



# A Qualitative Study of Parents With Children 6 to 12 Years Old: Use of Restaurant Calorie Labels to Inform the Development of a Messaging Campaign



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## ABSTRACT

**Background** US law mandates that chain restaurants with 20 or more locations post calorie information on their menus to inform consumers and encourage healthy choices. Few qualitative studies have assessed how parents perceive and use this information when ordering for their children and what types of accompanying messages might increase use of calorie labels when ordering food.

**Objective** We aimed to better understand parents' perceptions and use of calorie labeling and the types of messages that might increase use.

**Design** We conducted 10 focus groups (n = 58) and 20 shop-along interviews (n = 20). Focus group participants discussed their hypothetical orders and restaurant experiences when dining with their children, and shop-along participants verbalized their decision processes while ordering at a restaurant. Both groups gave feedback on 4 public service messages aimed to increase healthier ordering for children. All interviews were voice-recorded and transcribed.

**Participants/Setting** Participants were primary caregivers of at least 1 child between 6 and 12 years who reported having less than a college education at the time of screening and who commonly ate at chain restaurants. Focus groups were conducted in a conference room, and shop-alongs were conducted in quick-serve and full-service chain restaurants around Philadelphia between August 2016 and May 2017.

**Analyses** A modified grounded theory approach was used to extract themes from transcripts.

**Results** Thematic analysis of transcripts revealed 5 key themes: (1) parents' use of calorie labels; (2) differences across restaurant settings; (3) nonjudgmental information; (4) financial value and enjoyment of food; and (5) message preferences. These themes suggested that nonjudgmental, fact-based messages that highlight financial value, feelings of fullness, and easy meal component swaps without giving up the treatlike aspect of eating out may be particularly helpful for consumers.

**Conclusions** These findings can inform current US Food and Drug Administration campaign efforts to support consumer use of calorie labels on menus.

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EATING AWAY FROM HOME HAS BEEN LINKED TO higher energy intake and poorer diet quality among children and adolescents.<sup>1</sup> Americans now spend more money on away-from-home food than on groceries.<sup>2</sup> Although energy intake among US children from quick-serve restaurants declined between 2003 and 2010, intake remains high.<sup>3,4</sup> Diet quality further appears to improve as socioeconomic status (SES) improves, indicating a need to target low-SES households in healthy eating interventions.<sup>5</sup>

Beginning in May 2018, chain restaurants with 20 or more locations in the United States were required to post calorie

information on their menus along with a contextual statement regarding daily recommended calories.<sup>6</sup> The available evidence paints a mixed picture of menu labeling effects, suggesting that the influence of calorie labels might vary based on the type of restaurant and consumer.<sup>7-12</sup> Very few studies have examined the influence of menu labeling on children's caloric intake, and although they have competing results, they are limited by small sample sizes.<sup>12-14</sup>

Existing qualitative research on calorie labeling and restaurant dining has been focused on adults and suggests many adults do not use calorie labels, lack understanding of what calories are, and are drawn to lower-priced items.<sup>11,15-17</sup>

Key themes from these studies suggest that people believe calories are easy to burn<sup>11</sup> and they knew what they were going to order before stepping into a restaurant, regardless of restaurant type.<sup>11,16,18</sup>

Given the heterogeneity in response to restaurant menu labeling and limited data on how it influences parents and children, the purpose of this study was to conduct focus groups and shop-along interviews to identify (1) reasons why low-SES parents report using and not using calorie labels when at restaurants with their children and (2) insights into how messaging can affect parental decision-making at restaurants that can inform the development of messaging to promote parents' use of calorie information and encourage healthier purchases for children. Recently, the US Food and Drug Administration released a messaging campaign with the aim of increasing consumer use of menu labeling to make healthful food decisions.<sup>19</sup> The current study can further inform such outreach.

## METHODS

### Sample and Participant Recruitment

We recruited participants in Philadelphia, PA, one of the first cities to implement calorie labeling in 2010, using Craigslist ads and flyers placed in community spaces and local pediatric primary and specialty care clinics. Our eligibility criteria were: (1) 18 years or older, (2) English speaking, (3) primary caregiver of a child between the ages of 6 and 12, (4) less than a college degree at the time of screening, and (5) reported eating at quick-serve or full-service chain restaurants at least twice in the 4 weeks prior to recruitment. We purposely recruited caregivers who did and did not report using restaurant calorie labeling when dining out to understand perspectives from both sides.

We screened 155 potential focus group participants and 134 potential shop-along participants. Those who participated in the focus groups were not eligible to participate in the shop-along interviews. Eighty-nine people were eligible and invited to participate in the focus groups (31 did not show up), and 45 individuals were eligible and invited to participate in a shop-along (25 canceled or did not show up). Between August 2016 and May 2017, 58 caregivers took part in ten 90-minute focus groups, grouped based on participant availability. Twenty caregivers participated in 45-minute individual shop-along interviews. Focus group participants provided written informed consent. Shop-along participants gave verbal consent over the telephone prior to participation and were given an information sheet at the restaurant. Each focus group had 4 to 8 caregivers (no children were included); shop-alongs were conducted with 1 parent at a time with anywhere between 0 and 3 children. We conducted focus groups at a location easily accessible by public transportation and shop-alongs in various quick-serve and full-service chain restaurants in the city. After the interviews, participants completed a brief demographic survey. Focus group participants were compensated \$25 cash, and shop-along participants received \$35 cash. This study was approved by the Institutional Review Board of the University of Pennsylvania.

