

Parents' Reports of Fast-Food Purchases for Their Children: Have They Improved?

AUTHORS:

Jennifer L. Harris, PhD, MBA
Maia Hyary, MPA
Nicole Seymour, MSW
Yoon Young Choi, MS

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Summary

Fast-food consumption is associated with poor diet quality in youth.¹⁻³ Therefore, improving the nutritional quality of fast-food meals consumed by children is an important public health objective. In response to public health concerns, several of the largest fast-food restaurants have introduced policies to offer healthier drinks and/or sides with their kids' meals. However, few research studies have examined the menu items that parents purchase for their children at fast-food restaurants or their attitudes about healthier kids' meal offerings.

The primary purpose of this study was to document parents' reported fast-food purchases for their children (ages 2-11) and examine changes over time. Online surveys were conducted in 2010 ($n=771$ parents), 2013 ($n=835$ parents), and 2016 ($n=871$). Parents also provided detailed information about purchases of lunch or dinner for their child in the past week at one of the four largest fast-food restaurants (McDonald's, Burger King, Wendy's, or Subway) including specific menu items purchased and why they chose that restaurant. In 2016 only, the survey also asked for detailed information about visits to KFC, Dairy Queen, and Panera Bread (in addition to the four restaurants examined in 2010 and 2013), and parents reported their attitudes about restaurants' healthier kids' meal policies. All parents then reported the frequency of their visits to 16 fast-food restaurants with their children for any occasion. In addition to changes over time, we also examined differences between parents of preschool-age children (ages 2-5) and older children (ages 6-11), and compared responses by race and ethnicity.

Restaurant visits

- In 2016, 91% of parents reported purchasing lunch or dinner for their child in the past week at one of the four largest fast-food restaurant chains (McDonald's, Burger King, Wendy's, and Subway), a significant increase compared to both 2010 (79%) and 2013 (83%).
- Parents were most likely to have purchased food for their child at McDonald's (80% of parents surveyed in 2016), and they visited on average 2.4 of the 4 restaurants in the past week in 2016, a significant increase compared to 1.7 in 2010.

Nine out of ten parents surveyed had purchased lunch or dinner for their child at McDonald's, Burger King, Wendy's, or Subway in the past week.

Approximately two-thirds of parents reported purchasing a kids' meal for their child. Of those parents, 59% received a healthier drink.

- Across the three years, 89% of Hispanic parents reported purchasing food for their child in the past week from at least one of the four restaurants, which was significantly higher compared to White non-Hispanic (85%) and Black non-Hispanic (84%) parents. There were no significant differences by race/ethnicity in parents who reported visiting any of the individual restaurants.

Type of meal purchased

- In 2016, 46% of parents who visited one of the four largest fast-food chains reported purchasing a kids' meal and no additional menu items for their child, whereas approximately 20% of parents purchased a kids' meal plus another menu item.
- From 2010 to 2016, there was a significant decrease in parents who purchased *only* a kids' meal and a significant increase in those purchasing a kids' meal plus another item.
- However, the proportion of parents who did not purchase a kids' meal for their child did not change, representing approximately one-third of parents who purchased fast-food for their child across all three years.
- Parents were significantly more likely to purchase only a kids' meal (and not another menu item) for a younger child (ages 2-5) than for an older child (ages 6-11) (64% vs. 46%, respectively, across all three years).

Healthier drink and side purchases

- In 2016, 59% of parents who reported purchasing a kids' meal at one of the four largest chains received a healthier kids' meal drink (e.g., low-fat plain milk, 100% juice, plain water),^a and this proportion did not change significantly from 2010 to 2016.
- Parents were significantly more likely to receive a healthier drink for a younger child than for an older child (66% vs. 50%, respectively, across all three years).
- In 2016, 50% of parents who reported purchasing a kids' meal received a healthier side as part of the meal (e.g., yogurt, apple slices, mandarin oranges); a significant decrease compared to 2013 (67%). However, the proportion of parents who reported receiving an unhealthy side with a kids' meal increased significantly from 49% in 2013 to 61%^b in 2016.
- In contrast to healthier kids' meal drinks, there was no difference in the proportion of parents of younger and older children who received a healthier kids' meal side (51% vs. 48%, respectively, across all three years). It is important to note that during this time, restaurants increased the number of healthier kids' meal sides available, but they did not pledge to remove unhealthy sides from kids' meal menus.

^aIn the survey, parents reported the side and beverage they "received" with their kids' meal purchase, as in many cases, restaurant personnel provided these options automatically with the meal.

^bThe percentages of healthy and unhealthy sides received with kids' meals total more than 100% because customers received two sides with some kids' meals.



- At Panera Bread (included in 2016 only), parents were most likely to purchase a kids' meal (79%), and also most likely to purchase a healthier drink and healthier side (67% and 74%, respectively) with kids' meals, compared to parents who visited other restaurants.

Parents report that fast-food restaurants' policies to offer healthier kids' meals make them feel much more positive about the restaurants.

Parents' attitudes

- In 2016, nearly all parents responded positively to healthier kids' meal policies at the restaurant they visited and indicated that they will purchase food for their child at that restaurant more often because of the policy.
- With the exception of Subway, healthy menu items was not the main reason that parents chose to visit these restaurants. Their children like the restaurant, good value, and convenience were cited as most important more often.

Frequency of fast-food purchases

- In 2016, when asked how often they purchase food for their child(ren) at 16 different fast-food restaurants, more than one-quarter of parents reported purchasing food for their child(ren) weekly or more often at KFC, Pizza Hut, Starbucks, and Taco Bell, as well as at the four largest chains.
- There was a significant increase in parents reporting that they purchase food for their children weekly or more often from most restaurants compared to 2013.
- White non-Hispanic parents were more likely to report purchasing fast-food from most restaurants weekly or more compared to Hispanic and/or Black non-Hispanic parents.

Since fast-food restaurants introduced their voluntary healthier kids' meal policies, fast-food purchases have increased but purchases of healthier items have not.

Together, these results suggest that parents are purchasing fast-food for their children more frequently than in past years, while the proportion of healthier drinks and sides received with kids' meals has not improved. Furthermore, unhealthy options remain on kids' meal menus, including main dishes, sides, and desserts, and we found an increase in parents who purchased a kids' meal plus another menu item, especially for an older child.

Future research is required to explain the reasons for these trends, but it appears that restaurants' voluntary policies as currently implemented are unlikely to substantially reduce children's fast-food consumption overall, or increase their consumption of healthier items. In addition, the positive attitudes expressed by parents about restaurants' healthier kids' meal policies suggest that such policies could lead to unintended public health consequences, such as an increase in the frequency of parents' fast-food purchases for their children.

These findings demonstrate the need to identify state and local policies and/or regulations that will more effectively improve available kids' meal menu options and purchases of healthier fast-food options for children.

Background

Identifying opportunities to improve children's fast-food consumption is an important public health objective as consuming fast-food negatively affects their diets and health. Approximately one-third of children consume fast-food on a given day,⁴ and eating fast-food contributes 126 additional calories. Fast-food consumption also increases sugar, saturated fat, and sodium intake, and is associated with reduced milk, fruit, and non-starchy vegetable intake on those days.⁵⁻⁸ Furthermore, fast-food restaurants are a significant source of sugary drinks in children's diets.⁹ A 2016 study concluded that fast-food meals purchased for children with sugar-sweetened beverages added on average 179 calories and 19 grams of added sugar from beverages to the meal when compared to meals purchased without these drinks.¹⁰

Since 2013, major fast-food restaurants have introduced policies to offer and promote healthier kids' meal items. This research documents changes in parents' reported purchases of fast-food for their children.

Research has also raised concerns about the nutritional quality of kids' meals offered at fast-food restaurants. Kids' meal items tend to contain smaller portions and fewer calories than items on the main menu,¹¹ so they are better choices for children. However, nearly all kids' meal items exceed recommended levels of calories, saturated fat, sodium, and/or sugar,^{12,13} and fewer than 1% of kids' meal combinations (main dish, side, and drink) met recommended nutrition standards.¹⁴

To address these concerns, fast-food restaurants have made some improvements in the nutritional quality of kids' meals. An analysis of fast-food kids' meal menu items offered in 2013 found that most restaurants had added new healthier drinks and sides since 2010.¹⁵ Nonetheless, the majority of options available on restaurant kids' meals remained nutritionally inadequate.¹⁶

Since 2013, some fast-food restaurants have made further improvements and voluntarily agreed to offer and promote healthier kids' meal items on menu boards (see inset). However, restaurants have not consistently implemented their pledges at individual restaurant locations.¹⁷ In addition, encouraging parents to purchase the healthier menu items for their children in place of the predominately nutritionally poor kids' meal options remains a challenge. Yet few research studies have assessed parents' purchases of fast-food for their children in light of healthier kids' meal policies introduced since 2010.

The purpose of this research was to document specific menu items that parents reported purchasing for their children at the top fast-food restaurant chains, attitudes about the restaurants, frequency of fast-food purchases for their children, and changes from 2010 and 2013 to 2016.

