between parenting and child diet. *Appetite*, *128*, 205–213.

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research? A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, *54*(1), 11–22.

Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. In Forum qualitative Sozialforschung/Forum: qualitative social research, *11*(3).

McDermott, L., O'Sullivan, T., Stead, M., & Hastings, G. (2006). International food advertising, pester power and its effects. *International Journal of Advertising*, *25*(4), 513–539.

Morse, J. M. (2000). Determining sample size. *Qualitative Health Research*, *10*(1), 3–5.

Nicholls, A. J., & Cullen, P. (2004). The child–parent purchase relationship: 'Pester power', human rights and retail ethics. *Journal of Retailing and Consumer Services*, *11*(2), 75–86. https://doi.org/10.1016/S0969-6989(02)00080-2

Nørgaard, M. K., Bruns, K., Christensen, P. H., & Mikkelsen, M. R. (2007). Children's influence on and participation in the family decision process during food buying. *Young Consumers*, *8*(3), 197–216.

O'Connor, T. M., Mâsse, L. C., Tu, A. W., Watts, A. W., Hughes, S. O., Beauchamp, M. R., Baranowski, T., Pham, T., Berge, J. M., Fiese, B., Golley, R., Hingle, M., Kremers, S. P. J., Rhee, K. E., Skouteris, H., & Vaughn, A. (2017). Food parenting practices for 5 to 12 year old children: A concept map analysis of parenting and nutrition experts input. *International Journal of Behavioral Nutrition and Physical Activity*, *14*(2017), 122. https://doi.org/10.1186/s12966-017-0572-1

O'Dougherty, M., Story, M., & Stang, J. (2006). Observations of parent-child co-shoppers in supermarkets: Children's involvement in food selections, parental yielding, and refusal strategies. *Journal of nutrition education and behavior*, *38*(3), 183–188.

Page, B., Sharp, A., Lockshin, L., & Sorensen, H. (2018). Parents and children in supermarkets: Incidence and influence. *Journal of Retailing and Consumer Services*, *40*, 31–39.

Poti, J. M., Duffey, K. J., & Popkin, B. M. (2014). The association of fast food consumption with poor dietary outcomes and obesity among children: Is it the fast food or the remainder of the diet? *The American Journal of Clinical Nutrition*, *99*(1), 162–171.

Powell, S., Langlands, S., & Dodd, C. (2011). Feeding children's desires? Child and parental perceptions of food promotion to the "under 8s." *Young Consumers*, *12*(2), 96–109.

Shloim, N., Edelson, L. R., Martin, N., & Hetherington, M. M. (2015). Parenting styles, feeding styles, feeding practices, and weight status in 4–12 year-old children: A systematic review of the literature. *Frontiers in Psychology*, *6*, 1849.

Sick, J., Højer, R., & Olsen, A. (2019). Children's self-reported reasons for accepting and rejecting foods. *Nutrients*, *11*(10), 2455.

Sobal, J., & Bisogni, C. A. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine*, *38*(Suppl. 1), S37–46.

Stierman, B., Afful, J., Carroll, M. D., Chen, T. C., Davy, O., Fink, S., Fryar, C. D., Gu, Q., Hales, C. M., Hughes, J. P., Ostchega, Y., Storandt, R. J., & Akinbami, L. J. (2021). National Health and Nutrition Examination Survey 2017–March 2020 prepandemic data files—Development of files and prevalence estimates for selected health outcomes. National Health Statistics Reports; no 158. Hyattsville, MD: National Center for Health Statistics. https://doi.org/10.15620/cdc:106273

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Sage Publications Inc.

Schleepen, T. M. J., & Jonkman, L. M. (2014). A longitudinal study of semantic grouping strategy use in 6–11-year-old children: Investigating developmental phases, the role of working memory, and strategy transfer. *The Journal of Genetic Psychology*, *175*(6), 451–471.

Turner, J. J., Kelly, J., & McKenna, K. (2006). Food for thought: Parents' perspectives of child influence. *British Food Journal*, *108*(3), 181–191.

U.S. Department of Agriculture and U.S. Department of Health and Human Services. (2020, December). *Dietary Guidelines for Americans, 2020–2025* (9th ed.) DietaryGuidelines.gov. https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf

U.S. Department of Agriculture, Economic Research Service. (2012). U.S. household food security survey module: Six-item short form, September 2012. https://www.ers.usda.gov/media/8282/short2012.pdf

Waddingham, S., Shaw, K., Van Dam, P., & Bettiol, S. (2018). What motivates their food choice? Children are key informants. *Appetite*, *120*, 514–522.

Wilson, G., & Wood, K. (2004). The influence of children on parental purchases during supermarket shopping. *International Journal of Consumer Studies*, *28*(4), 329–336.

Wingert, K., Zachary, D. A., Fox, M., Gittelsohn, J., & Surkan, P. J. (2014). Child as change agent. The potential of children to increase healthy food purchasing. *Appetite*, *81*, 330–336.

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