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Research report

Child as change agent. The potential of children to increase healthy food purchasing ☆

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ABSTRACT

Shoppers make many food choices while buying groceries. Children frequently accompany caregivers, giving them the potential to influence these choices. We aimed to understand low-income shoppers' perceptions of how children influence caregivers' purchasing decisions and how the supermarket environment could be manipulated to allow children to serve as change agents for healthy food purchasing in a primarily African-American community. We conducted thirty in-depth interviews, five follow-up interviews, one supermarket walk-through interview, and four focus groups with adult supermarket shoppers who were regular caregivers for children under age 16. We conducted one focus group with supermarket employees and one in-depth interview with a supermarket manager. Qualitative data were analyzed using iterative thematic coding and memo writing. Caregivers approached grocery shopping with efforts to save money, prevent waste and purchase healthy food for their families, but described children as promoting unplanned, unhealthy food purchases. This influence was exacerbated by the supermarket environment, which participants found to promote unhealthy options and provide limited opportunities for children to interact with healthier foods. Caregivers' suggestions for promoting healthy purchasing for shoppers with children included manipulating the placement of healthy and unhealthy foods and offering opportunities for children to taste and interact with healthy options.

Introduction

Obesity rates are increasing among children and adults, with childhood obesity nearly tripling over the last three decades (Centers for Disease Control and Prevention, 2012a, 2012b). While many factors contribute to rising obesity rates, food intake is an important component that must be addressed in order to curb the rise in obesity (US Department of Health and Human Services, 2001). Individuals make hundreds of decisions daily regarding food intake, including what to eat, how much to purchase, whom to share with and so on, and each decision is influenced by a range of contextual and personal factors (Furst, Connors, Bisogni, Sobal, & Falk, 1996; Wansink & Sobal, 2007).

While food choices occur in many different contexts throughout the day, grocery store environments are gaining attention as important venues for dietary decisions (Cheadle et al., 1991; Gittelsohn et al., 2010; Inagami, Cohen, Finch, & Asch, 2006; Zenk et al., 2011). Studies have found that stocking of healthy items at local food stores and distance to food stores are correlated with dietary intake and BMI, and interventions to promote healthier purchasing through stocking healthy items and using educational materials to promote these items have shown promise (Cheadle et al., 1991; Gittelsohn et al., 2010; Inagami et al., 2006; Zenk et al., 2011). Moreover, qualitative studies have explored shoppers' experiences grocery shopping in low-income neighborhoods, and have identified poor placement and promotion of healthy items as potential barriers to purchasing these items (Wilson & Wood, 2004; Zachary, Palmer, Beckham, & Surkan, 2013). Most of this research has focused on individual adult shoppers, but many caregivers bring their children with them to the supermarket, giving children the potential to influence food purchasing.

Marketing research has long recognized the influence children can exert on caregivers' purchasing decisions, and used this influence to promote specific grocery items (Galst & White, 1976; Powell, Langlands, & Dodd, 2011; Wilson & Wood, 2004). A few studies have begun to expand this research from a public health perspective by exploring how children might influence the healthfulness of foods purchased when grocery shopping with their parents. A study of the impact of shopping with children on the nutritional content of purchases found that parents tend to use nutrition heuristics rather than reading nutrition labels, and that the perceived need to move through the store quickly while shopping with children may

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decrease the time available to compare the nutritional benefits of products (Maubach, Hoek, & McCreanor, 2009). Other studies suggest that children influence purchasing more directly in the store, through requests and nagging for specific items (Atkin, 1978; Henry & Borzekowski, 2011; Maubach et al., 2009). One study that broke down children's food requests by the category of items requested found that parents acquiesced to children's requests about half of the time and that over half of granted food requests were for unhealthy items (O'Dougherty, Story, & Stang, 2006). However, these studies of children's influence on purchasing focus on parent–child interactions independent of store context.

To summarize, there exists a body of research on the impact of food store environments on purchasing (Cheadle et al., 1991; Gittelsohn et al., 2010; Inagami et al., 2006; Zachary et al., 2013; Zenk et al., 2011) and another body of research on children's influence on purchasing (Atkin, 1978; Henry & Borzekowski, 2011; Maubach et al., 2009; O'Dougherty et al., 2006), but current research fails to explore how these two sets of factors come together to influence purchasing. With the goal of informing supermarket-based health initiatives, we chose to explore the joint influence of these factors on the healthfulness of foods purchased from the perspective of caregivers.

As racial minorities and low-income families suffer disproportionately from high obesity rates, we aimed to learn about this dynamic in a low-income, urban, predominantly African-American community, where obesity rates are high and purchasing is also constrained by limited food budgets (Centers for Disease Control and Prevention, 2012a; Ogden, Carroll, Kit, & Flegal, 2012; Wang & Beydoun, 2007). We were particularly interested in understanding which aspects of the supermarket environment hinder and promote healthy purchasing for low-income shoppers with children, and how the supermarket environment could maximize children's potential as change agents to increase healthy purchasing.