Healthier kids' meal pledges at fast-food restaurants

A previous report from the UConn Rudd Center documented pledges made by seven fast-food restaurants to offer and/or promote healthier drinks (e.g., low-fat plain or chocolate milk, 100% juice, bottled water) and/or sides (e.g., fruit) with kids' meals from 2013 to 2016.¹⁸

Restaurant (pledge year)	Pledge(s)
McDonald's (2013) ¹⁹	<ul style="list-style-type: none"> • Feature only healthier drinks (water, milk, and juice) with Happy Meals on menu boards and in-store and external advertising directed to children. • Phase out the listing of soda with Happy Meals on menu boards. • Offer new fruit, vegetable, low-/reduced-fat dairy (e.g., apple slices, Cuties mandarin oranges, Go-Gurt yogurt) or water options in the Happy Meal beginning in 2014.
Burger King (2015) ²⁰	<ul style="list-style-type: none"> • Instead of soft drinks on menu boards, the menu for kids will offer healthier drinks (fat-free milk, 100% apple juice, and low-fat chocolate milk).
Wendy's (2015) ²¹	<ul style="list-style-type: none"> • Remove carbonated soft drinks from the kids' meal listing on menu boards, both inside restaurants and at pick-up windows (as of fall 2014). • Only list healthier beverage options with kids' meals (1% white or chocolate milk, bottled water, and 100% juice).
Subway (2014) ²²	<ul style="list-style-type: none"> • Only offer items on its kids' meal menu that meet strong nutritional guidelines, including sides (apples) and drinks (low-fat/non-fat milk or water). • Since 2010, Subway has only offered healthier sides and drinks with its kids' meals.²³
KFC (2013) ²⁴	<ul style="list-style-type: none"> • Introduced the Li'l Bucket Kids' Meal with healthier sides and drinks.
Dairy Queen (2015) ^{25, 26}	<ul style="list-style-type: none"> • Remove soft drinks from kids' meal menu boards and solely list healthier drinks (such as milk and bottled water) as menu options. • Joined the National Restaurant Association's Kids LiveWell Program and committed to offer at least one kids' meal that meets specific nutrition criteria.

Implementation of restaurants' voluntary pledges

However, the previous Rudd Center report documents inconsistencies in implementation of pledges at individual restaurant locations, as well as wide variation in how often restaurant personnel offered healthier drinks and sides with kids' meal orders at the point-of-sale.²⁷

- All restaurants removed the unhealthy items listed in their pledges from kids' meal menus posted on their websites.
- Approximately one-third of McDonald's, Burger King, Wendy's, and Subway restaurant locations continued to list fountain drinks on kids' meal menu boards.
- Restaurant personnel offered at least one healthier drink option with more than 80% of kids' meal orders at McDonald's, Burger King, and Subway restaurants, compared to 56% of orders at Wendy's and KFC and 33% at Dairy Queen.
- The frequency that restaurant personnel offered any of their healthier side options with kids' meal orders varied widely, ranging from 80% or more of orders at McDonald's, Subway, and KFC, to 22% at Wendy's and 8% at Burger King.
- Although Burger King removed french fries from its kids' meal online menu, restaurant personnel automatically provided fries with 90% of Burger King kids' meal orders.

This research

Using an online panel recruited by Survey Sampling International (SSI), we surveyed approximately 800 parents each in 2010, 2013, and 2016 with children between the ages of 2 and 11 ($N=2,468$). We asked for detailed information about a recent visit by parents who had purchased lunch or dinner for their child at one of the four largest fast-food restaurants (McDonald's, Burger King, Wendy's, Subway) in the past week. Information about recent visits to KFC, Panera Bread, and Dairy Queen was also collected in 2016 only. Six of these restaurants had healthier kids' meal policies as of 2016: McDonald's, Burger King, Wendy's, Subway, KFC, and Dairy Queen.

Parents were asked to report the type of meal and specific sides, drinks, main dishes, and desserts purchased for their child. They also provided the main reason they chose to purchase food from the restaurant and (in 2016 only) their attitudes about the restaurant's healthier kids' meal policy. Parents who had purchased lunch or dinner for more than one child answered questions about the child with the most recent birthday, and parents who had purchased lunch or dinner from more than one of the restaurants were randomly assigned to answer questions about one restaurant.

Parents also indicated the frequency of their visits to 16 fast-food restaurants with their child(ren) (in 2010, 12 of the 16 restaurants were assessed). The total sample was augmented to include at least 100 black and 100 Hispanic parents per year, and responses were compared by parents' race/ethnicity, age of child (2-5 years vs. 6-11 years), and survey year (see [Appendix A](#) for detailed methods).

Parents reported recent purchases at fast-food restaurants for their child(ren) in 2010, 2013, and 2016. They also provided attitudes about healthier kids' meal policies.

Results

The sample of parents surveyed was diverse in race, ethnicity and education (see [Table 1](#)) ([Appendix Table B1](#) provides sample descriptives by year of survey). The majority of participants were female and 69% were between the ages of 25 and 40. Just over one-half of parents self-reported their race/ethnicity as White non-Hispanic. Approximately one-third of parents surveyed had completed some college, while 43% had a 4-year college degree or higher. Three-quarters of parents had two or more children ages 2-11 years.

Table 1. Sample characteristics (N=2,477)*

		% of total sample
Gender of parent	Female	60.9%
Age of parent	18-25	7.5%
	25-30	21.8%
	30-40	47.2%
	40-50	18.3%
	50+	5.2%
Number of children (all ages)	1	26.3%
	2	42.6%
	3	18.4%
	4+	12.7%
Education	High school/GED or less	19.8%
	Some college, 2-year college degree	37.2%
	4-year college, graduate or professional degree	43.0%
Race/ethnicity	White non-Hispanic	56.3%
	Black non-Hispanic	20.5%
	Hispanic	16.4%
	Other/multiple	6.8%

*2010, 2013, and 2016 survey years combined.

There was a significant increase in parents purchasing lunch or dinner in the past week for their child from at least one of the top-four restaurants: 79% in 2010 versus 91% in 2016.

Visits to top fast-food restaurants

More than 90% of parents surveyed in 2016 reported purchasing lunch or dinner at one of the top-four restaurants (McDonald's, Burger King, Subway, and/or Wendy's) for their child in the past week (see [Appendix Table B2](#)). On average, parents who visited at least one of these restaurants reported purchasing food for their child from approximately 2.4 of the 4 restaurants in the past week.

McDonald's was most popular, with 80% of parents reporting purchasing food from the restaurant for their 2- to 11-year-old child in the past week.^c More than one-half (54%) reported visiting Burger King and 46% visited Subway and/or Wendy's. In addition, 43% reported visiting KFC, and 28% reported visiting Dairy Queen or Panera Bread in the past week with their child. These numbers correspond to differences in total U.S. sales for these restaurants in 2016.²⁸

From 2010 to 2013, as well as from 2013 to 2016, the proportion of parents reporting that they purchased lunch or dinner in the past week for their child from at least one of the top-four restaurants increased significantly (from 79% in 2010 to 91% in 2016), as did the number of these restaurants visited (from 1.7 in 2010 to 2.4 in 2013).

Parents of an older child (ages 6-11) reported purchasing food from 2.3 of these restaurants on average (across the three years), which was significantly higher than the 2.1 restaurants reported by parents of a younger child (ages 2-5). Hispanic parents were more likely to report purchasing food for their child from at least one of these four restaurants in the past week (89%) compared to both Black non-Hispanic (84%) and White non-Hispanic parents (85%). However, there were no differences by race or ethnicity in the number of restaurants visited.

In examining visits to individual restaurants, there was also a significant increase from 2010 to 2016 in parents reporting that they purchased food from each of top-four restaurants for their child in the past week. Purchases at Burger King and Wendy's also increased significantly from 2013 to 2016. Across all three years, parents were significantly more likely to have purchased fast-food for an older child (6-11 years) compared to a younger child (2-5 years) at three of the four restaurants; McDonald's was the only top-four restaurant where parents *did not* purchase food more frequently for older children than for younger children. There were no significant differences by parents' race or ethnicity in purchasing at any of the top-four restaurants, although White non-Hispanic parents were more likely to report visiting KFC, Dairy Queen, and Panera Bread (restaurants asked in 2016 only).

There also was a significant increase in parents purchasing a kids' meal plus another menu item for their child: 19% of parents in 2016 vs. 5% in 2010.