## RESEARCH SNAPSHOT

**Research Questions:** How do parents perceive calorie labels on menus when ordering for their young children? What types of accompanying messages would prompt healthier ordering decisions when dining out?

**Key Findings:** Using 10 focus groups (n = 58) and 20 shop-along interviews (n = 20), primary caregivers of children between the ages of 6 to 12 conveyed that nonjudgmental, fact-based messages that highlight financial value, feelings of fullness, and easy meal component swaps without giving up the treatlike aspect of eating out may be particularly helpful for guiding ordering decisions for their children.

### Focus Group Methods

Focus groups were conducted and voice recorded by staff trained in qualitative research using a moderator guide (Figure 1, available at [www.jandonline.org](http://www.jandonline.org)). Participants were assured that their names would not be connected with their responses. At the beginning of the focus group, participants were shown sample menus with calorie labels from 1 quick-serve (McDonald's) and 1 full-service chain restaurant (Denny's) and asked to imagine what they would order for themselves and their child or children if they were currently at the restaurant. This was used to guide the discussion about their ordering process and whether they used and noticed the calorie labels. Moderators asked questions about participants' perceptions of restaurant calorie labeling, whether and how they used calorie labeling when ordering for themselves and their children within the age range of 6 to 12, and barriers to using calorie labeling.

During the second half, participants were presented with 4 poster-style messages with visual images (Figure 2). The messages read: (1) "You wouldn't dress your kids in adult-sized clothes, why order them an adult-sized meal? Try choosing items from the kids' menu"; (2) "Small changes make a big difference for a kid's health. Try replacing soda with milk or water"; (3) "Look and limit. Try to limit the calories your child has for lunch to 600 or less"; (4) "Don't waste money on portions that are too big for your kids—save by ordering from the kids' menu." The first and second messages were developed by the advertising agency Victor & Spoils for ChildObesity180.<sup>20</sup> The third message was based on the 2010 MyPlate, developed along with the Dietary Guidelines for Americans.<sup>21,22</sup> The fourth message was developed for this study to target consumers' desire to save money. The moderator asked participants questions to elicit their reactions to the messages.

### Shop-Along Interview Methods

Each shop-along interview was conducted by a staff member trained to interview participants using the provided moderator guide (Figure 3, available at [www.jandonline.org](http://www.jandonline.org)). Caregivers were asked to bring their children along for the interview, but 4 participants did not (the shop-along was still conducted with them imagining they were ordering for their child). Staff met participants at either a quick-serve (McDonald's [n = 6]; Burger King [n = 3], Wendy's [n = 1]) or full-service chain restaurant (Applebee's [n = 4]; Ruby Tuesday

A

A young girl with brown hair in pigtails is standing and smiling. She is wearing a black adult-sized suit jacket, a light blue dress shirt, and a dark patterned tie. The suit is significantly oversized for her, with the jacket reaching down to her knees and the pants being very loose.

You wouldn't dress your kids in adult-sized clothes.

Why order them an adult-sized meal?

**Try choosing items from the kids' menu.**

B

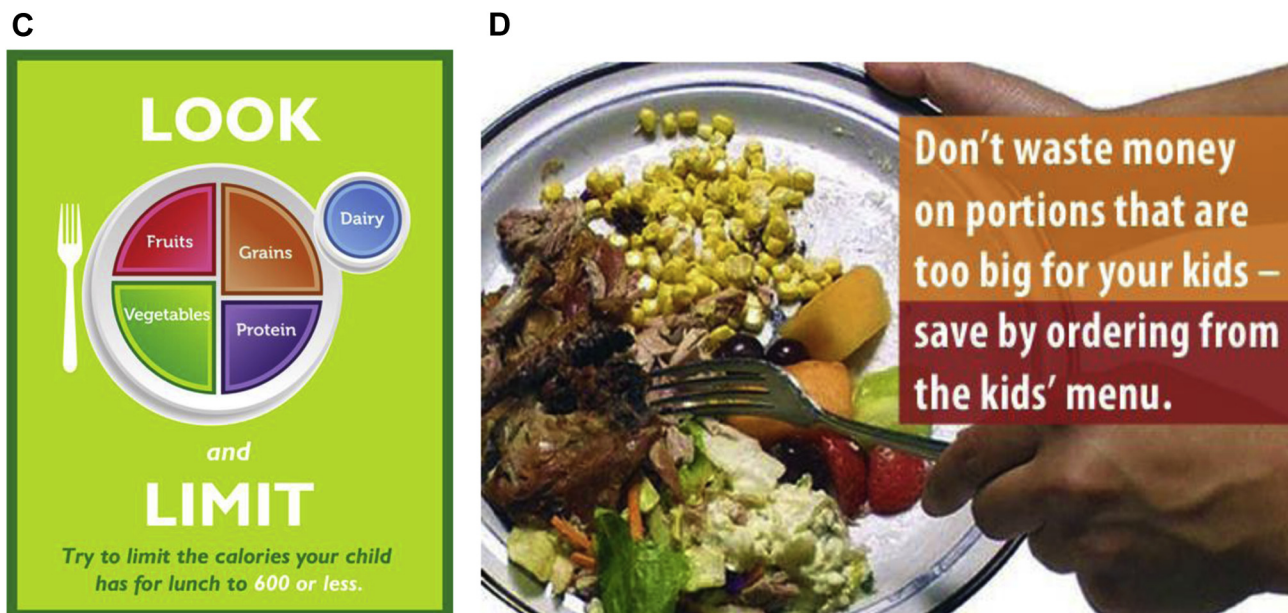
A young boy with a joyful expression is sitting at a table. He is wearing a brown and white striped polo shirt. In front of him is a clear glass filled with white milk.