Methods

This qualitative study was conducted to inform an intervention to increase healthy purchasing in a full-service supermarket located in a low-income neighborhood of Baltimore City. Situated in an area where over a quarter of families with children under age 18 have incomes below the Federal Poverty Level (Ames, Evans, Fox, Milam, & Rutledge, 2011), the study supermarket is promoted as a sale supermarket, highlighting low prices to serve local low-income shoppers. Many of the neighborhoods surrounding the study supermarket are considered food deserts, defined as 'an area where the distance to a supermarket is more than one quarter of a mile; the median household income is at or below 185 percent of the Federal Poverty Level; over 40 percent of households have no vehicle available; and the average Healthy Food Availability Index score for supermarkets, convenience and corner stores is low (measured using the Nutrition Environment Measurement Survey)' (Center for a Livable Future, 2012). The residents in this census tract are predominantly African American (76.2%) and White (17.6%), and the median household income, at $27,158, is roughly 70% of the median household income in Baltimore City (Ames et al., 2011).

We used maximum variation sampling to gain perspectives of shoppers from a range of ages, neighborhoods, family compositions, and economic constraints (Sandelowski, 1995). Interview participants were recruited through a leader of a local community organization and flyers posted at the study supermarket, schools, WIC centers, Head Start centers, churches, and a transitional housing facility, as well as referrals from other participants. Focus group participants were recruited separately for each group: Participants for the first focus group were recruited through a community leader and WIC office at a local community center; participants in the second and fifth focus groups were recruited from a transitional housing facility; participants in the third focus group were recruited from supermarket employees by the study store manager; and participants in the fourth focus group were recruited through schools and community centers. We did not turn away any volunteers who met inclusion criteria.

Participants ranged from young adults to senior citizens. All except five were African American, and 57 of 62 were women. With the exception of one interview with the store manager, all participants were adults who met the inclusion criteria of shopping at the study store, caring regularly for at least one child under the age of sixteen, and self-identifying as the primary shopper in their household (Table 1). Participants in the third focus group were employees at the study supermarket in addition to meeting other inclusion criteria. The majority of participants received USDA Supplemental Nutrition Assistance Program (SNAP) benefits; however, many participants also had income from part or full-time employment.

Qualitative data were collected in Southwest Baltimore, Maryland from February 2011 to July 2012. We conducted thirty in-depth interviews, five follow-up interviews, and five focus group discussions ($n_1 = 8$, $n_2 = 8$, $n_3 = 6$, $n_4 = 4$, $n_5 = 6$). One of the follow-up interviews was conducted by accompanying a participant while grocery shopping in order to gain familiarity with the supermarket layout and available products; she was told to go about her shopping as usual while the interviewer accompanied her and asked questions about product placement, pricing and options, and reasons for selecting the items she purchased. Another interview was a joint interview conducted with a grandmother and her adult daughter who were both primary food purchasers for the household. We also conducted an interview with the supermarket manager to gain insight into motivations behind product placement and availability, as well as to gauge openness to change. The in-depth interviews and focus groups were 45–90 minutes long. All interviews and focus groups, except for the supermarket walkthrough interview, were audio recorded and transcribed verbatim. Notes from the supermarket walkthrough interview were included in the analysis.

Researchers followed interview/discussion guides, but used open-ended questions and probed extensively based on informants' responses (Spradley, 1979). Interview guides were developed to gain an in-depth understanding of shoppers' experiences, while focus group guides were developed to explore similarities and differences of opinion on similar topics. Initial interviews and focus groups with shoppers included general questions about how participants go about their grocery shopping, how shoppers chose what to buy, how budget influences purchasing decisions, how food purchases are perceived in terms of health, and how the study supermarket could be changed to improve the grocery shopping experience and encourage healthier purchasing (Table 2). As store employees were also participating as shoppers at the store, we followed a similar discussion guide for the focus group in which they participated. Additional focus groups were used to understand common experiences when shopping with children and generate suggestions about how to increase healthy food purchasing for shoppers with children (Table 3). Participants gave oral consent and received a $20 gift card to the study supermarket.

Analysis took place throughout the data collection period from February 2011 to July 2012. Researchers used components of grounded theory methodology throughout data collection and analysis (Charmaz, 2006). Inventories of research topics and participant characteristics were used to inform further sampling and to revise interview guides (Charmaz, 2006; Sandelowski, 1995). After reaching saturation on our original study topics (Guest, Bunce, & Johnson, 2006; Sandelowski, 1995), a subset of transcripts was first manually line-by-line coded, and memos were used to categorize