Kids' meals and other menu items purchased

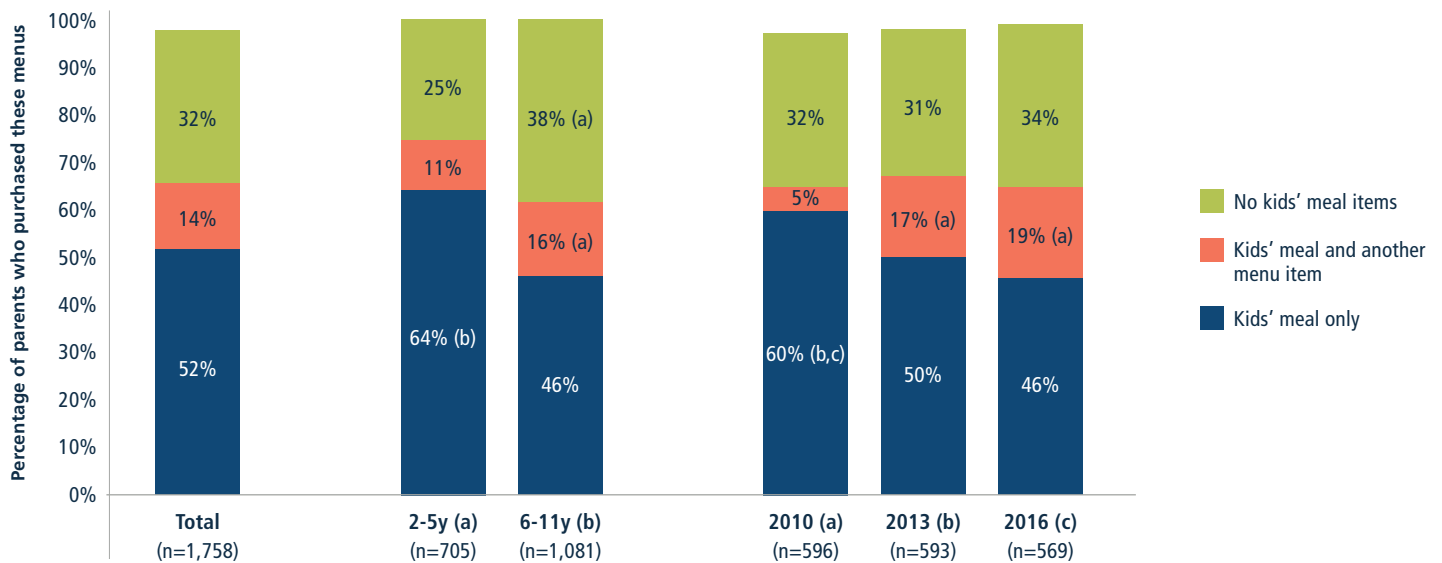
In 2016, 65% of parents who reported purchasing lunch or dinner for their child at McDonald's, Burger King, Subway, or Wendy's in the past week purchased a kids' meal. The remaining one-third only purchased items from another type of menu (e.g., dollar menu items, combo or value meal, or individual items from the main menu) (see [Figure 1](#)). Of those who purchased a kids' meal, almost 30% (19% of total parents who visited the restaurants) also purchased an

^c These results may reflect greater access to the top-four restaurant locations compared to KFC, Dairy Queen, or Panera Bread.

additional item for their child. Furthermore, from 2010 to 2013 (but not from 2013 to 2016), there was a significant reduction in the proportion of parents ordering only a kids' meal, and a significant increase in parents ordering a kids' meal plus another menu item. In 2016, almost four times as many parents ordered a kids' meal plus another menu item for their child than in 2010.

However, the proportion of parents who purchased food for their child in the past week and did not order a kids' meal at all remained approximately one-third across the three years. In addition, across all three years examined, parents were significantly more likely to order a kids' meal for a younger child (ages 2-5) than for an older child (ages 6-11) (75% vs. 62%, respectively). They also were more likely to order a kids' meal plus another menu item for an older child than for a younger child.

Figure 1. Type of menu items purchased for children (2-11y)*



*Includes responses by parents who purchased fast-food from McDonald's, Burger King, Wendy's or Subway for their 2- to 11-year-old child in the past week.

Letters indicate significantly higher purchases by child age or year.

Note: Columns do not total 100% because some parents did not select any of the menu options listed.

Parents were significantly more likely to order a kids' meal for a younger child than for an older child, and more likely to order a kids' meal plus another menu item for an older child.

Parents were also significantly more likely to purchase healthier drinks, but not healthier sides, for a younger child.

The proportion of parents who ordered a kids' meal for their child differed across the individual restaurants examined (see [Appendix Table B3](#)). In 2016, parents were most likely to order a kids' meal at Panera Bread (79%) and McDonald's (76%). Approximately 60% ordered a kids' meal at Wendy's, Subway, and KFC; while 55% and 54%, respectively, ordered kids' meals at Dairy Queen and Burger King. However, of the parents who ordered a kids' meal at McDonald's in 2016, 23% ordered the larger-sized Mighty Kids Meal, which comes with a larger main dish portion (e.g., six vs. four Chicken McNuggets) and regular-sized french fries. Furthermore, parents of older children (6-11 years) were significantly more likely to order a Mighty Kids' Meal compared to parents of younger children (2-5 years) (38% vs. 10%, respectively).

In addition, many of the parents who ordered a kids' meal at most restaurants also ordered another menu item for their child. This proportion was highest at Panera Bread (36% of parents who visited), likely because the restaurant does not include a drink with its kids' meal. However, approximately one-quarter of parents who visited Wendy's, Dairy Queen, and KFC; as well as 16% to 18% of parents who visited Subway, McDonald's, and Burger King; ordered a kids' meal plus another item for their child. Additional items were primarily individual items from dollar/value menus or combo meals, and included a range of specific types of items (including sides, drinks, desserts, and main dish items).

From 2010 to 2013, the proportion of parents who ordered a kids' meal plus another item also increased significantly at each of the top-four restaurants, while the proportion of parents who ordered a kids' meal only went down for McDonald's, but not the other restaurants. Parents were also significantly more likely to order only a kids' meal (and not additional items) for their younger child than for their older child at McDonald's, Burger King, and Subway. Parents visiting McDonald's also were more likely to order a kids' meal plus another item for their older child than for their younger child.

Healthier drinks and sides received with kids' meals

In 2016, 59% of parents who purchased a kids' meal for their child in the past week at one of the top-four restaurants reported receiving one of the restaurant's healthier drink options (see [Table 2](#)), and this proportion did not change from 2010 to 2016 (see [Figure 2](#)). However, parents were significantly more likely to report receiving a healthier drink for a younger child than for an older child.

When comparing results for individual restaurants in 2016, parents were least likely to receive a healthier drink with a kids' meal at Burger King (49%) and with McDonald's Mighty Kids' Meals (50%). They were most likely to receive healthier drinks with kids' meals at Subway (77%) and with Happy Meals at McDonald's (60%) (see [Appendix Table B4](#)). Two-thirds of parents who purchased a kids' meal at Panera Bread also purchased a healthier drink (the Panera kids' meal does not include a drink). Across all three years combined, parents of younger children were significantly more likely to purchase healthier kids' meal drinks than were parents of older children with Happy Meals at McDonald's and Wendy's kids' meals. However, there were no differences in the proportion of younger and older children who received healthier drinks at Burger King or Subway, or with Mighty Kids Meals at McDonald's.

Across all three years, 59% of parents who reported purchasing a kids' meal at one of the top-four fast-food restaurants received a healthier drink.

Table 2. Healthier* drinks and sides offered with kids' meals in 2016

Restaurant	Healthier drinks	Healthier sides
McDonald's	Low-fat plain milk, fat-free flavored milk, 100% juice	Mandarin oranges, apple slices, yogurt
Burger King	Fat-free plain milk, low-fat flavored milk, 100% juice, water	Applesauce
Wendy's	Low-fat plain milk, low-fat flavored milk, 100% juice, bottled water, Honest Kids Fruit Punch	Apple slices
Subway	Low-fat plain milk, low-fat flavored milk, 100% juice, water	Apple slices, yogurt
Dairy Queen	Low-fat plain milk, low-fat flavored milk, 100% juice, bottled water	Applesauce, banana
KFC	Low-fat plain milk, low-fat flavored milk, 100% juice, bottled water, Capri Sun Roarin' Waters	Green beans, applesauce, whole kernel corn, mashed potatoes, BBQ baked beans, corn on the cob, cole slaw
Panera Bread	Low-fat flavored milk, 100% juice, bottled water	Apple, yogurt

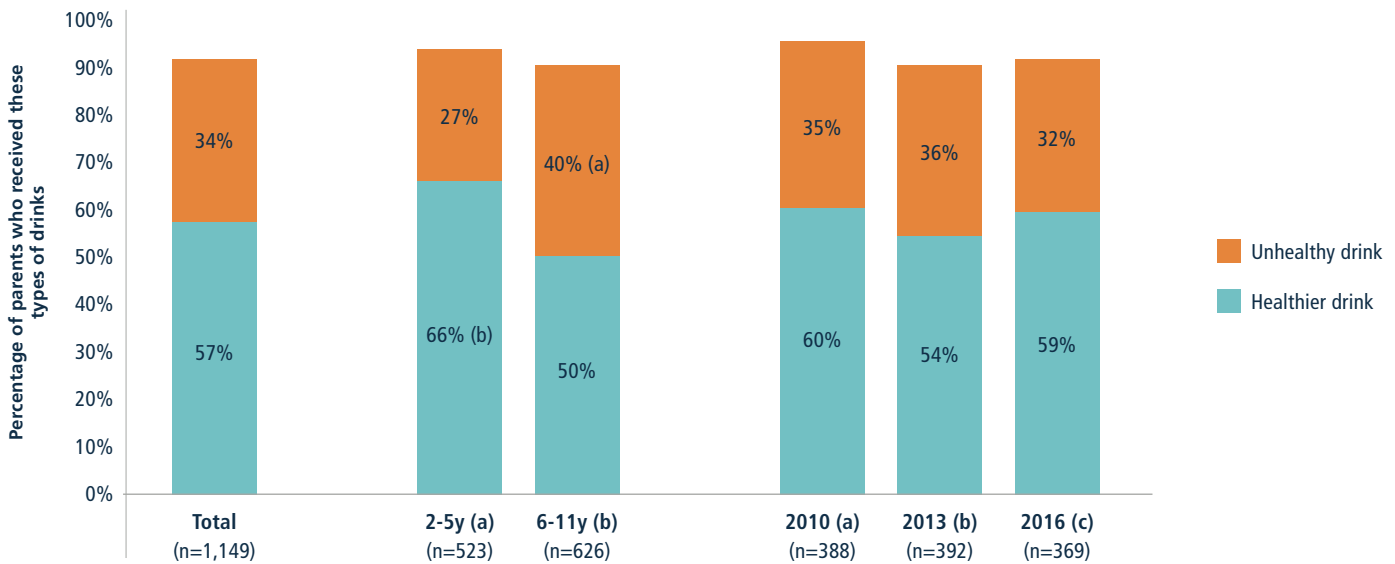
*Healthier options identified by the restaurants.