**SMALL CHANGES**  
make a  
**BIG DIFFERENCE**  
for a kid's health.

**Try replacing soda with milk or water.**

**Figure 2.** Messages used for interviews. Messages A and B were developed by the advertising agency Victor & Spoils for Child-Obesity180. Message C was based on the 2010 MyPlate, developed along with the Dietary Guidelines for Americans. Message D was developed for this study to target consumers' desire to save money.





**Figure 2.** (continued) Messages used for interviews. Messages A and B were developed by the advertising agency Victor & Spoils for ChildObesity180. Message C was based on the 2010 MyPlate, developed along with the Dietary Guidelines for Americans. Message D was developed for this study to target consumers' desire to save money.

[ $n = 4$ ], or Chili's [ $n = 2$ ]). Depending on which types of restaurants the participants reported visiting and where they indicated would be convenient, the appropriate restaurant was assigned from a predetermined list. Participants were assured that their answers would be anonymous and confidential. Participants were instructed to order using the restaurant menu as they normally would while verbally describing their decision-making processes into a voice recorder. After ordering, the interviewer sat with the participant while they ate and asked questions using a guide similar to that used for focus group interviews, including use of the same 4 messages.

### Data Analysis

All interviews were audio-recorded, manually transcribed with personal identifiers removed, and entered into NVivo 11.0 for coding and analysis using a modified grounded theory approach. Research staff felt that no new themes were emerging after 8 focus groups. This was confirmed during data analysis as no new codes were added after 5 focus groups.

Two coders conducted a line by line reading of the first 2 focus group transcripts to identify key ideas in the data to guide the development of our codebook. Thirty-three distinct codes were identified and operationalized and applied to the transcripts. Thirty percent of the 10 focus group transcripts were double-coded and had good inter-rater reliability ( $\kappa$  coefficients from 0.76 to 0.91). We identified 5 broad themes about calorie labeling usage and menu messaging characteristics. We used a similar approach to code the shop-along interviews, using the codes first identified in the focus groups and then adding

to them. We double-coded 20% of the shop-along interviews ( $\kappa$  coefficient of 0.83).

## RESULTS

### Participants

Of the 58 participants recruited for the focus group interviews, 43% were female, 81% were African American, and 93% had less than a college degree at the time of the interview (though all reported having less than a college degree at the time of screening). Among the 20 shop-along participants, 60% were female, 90% were African American, and all had less than a college degree. The majority of participants had a household income of less than \$50,000. See the [Table](#) for additional demographic information.

### Themes

In both focus groups and shop-alongs, 5 key themes emerged regarding parents' use of calorie labels and menu label messaging. See [Figure 4](#) for representative quotes for all themes.

**Theme 1: Parents' Use of Calorie Labels.** Parents who voiced not using calorie labels when ordering conveyed 5 key reasons why:

1. Although calorie labeling is not relevant for their children, it can be helpful for some. Many caregivers felt they did not need to worry about how many calories their children were consuming because their children are active and have high metabolisms. Caregivers did feel that the information might be useful for some parents who have children with health concerns.

**Table.** Self-reported characteristics of 78 caretakers of 6- to 12-year-olds participating in interviews about their use of calorie labels and menu label messaging when ordering for their children

Characteristic	Focus group interviews <sup>ab</sup> (n = 58)	Shop-along interviews (n = 20)
	←—n (%)—→	
Female	25 (43)	12 (60)
Race <sup>c</sup>		
African American	47 (81)	18 (90)
White	9 (16)	1 (5)
Other	9 (15)	1 (5)
	←—mean (SD) <sup>d</sup> —→	
Age (y)	37.8 (11.13)	37.8 (10.14)
No. of children 6-12 y	2.1 (1.25)	2.5 (1.19)
Education	←—n (%)—→	
Less than high school	4 (7)	0 (0)
High school or some college	50 (86)	20 (100)
4-y college degree or higher	4 (7)	0 (0)
Marital status		
Never married	36 (63)	7 (39)
Married	7 (12)	4 (22)
Living with significant other	6 (11)	5 (27)
Separated, divorced, or widowed	8 (14)	2 (11)
Household income (\$/y)		
<25,000	28 (70)	3 (17)
25,001-50,000	2 (5)	9 (50)
50,000-75,000	6 (15)	4 (22)
>75,000	4 (10)	2 (11)
Reported using calorie labels		
At quick-serve restaurants	37 (64)	12 (60)
At full-service chain restaurant	38 (66)	10 (50)
Past or present condition		
Heart disease	0 (0)	1 (5)
High blood pressure	20 (35)	2 (10)
Type 2 diabetes	9 (16)	2 (10)
High cholesterol	11 (19)	1 (5)
Cancer	0 (0)	1 (5)

<sup>a</sup>Percentages may not add up to 100 due to rounding.

