Economic Constraints on Children’s Taste Formation and the True Cost of Healthy Eating

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Research Question

How do low-income and higher-income parents decide what to feed their children?

Background and Motivation

- Rates of diet-related disease have risen
- Socioeconomic disparities in diet quality and dietary health exist

Healthy Eating is Prohibitive

Energy-dense, nutrient-poor foods provide the most affordable dietary Energy.

(Drewnowski & Darmon 2005, Darmon & Drewnowski 2008)

Today’s Research Question

How do economic constraints shape opportunities for children’s taste acquisition?

Research Question

How do low-income and higher-income parents decide what to feed their children?

How do material constraints and ideas interact to produce these decisions?
Healthy Eating is Possible

Many healthier foods are affordable, depending on how cost is measured.

(Carlson & Frazao, 2012)

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Neophobia and its Cost

• Children are wary of unfamiliar foods
• Acceptance can take 8 to 15 exposures
• Experience with a variety of foods → willingness to try and acceptance

Data and Methods

• 73 interview respondents
• 41 shopping observations, plus interview
• 53% white, 41% Black, 6% biracial
• 62% low-income, 16% moderate income, 22% higher-income

Empirical Argument

Taste aversion → Waste → Risk aversion
Contribution
- Compare tendencies of low- and higher-income respondents
- Consider implications for taste acquisition and food trajectory, not just present intake
- Examine moderators of risk aversion
- Extend findings to debates about cost of healthy eating

Buying Based on Preference
“I have a bad habit of picking things that they eat a lot instead of trying different things, because I don’t know if they’re gonna like them.”

- Sharonda
  (low-income African-American mother)

Cooking Based on Preference
“I know they’re gonna eat it, and if there’s leftovers, I know that they’ll have no problem with eating the leftovers.”

- Tamika
  (low-income African-American mother)
Why Defer to Kids’ Preferences?

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Cooking Based on Preference

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-Tamika
(low-income African-American mother)

Why Defer to Kids’ Preferences?

• Makes children happy
• Reduces time costs
• Reduces interpersonal conflict
• Minimizes food costs

Liking Minimizes Waste

“I get food stamps. Even then, ’cause things are so expensive, you end up using [your own] money. So I [get] the things I know that my son will eat and like. I try to mix it up a little bit […] but I try not to buy things that I don’t know if he’ll like, because, it’s just, it’s a waste.”

-Brittany
(poor, food-insecure white mother)
Scarcity Limits Experimentation

“She tried it, didn’t like it—let her experiment on a budget, you know what I’m sayin’? “Mummy, I want that!” “You’re not gonna try that ’cause we can’t afford it, and you don’t know if you gonna like it. [...] We get that, we’re not gonna be eating for a couple days, so if you want an empty stomach, you go ahead and try that.”

- Trisha
(poor African-American mother)

Economic Limits on Repeated Exposure

Brittany:
No, because you know those whole ten times that they say, “No, no, no,” you’re wasting that food. So that’s a big thing for me.

Me:
So if you knew that after eleven cauliflowers he would finally like cauliflower, would it be worth it?

Brittany:
No, No. That’s a lot of wasted food. No. Not for me, not for me.

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• Often, children like energy-dense, nutrient-poor foods

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Parents Defer to Children’s Preferences?
- Parents fall back on what they know their children like
- Often, children like energy-dense, nutrient-poor foods
  - Sweetened oatmeal packets vs. plain oatmeal
  - Hot Pockets vs. homemade beans and rice
  - Mashed potatoes vs. collared greens

Broad Preferences, Less Waste
- Family members can share their food with children
- Family members can absorb the food that children reject

Moderator: Family Food Preferences
Household-level preferences define which foods are risky

Limited Preferences, More Waste
Cassie: I don’t buy a lot of those things. If I’m at somebody’s house and my daughter sees it and says, “Ooh, that looks good,” then I might let her try it. Other than that I don’t buy those things, so she kind of isn’t getting what she should be.

Me: And what holds you back from buying stuff like that?

Cassie: Um, the fact that I don’t eat it [laughs].

Limited Preferences, More Waste
Me: Are there any things that she doesn’t eat for breakfast that you would like her to eat more of?

Cassie: I can give her bacon and eggs and I just feel as though it’s a waste of money giving it to her because she will leave it there.

― Jackie
(low-income white mother)

― Cassie
(Low-income African-American mother)
Children Encounter Food Elsewhere

- Low-income respondents were willing to buy foods their children had tried and liked
- Carrot and celery sticks (school)
- Pomegranates (school)
- Asian pears (school)
- Asparagus (friend’s house)
- Cauliflower parmesan (food pantry)
- Tomatoes (cookout)

Kids’ Favorites Are Still Important

Me: And what are you most looking forward to giving them?