Across all three years, 50% of parents who reported purchasing a kids' meal at one of the top-four fast-food restaurants received a healthier side, while 61% reported receiving an unhealthy side.

In 2016, 50% of parents who purchased a kids' meal at one of the top-four restaurants reported receiving a healthier side option with their kids' meal (see [Table 2](#) for definitions of healthier side options by restaurant), while 61% reported receiving an unhealthy side (see [Figure 3](#)). These percentages total more than 100% because kids' meals at McDonald's and Subway could come with two sides.

There were significant changes from 2010 to 2016 in the proportion of parents reporting that they received both a healthier and an unhealthy side with a kids' meal, consistent with McDonald's policy after 2010 to offer a healthier side plus smaller sized french fries with Happy Meals. Compared to 2010, significantly more kids' meal purchases at all restaurants combined included a healthier side in 2013 and 2016. However, the proportion of kids' meals with unhealthy sides increased from 2013 to 2016, offsetting a decline from 2010 to 2013. There was no significant difference overall (across all three years examined) in the proportion of older and younger children receiving a healthier or unhealthy side with their kids' meal.

Figure 2. Type of drink received with kids' meals*

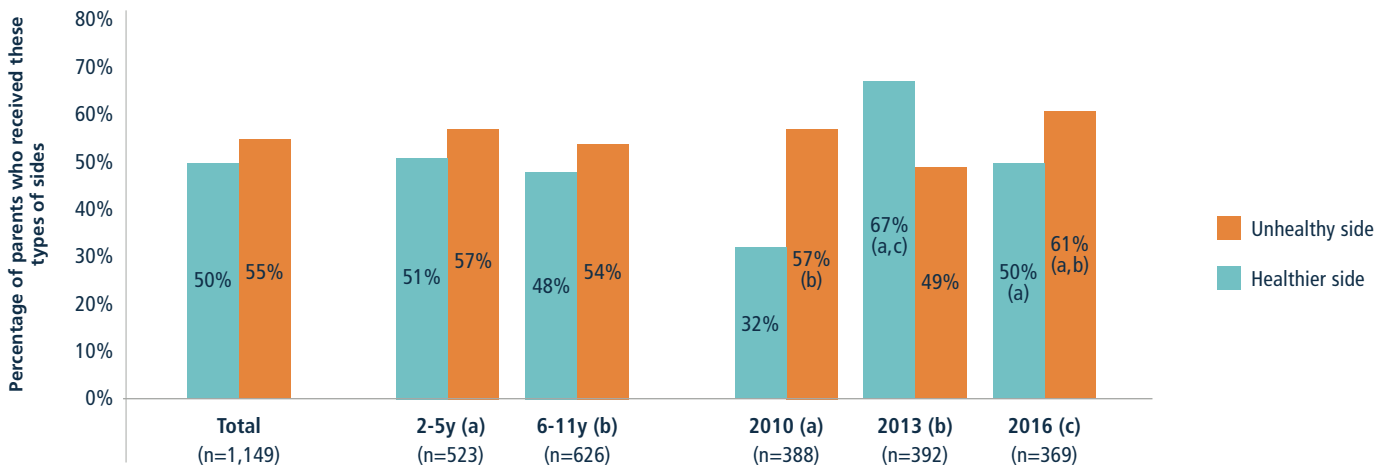


*Responses by parents who purchased a kids' meal at McDonald's, Burger King, Wendy's or Subway for their 2- to 11-year-old child in the past week.

Letters indicate significantly higher purchases compared to younger or older children.

Note: Columns do not total 100% because some parents did not select any of the menu options listed.

Figure 3. Types of sides received with kids' meal*



*Responses by parents who purchased a kids' meal at McDonald's, Burger King, Wendy's or Subway for their 2- to 11-year-old child in the past week.

Letters indicate significantly higher purchases of healthy or unhealthy sides compared to another year.

Note: The percentages of healthier and unhealthy sides received with kids' meals total more than 100% because customers received two sides with some McDonald's and Subway kids' meals.

Parents reported receiving fewer healthier kids' meal sides in 2016 than in 2013.

There was also wide variation between individual restaurants in the proportion of parents reporting that they received healthier and/or unhealthy sides with kids' meals (see [Appendix B5](#)). In 2016, 65% to 74% of parents received a healthier side with the kids' meal they purchased for their child at McDonald's, Subway, KFC, and Panera Bread. At three restaurants (McDonald's, Subway, and KFC), customers could receive two sides with kids' meals, and 64% or more of parents received an unhealthy side for their child at these restaurants.

At McDonald's the proportion of parents who received only unhealthy sides with a Happy Meal increased significantly from 2013 to 2016 (from 13% to 34%), whereas the proportion who received only healthier sides increased for Mighty Kids Meals (from 12% to 34%). Parents were most likely to receive an unhealthy side with kids' meals at Wendy's and Burger King (77% and 84%, respectively) in 2016, a significant increase from 2013 for both restaurants. Across all three years examined, older children were more likely to receive only an unhealthy side at Burger King and Wendy's than were younger children. Older children were also more likely to receive both a healthier and an unhealthy side with a Happy Meal at McDonald's.

Notably, 62% of parents who purchased a kids' meal at Dairy Queen in 2016 reported that the server offered them a free ice cream treat with the kids' meal. Similarly, 41% of parents who visited Burger King in 2016 reported that the server offered to substitute a free dessert for a kids' meal toy.

Attitudes about restaurants and healthy kids' meal policies in 2016

Parents responded positively when asked how they felt healthier kids' meal policies at the restaurant where they purchased food their child in the past week (see [Table 3](#)). In most cases, the majority of parents indicated that they were aware of the healthier kids' meal policies at the restaurant, ranging from 43% who were aware of Dairy Queen's Kids LiveWell meal to 70% who were aware of Subway's healthier drinks policy.

Three-quarters or more of parents indicated that they felt more positive about the restaurant because of its policy to offer only healthier drinks with kids' meals, with parents who visited Dairy Queen and KFC most likely to report that they felt more positive about the restaurant (91% and 89%, respectively). In addition, 80% of parents who visited McDonald's responded that they felt more positively about McDonald's because of its policy to automatically offer one healthy side with every kids' meal. Similarly, 90% of parents who visited Dairy Queen reported feeling more positive about Dairy Queen because it offers a kids' meal that met the National Restaurant Association's Kids LiveWell nutrition standards.

Table 3. Parents' attitudes about healthier kids' meal policies in 2016

		How does the policy affect...				
		Awareness of the policy	Attitude about the restaurant ^a (% responses)		Frequency of purchases ^b (% responses)	
Policy type and restaurant	# of respondents	% of parents responding	More positive (6-9)	Less positive (1-4)	More often (6-9)	Less often (1-4)
<i>Healthier drinks</i>						
McDonald's	231	54%	75%	6%	66%	4%
Burger King	144	63%	85%	4%	76%	3%
Wendy's	103	64%	87%	1%	71%	0%
KFC	102	63%	89%	2%	81%	2%
Subway	101	70%	82%	5%	77%	5%
Dairy Queen	67	54%	91%	1%	75%	0%
<i>Healthier sides</i>						
McDonald's	231	64%	80%	3%	68%	3%
<i>Healthier meal</i>						
Dairy Queen (Kids LiveWell)	67	43%	90%	3%	81%	0%

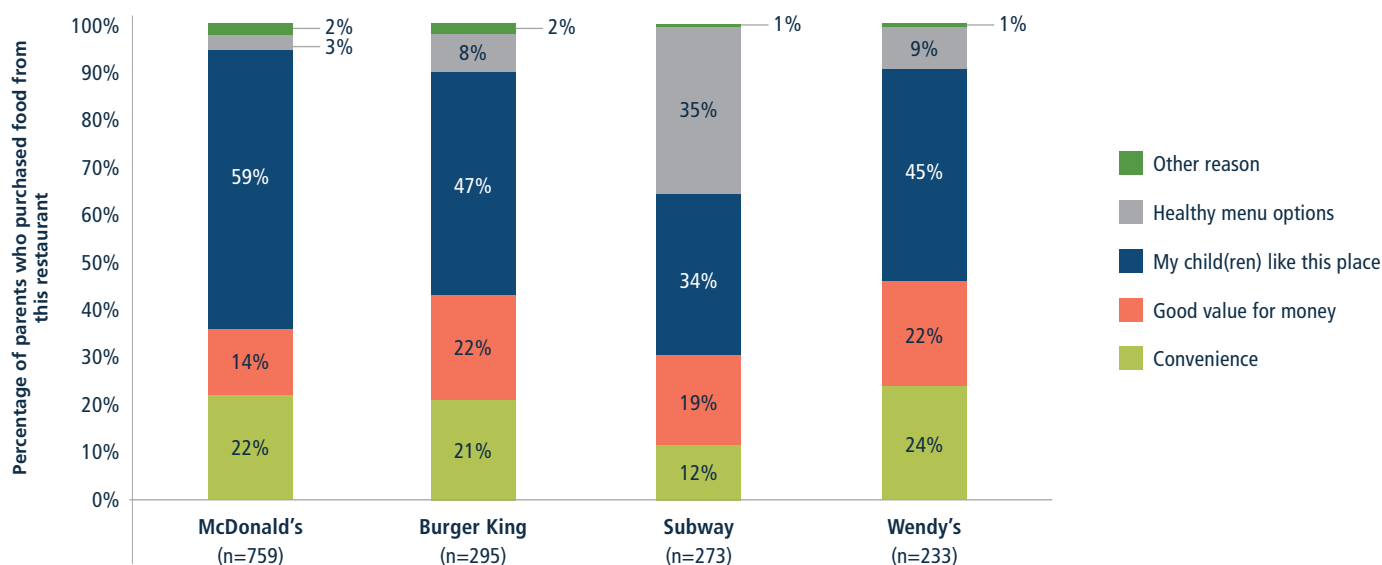
^a How does the restaurant's policy (only offer healthier drinks/automatically provide one healthy side/offer a Kids LiveWell meal) make you feel about the restaurant? Scale of 1 (significantly less positive) to 9 (significantly more positive)