<sup>b</sup>Total may not add up to "n" due to nonrespondents.

<sup>c</sup>Percentage is greater than 100 due to reporting of multiple races.

<sup>d</sup>SD = standard deviation.

2. Eating out is a special treat. Many parents expressed the belief that children should enjoy themselves when eating out.
3. Caregivers have inaccurate knowledge about calories and are skeptical about the accuracy of labels. Although most participants demonstrated a cursory knowledge of calories, many expressed inaccurate beliefs about the relationship between calories and diet as well as confusion about daily calorie recommendations for a healthy diet. Some participants also reported not using the information because they were skeptical of its veracity. Caregivers additionally expressed confusion about references to numeric calories in the messaging and described not knowing how to "count calories."
4. Multiple factors influence food choices. Parents' conveyed that the food choices they make for their children are influenced by a wide range of beliefs about which foods are "healthy." Concerns about preservatives and plastic bottling were common, as were perceptions that 100% juice was a healthy substitute despite its high sugar content. Participants also described being responsible "gatekeepers" for their children's food and strategies they use to help their child eat healthfully at restaurants (eg, supplementing what their child ordered with a healthy item).
5. Messaging about portion size and moderation was preferred over calorie information for some parents. Some participants expressed greater interest in messages about appropriate portion sizes than calorie information. They felt this information was easier to understand and more actionable.

**Theme 2: Differences Across Restaurant Settings.** Participants frequently described ordering "the usual" for themselves and their children at quick-serve restaurants. Some parents also conveyed that once they made the decision to eat at a quick-serve restaurant, health was no longer a priority. Although some parents also described ordering "the usual" at full-service chain restaurants, many saw these restaurants as an opportunity to consider different menu options and order something perceived to be healthier.

**Theme 3: Nonjudgmental Information.** Although participants welcomed messages that educated them about nutrition, they did not want to be told what to do and strongly disliked messages that felt judgmental (eg, the message about dressing their kids in adult-sized clothing).

**Theme 4: Financial Value and Enjoyment of Food.** Participants discussed making food choices based on their budget and concerns about value. They often reported ordering items based on the size, relative cost, potential for having leftovers, and ability to fill up their children. Many parents felt there were healthier options on adult menus and that kids' menus offered little variety and flavor. They also described the importance of ordering items the child enjoyed so that the food would not be wasted. They were not especially concerned about overordering because food could be taken home and eaten later.

Theme	Representative quote
<b>Parent's use of calorie labels</b>	
Although calorie labeling is not relevant for their children, it can be helpful for some.	<p><i>"Well, the hard thing is, he's slim. So I'm not really watching his calories."</i></p> <p><i>"I think that I would say I don't use the calories for my children, mainly because usually people who are counting calories are on diets . . . Children usually don't have that issue of trying to lose weight. They have a high metabolism because they run around a lot."</i></p> <p><i>"My little brother, he overweight. So if I take him to eat somewhere, I can't let him go all out . . . For my son, I can be more lenient because he's more active and he run around."</i></p> <p><i>"I think it's good . . . it's considerate. Some children are the size they're supposed to be. But then some of these kids are like—they're kind of big . . . So I think it's good to just have the calories because it's being considerate."</i></p>
Eating out is a special treat.	<p><i>"Yeah, it don't matter—calories. I let them enjoy. They're kids."</i></p> <p><i>"When you're out, I don't tend to put a barrier on what my kids eat at a restaurant like that . . . Just let go. It's not every day . . . So that's how I typically treat them when we go out. So the kids' calories and all that stuff, I don't really pay attention to that."</i></p>
Caregivers have inaccurate knowledge about calories and are skeptical about the accuracy of labels.	<p><i>"Well, they'll give you a calorie count, which is impossible, because, number one, you do a calorie count of what's in there, the calories change the way you heat it up, how long it's been stored. It changes the calorie. So none of that's right. And I know that firsthand."</i></p> <p><i>"Because we're sitting here and we are ignorant as hell toward calories. We don't know nothing. I'm like whatever . . . If you don't know, you're going to remain ignorant or you're going to figure it out. Change got to start somewhere."</i></p> <p><i>"I look at it. Sometimes I'm not sure, like well, I don't even know how many calories the child's supposed to have. So I'm confused with that part of it."</i></p>
Multiple factors influence food choices.	<p><i>"All the healthiness [of the food] is gone. So once you go into most fast-food restaurants, even the parfaits, the fruit comes packaged already. So they got preservatives. Even though they're putting it together as a healthy snack, it's really not. It's processed."</i></p> <p><i>"And then your water. They're putting all that in the water. In your tap water . . . And then people say plastic bottle, it's plastic, you don't know how long it's been sitting in the bottle."</i></p> <p><i>"One hundred percent fruit juices because I believe they're equivalently healthy to milk and water, and more, I guess, variety."</i></p> <p><i>"How to feed your kids properly. So you want to—you sit up at night talking to your significant other and you'll be like . . . I should have gave them an apple instead of giving them that cup of ice cream or something like that. So you've got to find a balance. And it's kind of hard sometimes."</i></p>
Messaging about portion size and moderation was preferred over calorie information for some parents.	<p><i>"You know what? It's really fun to order the perfect proportions of food and that's what's on your plate and then you finish it."</i></p> <p><i>"Educating the parent on how portions supposed to be served for their self and for their children. Because the parents needs to be educated on portion control. And the child need—portion control and calories."</i></p>
<b>Differences across restaurant settings</b>	<p><i>"Yeah. Well, my daughter eats nuggets and fries from [fast-food chain restaurant]. Same thing every time."</i></p> <p><i>"If I'm here, I'm not worried about healthy. If I'm coming to [fast-food chain restaurant], I'm eating everything I want because health went out the window when I walked in."</i></p> <p><i>"But if it's like a restaurant like [a full-service chain restaurant], I would probably get something with greens or healthy and stuff like that. Yeah, I think healthy first. Yeah."</i></p>