Lorraine:

I’m always happy when I have certain easy, go-to items in the house. That always makes me feel complete. Like I’m well stocked and I can get things done quickly.

- Lorraine
  (higher-income white mother)

Higher-Income Parents Take Risks

“I can take a chance on food that he might not like. He wanted [a peach-poppyseed salad], and I was like, “Okay, I’ll buy it, but I’m not sure you’re going to like it.” And then he didn’t like it, and I was like, “I knew you wouldn’t like it.” [Raises hands in resignation.]

Ehh. It’s okay. But again, because we’re lucky…”

- Claudia
  (middle-class white mother)

Why Not Withhold Food?

Cost Is A Less Salient Barrier

Wendy: Yes, ‘cause almonds are very easy to put in a little Ziploc bag and take it with you.

Me: Would you be at all worried that if you did that ten to fourteen times, it would kind of be a waste of money?

Wendy: I would find a better storing solution so that they won’t get rubbery and stale, but um, I, no, I don’t know if money would be a reason for me not to buy it.

Why Not Withhold Food?

- Hungry children are often difficult to deal with
- Eating disliked food under stress does not increase liking for that food
  (Devine et al 1998)
Why Not Withhold Food?

- Parental identity

Scope Conditions and Caveats

- Risk aversion may not be the most immediate barrier to healthy eating
- Other beliefs and attitudes may be most effective targets for dietary change

Why Not Withhold Food?

- Parental identity
- State intervention in family life

Implications: Children’s Health

- Without repeated exposure to varied foods, children may not come to like options that are not inherently palatable

“So, I don't want to force him. See, I was forced to do this when I was a kid. It's either you ate it or you didn't eat, and that was it. Now, forget about it. If you do that, they're like, “I'm calling the police, I'm calling child [protective] services.”

- Stefanie
  (low-income white mother)

Implications: Children’s Health

- Without repeated exposure to varied foods, children may not come to like options that are not inherently palatable
- Preferences formed in childhood tend to track over time
- Early experiences set “food roots”
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- Without repeated exposure to varied foods, children may not come to like options that are not inherently palatable
- Preferences formed in childhood tend to track over time
  - Early experiences set “food roots”
- Risk aversion may contribute to socioeconomic disparities in diet quality

Implications: Food Cost Estimates

- In most estimates, waste is unobserved
- Why? Studies use food intake data
- Food Cost = Quantity consumed \times Price

Implications: Food Cost Estimates

- In most estimates, waste is unobserved
- Why? Studies use food intake data
- Food Cost = \frac{1}{2} apple \times 50 cents = 25 cents

Implications: Food Cost Estimates

- In most estimates, waste is unobserved
- Why? Studies use food intake data
- Food Cost = (Qty consumed + Qty wasted) \times Price

For parents, waste is salient

- Parents pay for what’s consumed and what’s wasted
- Cost = (Qty consumed + Qty wasted) \times Price
Implications: Food Cost Estimates

- Cost = (Qty consumed + Qty wasted) x Price
- Consumed: ½ apple
- Wasted: ½ apple
- Cost of ½ apple = (½ apple + ½ apple) x 50 cents
  = 50 cents
- Cost food provided > Cost of food consumed

Implications: Food Cost

- The same food can have different costs depending on how much is wasted
- Foods with similar prices may have different costs
- Affordable foods can become costly

Implications: Food Cost

- The same food can have different costs depending on how much is wasted

Implications: Food Cost Debate

- “Healthy is possible” argument overestimates ability to provide healthy diet
- “Healthy is prohibitive” argument may be accurate for an unanticipated reason

Implications: Food Cost

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- Foods with similar prices may have different costs
Scope Conditions

- Some foods are expensive no matter how little the waste
  - Fresh seafood
  - Cherries
  - Berries
  - Sushi
  - Asian pears
  - Quinoa
  - Homemade Chinese-American food

Implications: Policy and Programming

- Distribute risk across organizations
  - Schools
  - After-school programs
  - Religious organizations

- Experiential food education increases willingness to try and acceptance (Liquori et al 1998, Heim et al 2009)
  - School-to-home spillover

Implications: Policy and Programming

- Feeding advice should acknowledge risk aversion
  - Identify foods that create less waste

- Create positive emotions around food
  - Involve children in cooking
  - Appealing, engaging presentation (Connell et al 2016)

Limitations and Next Steps

- Breadth and representativeness
- Magnitude relative to other barriers
- Do not quantify how much food-cost estimates would change with waste

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Thank you
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