^b How does the restaurant's policy (only offer healthier drinks/automatically provide one healthy side/offer a Kids LiveWell meal) affect how often you will purchase food from the restaurant for your child? Scale of 1 (significantly less often) to 9 (significantly more often)

The majority of parents also reported that restaurants' policies to only offer healthier drinks or automatically provide one healthy side were likely to increase the frequency that they purchased fast-food for their child from the restaurant. More than 80% indicated that KFC's healthier kids' meal drinks policy, as well as Dairy Queen's Kids LiveWell meal, would increase how often they purchase food at these restaurants. Approximately two-thirds of parents who visited McDonald's indicated that its healthier side or drink policy would increase the frequency that they purchased food there for their child. This percentage was lower than other restaurants, but parents were already more likely to visit McDonald's compared to other restaurants.

Despite parents' positive attitudes about restaurants' healthier kids' meal policies, Subway was the only restaurant that parents chose because of its healthy menu options more than for any other reason (see [Figure 4](#)). For all other restaurants, parents selected that their child(ren) like the restaurant as the main reason they purchased fast food for their child from that restaurant, followed by good value and convenience. Healthy menu options was selected as the main reason for visiting by fewer than 10% of parents across the three years examined.

Figure 4. Main reason parent chose to visit the restaurant*



*Responses from 2010, 2013, and 2016 combined.

However, from 2010 to 2016 there was a significant increase in parents selecting healthy menu options as the main reason they chose to visit Burger King (4% in 2010 vs. 10% in 2016) (data not reported). In addition, there was a significant increase from 2010 to 2016 in parents citing that their child(ren) like the restaurant as the main reason they chose Wendy's (33% in 2010 vs. 50% in 2016) and Subway (26% in 2010 to 41% in 2016). Notably, in 2016 (but not in other years) parents indicated that the main reason they chose to visit Subway was that their child(ren) like the restaurant (41%) more often than healthy menu options (27%).

Frequency of visits to fast-food restaurants

Finally, parents reported how often they purchase fast-food for any of their child(ren) (ages 2-11) from 16 of the largest fast-food restaurant chains (12 chains in 2010) for any occasion. In 2016, approximately one-third or more of parents reported purchasing food for their child(ren) at least once per week at McDonald's, Burger King, Subway, or KFC (see [Appendix Table B6a](#)).

One-third or more of parents reported purchasing food for their child(ren) at least once per week from McDonald's, Burger King, Subway, or KFC.

One-quarter or more reported purchasing food for their child(ren) weekly or more often at seven additional restaurants (Pizza Hut, Starbucks, Wendy's, Dunkin' Donuts, Taco Bell, Panera Bread, and/or Domino's Pizza). For most restaurants, there was a significant increase in weekly or more visits from 2010 to 2013 and from 2013 to 2016.

In contrast, just 4% of parents in 2016 reported that they never purchase food for their child(ren) at McDonald's, and fewer than 20% reported never purchasing food at Burger King, Subway, Wendy's, or Pizza Hut (see [Appendix Table B6b](#)). From 2010 to 2016 there was a significant reduction in parents who never purchased food for their child(ren) at Subway, Pizza Hut, Domino's, Dairy Queen, Sonic, Dunkin' Donuts, and Starbucks.

In examining frequency of visits by demographic characteristics, White non-Hispanic parents were more likely to report visiting most restaurants weekly or more often compared to Hispanic and/or Black non-Hispanic parents. There were fewer differences by race/ethnicity in parents who reported that they never visit individual restaurants with their children. Black non-Hispanic parents were more likely to report that they never visit Starbucks; Hispanic parents were more likely to report never visiting Wendy's or Dairy Queen; and both Black and Hispanic parents were more likely to report never visiting Taco Bell compared to White non-Hispanic parents.

Discussion

These findings indicate numerous reasons for continued concern about the impact of fast-food consumption on children's diets and health. In 2016, we identified 10 different fast-food restaurants where at least one-quarter of parents reported that they purchased food for their child(ren) weekly or more often. In addition, more than 90% of parents surveyed reported that they visited at least one of the four largest fast-food restaurants to purchase lunch or dinner for their child (ages 2-11) in the past week, and they purchased food for their child at 2.4 of these restaurants on average. These numbers are high, but they correspond to previous research showing that on any given day, one-third of children consume fast-food.²⁹

Furthermore, parents' purchases of fast-food for their children increased significantly during the years examined, with parents reporting increased frequency of visits to most individual fast-food restaurants from 2013 to 2016. Parents who reported that they had purchased lunch or dinner for their child in the past week at Burger King and Wendy's also increased from 2013 to 2016.

Of additional concern, approximately one-third of parents who purchased lunch or dinner for their child at one of the four largest fast-food restaurants *did not* purchase a kids' meal. Although this number did not change from 2010 to 2016, the proportion of parents who ordered a kids' meal plus another menu item increased significantly. In 2016, 3 of 10 parents who ordered a kids' meal also ordered an additional menu item for their child.

Finally, despite their healthier kids' meal policies, 41% of parents who ordered a kids' meal from the top-four restaurants in 2016 continued to receive an unhealthy drink, while 61% reported receiving an unhealthy side. At the same time, the proportion of parents who received healthier items did not improve compared with 2010. Parents also were less likely to order kids' meals and

The frequency of parents' purchases of fast-food for their children has increased in recent years, while purchases of healthier drink and side items have not improved.

Additional research is needed to understand why parents are more likely to order kids' meals and healthier menu items for younger children than for older children.

to receive healthier kids' meal drinks and sides for an older child (ages 6-11) than for a younger child (ages 2-5). The increase in parents receiving unhealthy sides with kids' meals in 2016 versus 2013 also indicates a troubling trend.

Additional research needs

Further research is required to understand the reasons for these trends. The increase in fast-food purchases from 2010 to 2016 is consistent with a documented upward trend in quick service restaurant revenues during this time.³⁰ It will be important to assess drivers of this trend, such as lower costs/increased value of fast-food meals, growing time constraints, and/or increases in fast-food advertising to children.³¹ It does not appear that 2010 purchases were unusually low due to the U.S. recession, as previous research has shown that the recession did not affect fast-food purchases.³²

Additional research is also needed to understand why many parents do not order kids' meals or order kids' meals plus additional menu items for their child, and why they continue to order unhealthy kids' meal drinks and sides when healthier options are available. The findings that parents were more likely to purchase kids' meals and healthier items and less likely to purchase additional items for younger children suggest that parents may believe older children need larger portions and/or will not eat the healthier items. It will be important to monitor whether parents continue to purchase the healthier items as these children get older.

It is also important to assess why, despite fast-food restaurants' recent pledges to only list healthier drinks on kids' meal menu boards, we did not find an increase in parents reporting that they received healthier kids' meal drinks from 2013 to 2016. Only McDonald's policy to offer a healthier side automatically with Happy Meals, in addition to french fries, appeared to result in an increase in parents reporting that their child received a healthier side (from 2010 to 2013). Notably, a previous evaluation of McDonald's pledge to remove fountain drinks from kids' meal menus also showed that consumers continued to receive fountain drinks with the majority of kids' meal orders. However, that evaluation used McDonald's data on kids' meal orders, and showed a small improvement following pledge implementation: 54% of kids' meals purchased in 2016 included a fountain drink vs. 64% in 2013.³³

Questions to explore further also include, whether parents are aware that the healthier items are available, if they think their children will like these items, and whether parent-child conflicts arise if they do not allow their child to get the unhealthy items (e.g., french fries, ice cream, sugary soda) that are promoted inside the restaurant. It is interesting that parents expressed positive attitudes about restaurants' healthier kids' meal policies and nearly all parents indicated that they will purchase food for their child at the restaurants more often because of the policies. However, Subway was the only restaurant that parents chose to visit primarily for its healthy kids' meal items, suggesting that the availability of healthier items is less important than other reasons for visiting.

These results also suggest that healthier kids' meal policies could result in unintended public health consequences if they lead parents to view the restaurants more positively and increase their visits, but continue to order the unhealthy items for their child. Furthermore, it is important

to better understand what options fast-food meals replace to determine the effects of changes in fast food purchases on children's diets. Previous research suggests that fast-food replaces more nutritious options.³⁴⁻³⁶ However, if reductions in fast-food consumption increase visits to more caloric meals in full-service restaurants,³⁷ or consumption of nutritionally poor foods prepared at home, then reducing fast-food purchases would not improve children's diets.