(continued on next page)

**Figure 4.** Key themes and quotes extracted from focus groups and shop-along interviews with caretakers of 6- to 12-year-olds about their use of calorie labels and menu label messaging when ordering for their children.

Theme	Representative quote
	<i>"For me, if I run to a [full-service] chain restaurant, I plan on spending some time there. So I wouldn't get nothing I could eat real quick anyway . . . But fast food, I would just grab something quick."</i>
<b>Nonjudgmental information</b>	<i>"I already said it. Don't judge me." "It just frustrates—like, who are you to tell me what to do? I mean, I know what's best for my child, and if I choose—it's my choice."</i>
<b>Financial value and enjoyment of food</b>	<i>"And the other reason why it's good ordering off the kids' menu because the kids' menu they get a meal, they get a drink and they get a side, and all for \$3.50." "And it's like they put all the flavor in our food and leave the kids' food bland, like the kids don't want to taste nothing. Like they don't have no taste buds or something." "Yes. I would get the salmon, but I'm not gonna lie . . . when I look at meals I'm thinking no more than \$10."</i>
<b>Message preferences</b>	<i>"I like the fact that it says—it suggests to change the soda with milk or water . . . it gives information how to make a small change." "I like the small changes . . . I just think it's attainable. I think if you tell people—even in terms of every meal, just change one little thing every meal, you'll be in a better place. And then you get a taste for it after a while, because your body gets used to it." "You mainly want to relate to whoever you're talking to. So I'm guessing he looked like a kid you will find in like a public school in Philadelphia and everything drinking the milk. He's smiling." "It's like you see yourself, like a mirror of what you could be like that. Oh, I could do that."</i>

**Figure 4.** (continued) Key themes and quotes extracted from focus groups and shop-along interviews with caretakers of 6- to 12-year-olds about their use of calorie labels and menu label messaging when ordering for their children.

**Theme 5: Message Preferences.** Overall, parents preferred messages that were actionable. Many participants liked messages that provided a small action that over time could make a difference for their child's health (eg, the message encouraging parents to swap soda for milk or water). They also preferred messages that included pictures of people who reminded them of themselves and their communities. For example, many African-American participants indicated that they preferred messages that featured a black child rather than a child of a different race.

## DISCUSSION

We conducted focus group and shop-along interviews with low-SES primary caregivers of 6- to 12-year-olds to identify how they make decisions when ordering at restaurants with their children and the degree to which they use calorie labels. The aim was for these interviews to inform the development of messages that can be used in conjunction with restaurant calorie labels to encourage their use and more generally promote healthier choices at restaurants. We identified the following 5 key themes: (1) parents' use of calorie labels, (2) differences across restaurant settings, (3) nonjudgmental information, (4) financial value and enjoyment of food, and (5) message preferences.

Our study confirmed previous findings that many adults report not understanding calorie information<sup>11,15</sup> and believe that only people with health issues need to be concerned about nutrition.<sup>15</sup> Messaging campaigns to promote the use of restaurant calorie information must counter beliefs that

this information is only relevant to children or adults who have excess weight or health problems. Another barrier to calorie-label use identified in this study and others<sup>15,18</sup> is that people view dining out as a treat, so nutrition is not a concern. Therefore, messages that acknowledge having fun when dining out, while also making balanced choices, may resonate with parents. A third barrier to use of calorie labeling is the habitual ordering of "the usual" in quick-serve settings, which is consistent with other qualitative studies.<sup>11,16,18</sup> New to this study was the differentiation of habitual ordering practices in quick-serve vs full-service chain restaurants. Participants perceived more opportunity to shift behavior and order healthier options in full-service chain restaurants, which is also consistent with possible larger effects of calorie labeling reported in those settings.<sup>15,23</sup> Furthermore, some participants pointed out that regardless of restaurant setting, calorie labeling may be helpful for those who have children with health problems. Generally, messages to encourage the use of calorie labels or making healthy choices in full-service restaurants might have more resonance than in quick-serve restaurants. This study also supports past findings that parents usually order for their kids,<sup>18</sup> so messages targeting parents, rather than children, may be more influential.