Limitations

This research does have limitations. We used a nonprobability based sample, therefore the results are not representative of the entire U.S. population of parents of children 2- to 11-years-old. In addition, to enable comparisons between groups, quotas were established for Black and Hispanic parents. We did not weight the results to adjust for oversampling of these demographic groups nor for other differences between sample and population demographics. Parents also self-reported the fast-food restaurants they visited with their children, which may have biased their responses in some ways, although asking about the past week only should have minimized recall bias. Sampling procedures, sample sizes, and most measures remained consistent across the three years to assess changes over time, but we cannot rule out differences between the three cross-sectional panels as a potential explanation for changes across the three years. It is also possible that changes in environmental factors (e.g., awareness of sugary drink healthfulness, marketing messages by fast-food restaurants) across the three years affected participants' responses to the questions in some systematic way. However, the significant changes documented from 2010 to 2016 are consistent with increases in fast-food sales during this time period³⁸ and changes in restaurants' kids' meal menus, suggesting that these changes are not due to issues with the research design.

Recommendations

These findings indicate numerous opportunities for **restaurants** to enhance their efforts to improve the nutritional quality of fast-food consumed by children. First, restaurants should introduce healthier kids' meals that are also appropriate and appealing to older children. It appears that McDonald's and Panera Bread may have done so, as parents are most likely to order kids' meals for older children at these restaurants compared to the other restaurants examined. Unfortunately, the McDonald's Mighty Kids Meal (which was purchased primarily for older children) also comes with a larger-sized main dish and a bigger serving of french fries than the McDonald's Happy Meal, making it a questionable improvement over purchasing from the restaurant's regular menu.

In addition, restaurants must discontinue the increasingly common practice of offering unhealthy sides together with healthier sides, and/or they should remove unhealthy sides from their kids' meal menus altogether, as they have pledged to do with kids' meal drinks. Burger King's practice of offering a dessert in place of a kids' meal toy indicates an especially troubling potential new trend. Restaurants must also introduce healthier kids' meal main dishes, which remain high in fat, sodium, and/or calories at most restaurants.³⁹

Restaurants must identify opportunities to make healthier items the most appealing options for children and the most convenient choice for parents.

State and local policies may be required to more effectively increase purchases of healthier kids' meal options.

Finally, since parents often choose restaurants that are convenient and that their kids like (more than for healthy options), restaurants should make the healthier items the most appealing options for children to choose. They should also make the healthier items the easiest options for parents to order, for example, by making them the default for kids' meals. Given parents' positive attitudes about healthier kids' meals, there appears to be a substantial marketing opportunity for restaurants to introduce and promote healthier kids' meals that appeal to both parents and children. Notably, in early 2018 McDonald's announced further improvements in the nutritional quality of its Happy Meal and Mighty Kids meals that could help to address some of these issues.⁴⁰

Advocates should also continue to encourage fast-food restaurants to improve the nutrition of kids' meal side and main dish items in addition to drinks, and urge them to introduce healthier options as the default, not just another choice among both healthy and unhealthy options. In light of recent research demonstrating inconsistent implementation of healthier kids' meal pledges at individual restaurant locations,⁴¹ advocates should also monitor and insist that restaurants consistently implement their healthier kids' meal policies.

If restaurants do not implement further improvements voluntarily, advocates should continue to work with state and local municipalities to introduce **public policies** to improve the healthfulness of kids' meals. Policy makers should follow the lead of communities in California and Colorado and consider legislation or regulation to require that all restaurants serve healthier kids' meals.⁴²⁻⁴⁴ For example, since 2015, local municipalities, including Perris, Davis, and Stockton, California, have introduced healthier default kids' beverage ordinances to ensure that sugary drinks do not automatically come with kids' meals.⁴⁵ Two additional municipalities in California, San Francisco and Santa Clara, have ordinances to prohibit the distribution of free toys or giveaways with kids' meals that do not meet minimal nutritional standards,^{46, 47} and similar legislation was introduced (but not passed) in New York City.⁴⁸

However, these findings also demonstrate that such policies must be carefully crafted to limit possible unintended responses from consumers that could reduce their effectiveness, such as an increase in parents purchasing a kids' meal plus another menu item or purchasing higher calorie menu items in place of kids' meals for their child.

Policies must also consider potential restaurant responses such as Taco Bell's decision to discontinue offering kids' meals at all (as it did in 2013⁴⁹). Notably, we did not find a reduction in parents visiting Taco Bell with their children from 2013 to 2016, indicating that discontinuing kids' meals did not lead parents to stop purchasing food for their children there. Although Taco Bell kids' meals were not nutritious, they did provide a lower calorie option for children. Another concern is that restaurants may comply with requirements to add healthier options with their kids' meals, but also increase offering desserts (e.g., ice cream or cookie) (as Dairy Queen and some Subway locations have done) or offer a dessert in place of a kids' meal toy (which some Burger King locations have done).

Conclusion

Together, these results suggest that parents' purchases of fast-food for their children have increased in recent years, while purchases of healthier drink and side items have not increased. In addition, policies must address more than the side and drink options listed on kids' meal menus. Unhealthy options, including main dishes, sides, and desserts, remain on kids' meal menus at most restaurants, and purchases of a kids' meal plus another menu item for their child have increased. Although future research is required to explain the reasons for these trends, they do indicate that restaurants' voluntary pledges, as currently implemented, are unlikely to substantially reduce children's fast-food consumption overall, or increase their selection of available healthier drink and side options. Furthermore, parents' positive attitudes about restaurants' healthier kids' meal policies indicate that such policies could backfire for public health and increase the frequency of purchasing fast-food for their children without increasing healthier purchases. These findings demonstrate that restaurants must implement more effective healthier kids' meal policies to avoid additional state and local regulations that would mandate healthier options for children.

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Methods

This survey assessed parents' visits to one of the four largest fast-food restaurants (McDonald's, Burger King, Wendy's or Subway) to purchase lunch or dinner for their 2- to 11-year-old child in the past week, including the menu items they selected and why they chose that restaurant. All parents also reported the frequency of their visits to 16 fast-food restaurants to purchase food for their children for any eating occasion. The survey was conducted in 2010, 2013, and 2016, using the same sampling procedures and methods.¹ In 2016, detailed information about visits to KFC, Dairy Queen, and Panera Bread were also provided, and parents reported their attitudes about restaurants' healthier kids' meal policies. We examined differences by year, as well as differences between parents of preschool-age children (ages 2-5) and older children (ages 6-11), and compared responses by parents' race and ethnicity.

Sample

Participants were recruited via Survey Sampling International (SSI).² SSI distributed the survey to its panel of consumers who agree to participate in survey research. SSI recruits its panel members through thousands of websites to obtain a representative sample of the online population. The company screens panelists to provide high-quality respondents. Panelists do not receive a direct reward for completing individual surveys. Instead, participants receive compensation for being active panelists. These rewards range from charitable donations to monetary and point rewards for overall participation. All participants in this survey were anonymous.

In September 2010, July 2013, and July 2016, SSI recruited a national sample of approximately 800 parents with children between the ages of 2 and 11. Additional Black and Hispanic parents were recruited to include at least 100 participants each in all three years. Participation rates for the total sample were 89% in 2010, 90% in 2013, and 97% in 2016.

The survey was conducted using an online non-probability sample of adults. The use of a non-probability based panel for an online survey has limitations as these findings are not representative of the population. However, there are advantages in cost and the ability to evaluate differences between specific populations. This research was not intended to produce precise estimates of fast-food purchases for the population, but rather to understand how purchases change over time.

Survey

Participants accessed the survey on the computer through an email link. After providing consent, participants confirmed that they were the parent of at least one child aged 2-11 years old. The study questions assessed detailed information about: 1) parents' visits to top fast-food restaurants to purchase lunch or dinner for their 2- to 11-year-old child(ren) in the past week; 2) parents' purchases of kids' meals, other menu items, and healthier drinks and sides (with kids' meal orders) for one 2- to 11-year-old child; 3) parents' attitudes about the restaurant visited and healthy kids' meal policies in 2016; and 4) frequency of visits to a larger group of fast-food restaurants with their 2- to 11-year-old child(ren) for any occasion.

Parents' visits to top fast-food restaurants to purchase lunch or dinner for their 2- to 11-year-old child(ren) in the past week

Parents first indicated whether they had purchased lunch or dinner from McDonald's, Burger King, Subway, and/or Wendy's for their 2- to 11-year-old child(ren) within the past week. In 2016, they were also asked about purchases from KFC, Dairy Queen, and Panera Bread in the past week.

If they answered "yes", parents then provided detailed information about the food they purchased for one of their children at one of the restaurants they visited. If parents had purchased lunch or dinner for their child(ren) from more than one of these restaurants in the past week, they were randomly assigned to answer questions about one of the restaurants. If parents had more than one qualified child, they answered questions about the child with the most recent birthday.

Parents indicated the age of their 2- to 11-year-old child with the most recent birthday for whom they had purchased food during their last visit to the specific restaurant (i.e., McDonald's, Burger King, Wendy's, Subway, KFC, Dairy Queen, or Panera Bread). They then selected the type(s) of menu items they bought for their child. Five options were provided (kids' meal, combo meal, value menu items, other individual menu items, or other [fill in]), and parents could select more than one if applicable. If parents indicated that they had ordered from the kids' meal menu, they were then shown lists of items available on the menu for the specific restaurant they visited (with separate questions for main dish, side/dessert, and drink items) and asked to select the specific items they received for their child. Researchers identified individual side and drink options that were designated as "healthier" choices by the restaurants, including low-fat or fat-free plain and flavored milk, 100% juice, plain water, low-calorie drinks (e.g., Capri Sun Roarin' Waters), and fruit, vegetable, and yogurt sides.

Attitudes about restaurants and healthy kids' meal policies in 2016

Parents who had purchased food for their children in the past week at one of the top fast-food restaurants were also asked to indicate why they chose that restaurant by selecting the one most important factor from five options: good value for money, convenience, healthy menu options, my child(ren) like this place, or other (please specify).

In 2016, participants also provided their attitudes about the healthier kids' meal policy(ies) of the restaurant they visited. These questions described the restaurant's policy, and separate questions were asked for each policy if the restaurant had more than one (i.e., McDonald's and Dairy Queen):

- Policy to only offer healthy drinks with kids' meals (McDonald's, Burger King, Wendy's, KFC, Subway, and Dairy Queen).
- Policy to automatically offer one healthier side with kids' meals (McDonald's).
- Policy to offer a kids' meal that meets the National Restaurant Association's Kids LiveWell nutrition standards (Dairy Queen).

Participants first indicated how this policy affects how they feel about the restaurant, with responses ranging from 1 (significantly less positive) to 9 (significantly more positive). They then indicated if the policy affects how often they will purchase food from the restaurant for their 2- to 11-year-old, with responses ranging from 1 (significantly less often) to 9 (significantly more often).

Frequency of visits to fast-food restaurants

All participants (including those who had not visited one of the top fast-food restaurants in the past week) reported the frequency of their visits to 16 of the largest fast-food restaurants (12 restaurants in 2010) to purchase food for their 2- to 11-year-old children for any occasion. The following options were provided: never buy food from this restaurant, once a month or less, a few times a month, 1-2 times a week, 3-6 times a week, every day.

Parent socio-demographics

Finally, parents were asked to identify their own racial and ethnic identity (White/Caucasian, African-American, Hispanic, Asian/Pacific Islander, Native American and other) and to select all that apply. Participants who selected both White and Hispanic were coded as Hispanic. All other participants who selected more than one option were coded as multiple race/ethnicity. Parents also indicated number of children (of any age), and their own gender and highest level of education completed.

Data analysis

Survey responses were compared by year (2010, 2013, 2016). We also examined differences between parents of preschool-age children (2-5 years) and elementary school-age children (6-11 years), as well as by race/ethnicity (White non-Hispanic, Black non-Hispanic, and Hispanic parents). Chi-square tests with Bonferroni corrections were used to identify significant differences between year and demographic groups for all three years combined.

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TABLE B1. SAMPLE DESCRIPTIVES OF ALL PARENTS WITH CHILDREN AGES 2 TO 11

Demographic characteristics		2010		2013		2016		Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Gender of parent	Female	571	82.9	389	51.7	432	51.1	1392	60.9
	Male	118	17.1	364	48.3	413	48.9	895	39.1
Age of parent	18-25	89	12.9	42	5.6	40	4.7	171	7.5
	25-30	168	24.4	149	19.8	182	21.5	499	21.8
	30-40	257	37.3	341	45.3	482	57.0	1080	47.2
	40-50	125	18.1	158	21.0	136	16.1	419	18.3
	50+	50	7.3	73	9.7	5	0.6	118	5.2
Number of children in household (all ages)	1	167	24.3	206	27.5	228	27.0	601	26.3
	2	275	40.0	303	40.4	395	46.7	973	42.6
	3	135	19.6	142	18.9	143	16.9	420	18.4
	4+	111	16.1	99	13.2	79	9.3	289	12.7
Parent education	High school/GED or less	197	28.7	153	20.3	103	12.2	453	19.8
	Some college, 2-year college degree	331	48.2	270	35.9	249	29.5	850	37.2
	4-year college, graduate or professional degree	159	23.1	329	43.8	493	58.3	981	43.0
Parent race/ethnicity	White non-Hispanic	307	44.7	459	61.0	521	61.7	1287	56.3
	Black non-Hispanic	199	29.0	120	16.0	149	17.6	468	20.5
	Hispanic	150	21.8	92	12.2	132	15.6	374	16.4
	Other/multiple	31	4.5	81	10.8	43	5.1	155	6.8

Percentages are based on those responding to each question

Appendix B. Supplemental Tables

TABLE B2. PARENTS WHO PURCHASED LUNCH OR DINNER FOR THEIR CHILD IN THE PAST WEEK FROM INDIVIDUAL RESTAURANTS

	Total*	Year of survey			Child's age ¹		Parent race/ethnicity		
		2010 (a)	2013 (b)	2016 (c)	2-5y (a)	6-11y (b)	White non- Hispanic (a)	Black non- Hispanic (b)	Hispanic (c)
# of respondents	2,468	768	830	870	815	1,237	1,287	468	374
Parents who purchased lunch or dinner for their child in the past week at McDonald's, Burger King, Subway, and/or Wendy's (top-four restaurants):									
% of parents who purchased from at least one ²	85	79	83 ^a	91 ^{ab}			85	84	89 ^{ab}
Avg number of restaurants ²	2.1	1.7	2.1 ^a	2.4 ^{ab}	2.1	2.3 ^a	2.1	2.1	2.1
% of parents who purchased lunch or dinner at:									
McDonald's	73	66	72	80 ^a	86	84	74	72	74
Burger King	40	26	39 ^a	54 ^{ab}	44	50 ^a	41	40	43
Subway	38	25	42 ^a	46 ^a	38	49 ^a	39	35	39
Wendy's	37	24	38 ^a	46 ^{ab}	39	45 ^a	37	37	35
KFC ³		-	-	43	43	49	51 ^{bc}	35	38
Dairy Queen ³		-	-	28	28	32	31	25	27
Panera Bread ³		-	-	28	28	32	34 ^{bc}	17	23

¹ Age of child with the most recent birthday

² For parents who purchased lunch or dinner for their child at one or more of these restaurants: McDonald's, Burger King, Subway, and Wendy's

³ Restaurant was asked in 2016 only. Sample size for 2016 only: Child's age 2-5y (n=267); Child's age 6-11 y (n=523); White non-Hispanic (n=505); Black non-Hispanic (n=139); Hispanic (n=124)

*For restaurants asked in all three years

Letter means that it is statistically different from the column of the letter at 95% significance level after Bonferroni corrections

TABLE B3. TYPE OF MENU ITEMS PURCHASED

Restaurant	Type of menu items purchased (%)*	Total**	Year of survey			Child's age ¹	
			2010 (a)	2013 (b)	2016 (c)	2-5y (a)	6-11y (b)
McDonald's (n=882)	All kids' meals total (Happy Meal or Mighty Kids Meal)	73	73	71	75	81	69
	Kids' meal only	60	66 ^b	54	58	72 ^b	53
	Kids' meal and another item	12	7	17 ^a	18 ^a	9	16 ^a
	Happy Meal total (n=486)	55	59	48	57	72	42
	Kids' meal only	46	54 ^{bc}	37	42	65 ^b	31
	Kids' meal and another item	9	5	11 ^a	15 ^a	7	12 ^a
	Mighty Kids Meal total (n=154)	17	14	22	18	8	26
	Kids' meal only	15	13	17	15	7	22 ^a
	Kids' meal and another item	3	2	5 ^a	3	2	4 ^a
	Other menu type only	25	24	26	24	18	31 ^a
Burger King (n=322)	Kids' meal total	59	54	67	54	66	57
	Kids' meal only	44	50	51	36	53 ^b	41
	Kids' meal and another item	15	4	16 ^a	18 ^a	13	16
	Other menu type only	39	40	31	45	34	43
Wendy's (n=257)	Kids' meal total	61	52	65	63	65	63
	Kids' meal only	45	50	49	38	49	45
	Kids's meal and another item	16	2	16 ^a	25 ^a	16	18
	Other menu type only	35	45	29	36	35	37

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TABLE B3. TYPE OF MENU ITEMS PURCHASED (CONTINUED)

Restaurant	Type of menu items purchased (%)*	Total**	Year of survey			Child's age ¹	
			2010 (a)	2013 (b)	2016 (c)	2-5y (a)	6-11y (b)
Subway (n=297)	Kids' meal total	54	44	56	60	68	49
	Kids' meal only	41	41	39	44	56 ^b	35
	Kids' meal and another item	13	3	17 ^a	16 ^a	12	14
	Other menu type only	44	53	43	40	33	51 ^a
KFC ² (n=104)	Kids' meal total		-	-	60	54	62
	Kids' meal only		-	-	37	39	35
	Kids' meal and another item		-	-	23	15	27
	Other menu type only		-	-	40	45	38
Dairy Queen ² (n=67)	Kids' meal total		-	-	55	69	50
	Kids' meal only		-	-	31	37	29
	Kids' meal and another item		-	-	24	32	21
	Other menu type only		-	-	45	32	50
Panera Bread ² (n=53)	Kids' meal total		-	-	79	80	78
	Kids' meal only		-	-	43	55	36
	Kids's meal and another item		-	-	36	25	42
	Other menu type only		-	-	21	20	21