According to the Theory of Planned Behavior, behavioral intentions are in part associated with how positively a person feels about the behavior.<sup>24</sup> Participants in these interviews expressed liking messages that were nonjudgmental and educational, promoted a mix of healthy foods and treats, and featured people to whom they related. Messages engendering



positive feelings may be more likely to influence consumers. Because parents reported never having intentions to throw away food, messaging about food waste seems unlikely to be effective among this target group in this context.

Parents also expressed wanting to maximize the value of their money and to ensure that their kids felt full after eating. This dissuaded them from ordering perceived “less-filling” options like a salad, a sentiment that adults shared in a prior study.<sup>11</sup> Parents had mixed feelings about the study’s message encouraging parents to order from the kids’ menu. Two concerns were that kids’ meals would not keep a preteen child full and that the kids’ menu had little variety in comparison with the adult menu. This suggests that messaging encouraging parents to order from the kids’ menu may be more effective if explicitly targeted based on age with language about keeping a child full. It might also be useful to develop future messages that highlight healthy, filling items that are a good value.

This study has several limitations. First, it is unclear whether insights reported here translate to actual usage of calorie labels. Second, participant interviews may also be limited by social desirability. In this study, though, parents appeared to freely report reasons why they did not use calorie information at restaurants. Third, caregivers were exposed to a limited number of menus and were only asked about children between 6 and 12 years old. Fourth, most of the participant reactions that emerged from the analysis had to do with the messages shown, but it is possible that the visual images also affected their reactions, although they were not analyzed separately. Finally, not all caregivers brought their children to the shop-along interviews, so the reasons for ordering certain items in interviews with and without children present may have been different.

This study has several strengths. First, we captured the opinions of mostly African Americans, a group that has a high prevalence of childhood obesity.<sup>25</sup> Second, we replicated our data collection from focus groups using a shop-along method where parents placed actual orders in the restaurant environment. Although shop-along participants were compensated for their participation, they had to pay for the meal themselves to make the ordering experience more closely mimic what would happen outside of a research study. Third, although there are a few published qualitative studies on restaurant calorie labeling and menu messaging,<sup>11,15–18</sup> this is the first qualitative study to focus on food decisions for children in a quick-serve setting.

Future studies should experimentally test the influence of promising messages on real-world food purchases for children and the mechanisms through which such messages might have influence. Research should also explore the most cost-effective ways to deliver such campaigns (eg, social media, in store).

## CONCLUSION

Our results point to several key takeaways that should be considered when developing messaging to complement national restaurant menu labeling and may inform the US Food and Drug Administration’s menu labeling outreach initiative. First, nonjudgmental, fact-based messages that highlight financial value, feelings of fullness, and easy meal component swaps without giving up the treatlike aspect of eating out may be particularly helpful for consumers. Second, the extent

to which messages change ordering behavior may be dependent on the type of restaurant people are visiting. Such public health messages to encourage people to make healthy choices at restaurants might be helpful when delivered through a broader public service campaign or by health care practitioners such as dietitians talking to clients about navigating restaurant environments.

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## AUTHOR CONTRIBUTIONS

S. V. Hua and K. Sterner-Stein assisted with data collection, coded transcripts, and wrote the first draft of the manuscript. C. A. Roberto obtained funding, conceptualized and oversaw the study, and edited and reviewed the final manuscript. F. K. Barg oversaw the qualitative analyses and provided feedback on manuscript drafts. All other authors provided critical feedback on the study design and manuscript drafts.

**INTRODUCTIONS** (10 minutes)

Before we get started, I want to reiterate some of the information on the consent form you signed and also share some housekeeping and ground rules. My name is \_\_\_\_\_, and I'm a researcher at the Mixed Methods Research Lab here at Penn.

- A. First off, does anyone need to leave before XX?
- B. The restrooms are located \_\_\_\_\_. If you need to leave briefly to use the restroom or answer an important call, please just step out of the room and step back in when you are finished.
- C. Feel free to help yourself to food and drink throughout our conversation today.
- D. Has anyone participated in a focus group before?
- E. Participation in this research focus group is voluntary—you can leave at any time and you don't need to answer any questions you don't want to answer.
- F. Anything discussed here today will remain confidential by us, although we cannot guarantee complete confidentiality as participants may discuss the conversation outside of this meeting.
- G. Please respect the privacy and confidentiality of the other members of this group, and don't discuss what is said in this group after you leave.
- H. The session will be audio-taped. To protect your privacy, what is said on the recording will be typed up by a professional transcriber who will remove any names or information that identifies individuals and then the recordings will be deleted.
- I. We will only report the results of the group as a whole, so that no individuals in the group can be identified.
- J. Since what each of you has to say is important to us, we would ask that you speak one at a time. I may remind you of this throughout our conversation today.
- K. As the facilitator, it's my job to keep track of time and make sure that everyone has the opportunity to speak. I may call on you if you are quiet or ask you to give others a chance to talk if you have a lot to say, as we need to get everyone's thoughts on the questions.
- L. \_\_\_\_\_ [note taker] works with the research team.

Are you ready to begin? I'm going to turn on the recorder.

Let's quickly go around the room and introduce ourselves using first names only so that we each know how to pronounce each other's names.

**FOCUS GROUP QUESTIONS**

Let's get started with the focus group now. We are going to be talking about your experiences eating at restaurants.

1. We are going to pass out a sample fast-food menu. Take a few minutes to look at the menu and think about what you might order *if you were out at a restaurant with your child right now*. There is some paper in front of you to write down what you would order for yourself and your child. Remember to focus on children ages 6–12.

Okay, now that you've looked at a menu, what did you think about when deciding what to order for *your child*?

- a. Would you have approached the decision-making process differently if you'd been ordering for yourself? If so, how? [Keep this brief.]

2. Now we are going to pass out a sample menu from a full-service chain restaurant like TGI Fridays, Applebee's, and Chili's. Take a few minutes to look at the menu and think about what you might order *if you were out at a restaurant with your child right now*. Please write down what you would order for yourself and your child. Remember to focus on children ages 6–12.

Okay, now that you've looked at a full-service restaurant menu, what did you think about when deciding what to order for *your child*?

- a. Would you have approached the decision-making process differently if you'd been ordering for yourself? If so, how? [Keep this brief.]

3. Do you typically order off the adult menu or the kids' menu for your child? How come [for each]?

- a. For those who order off the adult menu, do you find there is food left over? [Trying to understand amount of food waste—ie, what do folks do with leftovers if they have them?]

4. How healthy do you think the options are on the kids' menus?

5. When you go to large chain fast-food restaurants or full-service sit-down restaurants in Philadelphia, there are calories on the menu. What do you think about that?

(continued on next page)

**Figure 1.** Moderator guide for focus groups used to understand how caretakers of children 6 to 12 years use calorie labels on menus when ordering for their children.

6. What makes you want to use the calorie information or not want to use it when you are ordering food for *your child*?
  - a. Do you worry that low-calorie items won't keep your child full?
  - b. [If relevant] Even for those who are treating themselves with a trip to a fast-food or chain restaurant, do you think calorie information can be useful? In what ways?
7. We're going to switch gears now.

We are interested in hearing your opinions about different messages that could appear on signs or advertisements to help parents make healthy choices for their kids when eating out. I'm going to pass out a few different messages and ask you what you think about them to get our conversation started. Then we want to hear your ideas for messages.

[Pass out first message.]

*Design messages:*

1. *Look and limit: try to limit the calories your child has for lunch to 600 or less.*
2. *You wouldn't dress your kids in adult-sized clothes. Why order them an adult-sized meal? Try choosing items from the kids' menu.*
3. *Small changes make a big difference for a kid's health—try replacing soda with milk or water.*
4. *Don't waste money on portions that are too big for your kids—save by ordering from the kids' menu.*

Please take a look at this first design. [Read message aloud.]

- a. What jumps out to you?
  - i. What do you think about the message?
- b. How do you think this message might influence what parents order for their children? [Prompt if needed: Do you think it would encourage parents to order healthy items for their child to eat?]
- c. How would this message affect whether or not you would use the calorie information on restaurant menus when ordering for your child? How about for yourself?

[Repeat questioning for all sample messages.]

8. Thanks for sharing your thoughts on those messages. Now imagine you were going to design a poster with messaging to help parents notice and use calorie information when purchasing food for their children at restaurants. What would you put on that poster?
  - a. How important do you think it is for parents to use calorie-labeling information when purchasing food for their children?
  - b. If you were designing a poster to help parents make healthier choices, in general, when purchasing food for their children at restaurants, what would you put on that poster?

#### **WRAP-UP**

Those are all the specific questions we have for you at this time.

Is there anything else that you would like to say on these topics before we close? We thank you for your time and your participation. Before you leave please fill out the brief information form. Don't put your name on the form. And again, we will never quote from these forms about an individual person; we just need to compile some facts about our participants that we will report all together.

Once these forms are done, we have \$25 to give you for your time. Thank you!

**Figure 1.** (continued) Moderator guide for focus groups used to understand how caretakers of children 6 to 12 years use calorie labels on menus when ordering for their children.

**WELCOME AND CONSENT REVIEW**

[Meet and greet participant at the door and introduce self. Accompany to table to review consent procedures. Participant has already consented over the phone, so this can be brief. **See bolded for shortened version.**]

Thank you for coming today to participate in this research study. We have asked you to be here today because **we are interested in understanding your opinions about eating at restaurants**. Today, I will be asking you questions so that I can learn from you. Our discussion will last about 45 minutes to 1 hour. There are **no right or wrong answers**—please share all ideas with us.

On the phone you completed a consent form. I'm now going to remind you about the main points in that consent form [see bolded for the short version].