¹ Age of child with the most recent birthday

² Restaurant asked in 2016 only

* Percent of parents who visited the restaurant and ordered lunch or dinner for their child

** For restaurants asked in all three years

Letter means that it is statistically different from the column of the letter at 95% significance level after Bonferroni corrections

TABLE B4. PERCENT OF KIDS' MEAL PURCHASES THAT RECEIVED A HEALTHIER DRINK

Restaurant	Total*	Year of survey			Child's age ¹	
		2010 (a)	2013 (b)	2016 (c)	2-5y (a)	6-11y (b)
McDonald's kids' meals total (n=640)	56	57	54	58	65 ^b	47
Happy Meal (n=486)	60	61	56	60	66 ^b	50
Mighty Kids Meal (n=154)	46	41	48	50	55	44
Burger King (n=189)	49	54	46	49	58	41
Wendy's (n=158)	56	63	50	58	72 ^b	45
Subway (n=162)	73	87	64	77	75	72
KFC ² (n=62)		-	-	55	56	55
Dairy Queen ² (n=37)		-	-	59	77	50
Panera Bread ² (n=42)		-	-	67	75	62

¹ Age of child with the most recent birthday

² Restaurant asked in 2016 only

*For restaurants asked in all three years

Healthier drinks: milk, 100% juice, water, and other drinks listed on kids' meal menus as healthier choices

Letter means that it is statistically different from the column of the letter at 95% significance level after Bonferroni corrections

TABLE B5. PERCENT OF KIDS' MEAL PURCHASES THAT RECEIVED HEALTHIER AND/OR UNHEALTHY SIDES

Restaurant		Total*	Year of survey			Child's age ¹	
			2010 (a)	2013 (b)	2016 (c)	2-5y (a)	6-11y (b)
McDonald's kids' meals total ³ (n=640)	Healthier sides only	27	27 ^b	19	35 ^b	30	24
	Unhealthy sides only	44	72 ^{bc}	13	31 ^b	49 ^b	39
	Both healthier and unhealthy sides	29	-	68 ^c	33	21	37 ^a
Happy Meal ³ (n=486)	Healthier sides only	27	26	22	35	29	24
	Unhealthy sides only	47	73 ^{bc}	13	34 ^b	50	42
	Both healthier and unhealthy sides	25	-	64 ^c	30	19	34 ^a
Mighty Kids Meal ³ (n=154)	Healthier sides only	24	30 ^b	12	34	30	22
	Unhealthy sides only	36	70 ^{bc}	13	21	39	35
	Both healthier and unhealthy sides	40	-	75 ^c	45	30	43
Burger King (n=189)	Healthier sides only	25	36 ^c	31	15	37 ^b	19
	Unhealthy sides only	73	64	66	84 ^{ab}	62	80 ^a
Wendy's (n=158)	Healthier sides only	32	31	43 ^c	23	45 ^b	23
	Unhealthy sides only	66	69	53	77 ^b	55	75 ^a
Subway ³ (n=162)	Healthier sides only	62	81 ^c	80 ^c	36	68	58
	Unhealthy sides only	21	19	20	21	16	24
	Both healthier and unhealthy sides	17	-	-	43	16	18

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Appendix B. Supplemental Tables

TABLE B5. PERCENT OF KIDS' MEAL PURCHASES THAT RECEIVED HEALTHIER AND/OR UNHEALTHY SIDES (CONTINUED)

Restaurant		Total*	Year of survey			Child's age ¹	
			2010 (a)	2013 (b)	2016 (c)	2-5y (a)	6-11y (b)
KFC ^{2,3} (n=62)	Healthier sides only		-	-	15	11	17
	Unhealthy sides only		-	-	33	50	26
	Both healthier and unhealthy sides		-	-	52	39	57
Dairy Queen ² (n=37)	Healthier sides only		-	-	32	46	25
	Unhealthy sides only		-	-	68	54	75
Panera Bread ² (n=42)	Healthier sides only		-	-	74	69	77
	Unhealthy sides only		-	-	21	31	15

¹ Age of child with the most recent birthday

² Restaurant asked in 2016 only

³ Kids' meals received more than one side

*For restaurants asked in all three years

Healthier sides: fresh fruit, yogurt, applesauce, and vegetables

Letter means that it is statistically different from the column of the letter at 95% significance level after Bonferroni corrections

TABLE B6A. PARENTS WHO PURCHASE FOOD FOR THEIR 2- TO 11-YEAR-OLD CHILD(REN) AT INDIVIDUAL FAST FOOD RESTAURANTS WEEKLY OR MORE OFTEN

Restaurant	Total*	Year of survey			Age of child(ren)			Parent race/ethnicity		
		2010 (a)	2013 (b)	2016 (c)	Under 6 only (a)	6-11 only (b)	Under 6 and 6-11 (c)	White non-Hispanic (a)	Black non-Hispanic (b)	Hispanic (c)
# of respondents	2,333	708	774	851	554	1,065	650	1,287	468	374
Buy food at this restaurant weekly or more often (%):										
McDonald's	35	22	37 ^a	44 ^{ab}	31	38 ^{ac}	33	36 ^c	37 ^c	29
Burger King	21	8	22 ^a	33 ^{ab}	18	25 ^{ac}	18	24 ^c	19	18
Subway	23	10	25 ^a	31 ^a	17	28 ^{ac}	19	24	21	21
KFC	19	5	18 ^a	31 ^{ab}	15	22 ^a	17	22 ^{bc}	15	15
Pizza Hut	19	5	20 ^a	29 ^{ab}	13	24 ^{ac}	16	22 ^{bc}	14	15
Starbucks	19	5	20 ^a	29 ^{ab}	15	22 ^{ac}	18	21 ^b	13	17
Wendy's	20	8	23 ^a	28 ^{ab}	17	23 ^{ac}	18	22	19	18
Dunkin' Donuts	17	4	17 ^a	28 ^{ab}	13	20 ^{ac}	15	20 ^{bc}	13	14
Domino's Pizza	16	4	18 ^a	25 ^{ab}	11	20 ^{ac}	14	18	13	14
Taco Bell	19	7	24 ^a	25 ^a	15	22 ^{ac}	17	20	17	16
Panera Bread ¹		-	16	24 ^b	16	24 ^{ac}	16	23 ^{bc}	14	17
Chick-Fil-A ¹		-	18	23 ^b	19	22 ^{ac}	18	21 ^c	21	17
Dairy Queen	15	5	17 ^a	22 ^{ab}	12	18 ^{ac}	13	17	13	12
Sonic	15	6	16 ^a	20 ^a	11	17 ^{ac}	13	17 ^{bc}	12	10
Jack in the Box ¹		-	16	19	14	20 ^{ac}	15	19 ^b	16	16
Arby's ¹		-	16	18	12	21 ^{ac}	14	19 ^{bc}	13	14

¹ Restaurant was asked in 2013 and 2016 only, total respondents = 1,625

*Restaurants included in all three years

Letter means that it is statistically different from the column of the letter at 95% significance level after Bonferroni corrections

TABLE B6B. PARENTS WHO NEVER PURCHASE FOOD FOR THE 2- TO 11-YEAR-OLD CHILD(REN) AT INDIVIDUAL FAST FOOD RESTAURANTS

Restaurant	Total*	Year of survey			Age of child(ren)			Parent race/ethnicity		
		2010 (a)	2013 (b)	2016 (c)	Under 6 only (a)	6-11 only (b)	Under 6 and 6-11 (c)	White non-Hispanic (a)	Black non-Hispanic (b)	Hispanic (c)
# of respondents	2,333	708	774	851	554	1,065	650	1,287	468	374
Never buy food at this restaurant (%):										
Jack in the Box ¹		-	60	51	63	52	54	56	64 ^{ac}	46 ^a
Arby's ¹		-	40	41	50	37	39	35	53	50
Starbucks	53	74 ^{bc}	50 ^c	37	57 ^b	50	52	51	61 ^{ac}	51
Sonic	45	50 ^c	48 ^c	37	49 ^b	42	44	44	44	46
Panera Bread ¹		-	52 ^c	37	51	41	43	42	53	43
Dunkin' Donuts	47	66 ^{bc}	43	34	53 ^b	42	50 ^b	45	50	48
Chick-Fil-A ¹		-	48 ^c	32	43	37	40	38	41	42
Dairy Queen	38	46 ^{bc}	37	32	44 ^{bc}	36	35	34	40	46 ^a
Domino's Pizza	37	47 ^{bc}	37 ^c	27	43 ^{bc}	35	34	37	36	34
Taco Bell	27	30	26	25	34 ^{bc}	24	24	25	29 ^a	29 ^a
KFC	27	31	28	23	36 ^{bc}	23	25	28	24	27
Pizza Hut	24	29 ^c	24	19	32 ^{bc}	20	22	25	21	24
Wendy's	18	20	18	16	23 ^{bc}	15	17	17	16	24 ^{ab}
Subway	18	24 ^{bc}	15	15	25 ^{bc}	14	17	16	20	18
Burger King	16	16	17	15	19 ^b	14	17	16	14	17
McDonald's	5	4	5	5	7 ^b	3	5	4	4	6

¹ Restaurant was asked in 2013 and 2016 only, total respondents = 1,625

*Restaurants included in all three years

Letter means that it is statistically different from the column of the letter at 95% significance level after Bonferroni corrections