- Participation in this interview is completely voluntary—you can leave at any time and you don't need to answer any questions you don't want to answer.
  - **Participation is voluntary.**
- We will not retain any identifying information about you that could in any way link your responses to you. Do you have any questions about that?
  - **Privacy is protected.**
- Anything discussed here today will remain confidential—that means I will not tell anyone outside this room exactly what you said.
  - **Everything will be confidential.**
- To make sure we capture everything that is said today, I would like to record our talk. After our conversation, we'll have the audiotape typed, and we will only use your first name. In other words, no one outside of our project team at the University of Pennsylvania will ever know the full names of the people who contributed to this study. To protect your privacy, what is said on the recording will be typed up by a professional transcriber who will remove any names or identifiers and then the recordings will be destroyed.
  - **Do you feel comfortable with the recording? Privacy protected.**
- We will only report the results of this study for the group of people who participate in it—so no one individual can be identified.
  - **Study results will not identify any individuals.**
- Since we are recording the conversation, we would also ask that you try to speak up so we will be able to get what you say when we are typing this up.
  - **Please speak up so that recording can capture your voice.**

Thank you again for taking time to participate in this project. Your thoughts and opinions matter a lot to us and we are excited to hear what you think.

As explained on the phone, to thank you for your time, we will give you \$35 cash to pay for the meal, and you can keep anything you don't use.

Any questions before we get started?

[If the participant asks you whether they can stop early and still get paid, you can say] If you want to stop the study for some reason and have made a good and honest effort to answer our questions, we will still compensate you for your time.

However, all of our participants have been able to complete the full study without difficulty.

Now that we have talked about what we will do today, we are going to get started.

In this study, you're the expert, and we want to learn as much as we can from you about how you order at restaurants when you're out with your kids. We would like you to simply walk us through your thought process as you order a meal.

Basically, you're going to go ahead and order from the menu for yourself and your child the way you normally would. The only difference is that I'd like you to talk out loud into the recorder while you order. We want to understand your thought process—what you're noticing on the menu and what you're thinking about the different items.

Okay, let's get started and take as much time as you need. When you're done, I'll ask you a few more questions.

[Fast food: hand participant recorder and have him/her think out loud about ordering while off to the side of the line. Only after he/she has had his/her thoughts recorded, then he/she can approach the counter to order. After the participant has ordered, make small talk until the food is ready (topics might include the weather, where are they from, where do they live, do they eat

*(continued on next page)*

**Figure 3.** Moderator guide for shop-along interviews used to understand how caretakers of children 6 to 12 years use calorie labels on menus when ordering for their children.



out much). Find a seat, then proceed with questioning. If at sit-down restaurant, record the thought process after having been seated, then place the order.]

1. Now that you've ordered your food, I'm going to ask some more questions.
  - a. Can you tell me what you were thinking about when you ordered for your child? [Note: Stick to kids ages 6-12.]
  - b. Was this thought process similar or different when ordering for yourself?
  - c. What parts of the menu were you most interested in?
  - d. Was there any part of the menu that surprised you?
2. Do you typically order off the **adult or kids'** menu for your child(ren)? Why do you order from that one?
  - a. Do you find that your kids leave a lot of leftover food?
3. How healthy do you think the options are on restaurant kids' menus?
4. When you go to large chain fast-food restaurants or full-service sit-down restaurants in Philadelphia, there are calories on the menu. What do you think about that?
5. Did you notice the calorie information on the menu today? Did you use it when you were ordering for yourself? How about for your child?
  - a. Were there reasons you did or didn't use the calorie information when ordering for your child?
  - b. Do you worry that low-calorie items won't keep you or your child full?
  - c. Can you imagine using calorie information to guide your decisions even if you are out treating yourself to a tasty restaurant meal?
6. We are interested in hearing your opinions about different messages that could appear on signs or advertisements to help parents make healthy choices for their kids when eating out. I'm going to show you a few different messages and ask you what you think about them to get our conversation started. Then I want to hear your ideas for messages. Please take a look at this first design.

*Design messages [Note: read the message out loud before asking questions]:*

- *Look and limit: try to limit the calories your child has for lunch to 600 or less.*
- *You wouldn't dress your kids in adult-sized clothes. Why order them an adult-sized meal? Try choosing from the kids' menu.*
- *Small changes make a big difference for kid's health—try replacing soda with milk or water.*
- *Don't waste money on portions that are too big for your kids—save by ordering from the kids' menu.*
  - a. What do you think about the message? What jumped out at you? [Even if they don't like the image, be sure to get thoughts on the actual message.]
  - a. How do you think this message might influence what parents order for their children? [Prompt if needed] Do you think it would encourage parents to order healthy items for their child to eat?
  - b. If this message were posted in a restaurant, would it encourage you to use the calorie labels posted on the menu for your child? What about for you?

[Repeat questioning for 3 sample messages.]

7. Thanks for sharing your thoughts on those messages. Now imagine you were going to design a poster with messaging to help parents make healthier choices for their kids at restaurants. What would you put on that poster?
  - a. What ideas do you have to get parents to use calorie labels?
  - b. Would you even want messages about noticing and using the calorie information?

Those are all the specific questions we have for you at this time. Anything you would like to add before we finish?

Is there anything else that you would like to say on these topics before we close? We thank you for your time and your participation. Before you leave please fill out the brief **information form**. Don't put your name on the form. And again, we will never quote from these forms about an individual person; we just need to compile some facts about our participants that we will report all together.

Thank you!

**Figure 3.** (continued) Moderator guide for shop-along interviews used to understand how caretakers of children 6 to 12 years use calorie labels on menus when ordering for their children.