



Research report

Food choice, eating behavior, and food liking differs between lean/normal and overweight/obese, low-income women [☆]

Heidi Dressler, Chery Smith ^{*}

University of Minnesota, Department of Food Science and Nutrition, 225 FScN, 1334 Eckles Ave., St. Paul, MN 55108-6099, United States

ARTICLE INFO

Article history:

Received 31 October 2011
 Received in revised form 24 January 2013
 Accepted 30 January 2013
 Available online 18 February 2013

Keywords:

Food liking
 Low-income
 Eating behavior
 Obesity
 Food choice

ABSTRACT

The higher rate of obesity among low-income women has widely been attributed to environmental barriers; however, many low-income women are still able to maintain a healthy weight despite obesogenic environments. To better understand personal and behavioral attributes related to food choice and weight, overweight/obese women and lean/normal weight women living in similar low-income environments, participated in focus groups, and taste testing sessions to investigate food liking ($n = 83$). During focus groups, lean/normal weight participants reported that health was influential in food choice, while overweight/obese participants expressed cost as being more of a factor. Both BMI (kg/m^2) groups reported that taste was of greatest importance. Personal factors, like emotional eating, and overeating were also discussed with differences noted between BMI (kg/m^2) groups. Quantitative data also showed cost to be more important for overweight/obese women. Taste testing results revealed that overweight/obese participants had a higher overall liking for both healthy and less healthy foods, as well as other food categories. Additionally, these women had a higher liking of fat in the context of spreadable fats. Our results show that a variety of complex factors interact to influence eating behavior and present weight status of women living in similarly impoverished environments. However, findings from this exploratory study should be confirmed through further research.

© 2013 Elsevier Ltd. All rights reserved.

Introduction

Obesity is disproportionately prevalent in low-income and minority populations (Ball & Crawford, 2005; Flegal, Carroll, Kit, et al., 2012), with an accompanying increased risk for chronic disease (Evans, Newton, Ruta, MacDonald, & Morris, 2000), heightening the need for a better understanding of the relationship between obesity and poverty. Many have suggested that the food environment contributes to this relationship because healthy food is more costly (Drewnowski, 2004; Henderickson, Smith, & Eikenberry, 2006), and low-income neighborhoods often lack supermarkets that offer high-quality, affordable food (Block, Scribner, & DeSalvo, 2004; Powell, Slater, Mirtcheva, Mao, & Chaloupka, 2007; Richards & Smith, 2006a; Richards & Smith, 2006b; Smith, Butterfass, & Richards, 2010; Zenk, Schulz, James, Bao, & Wilson, 2006). This creates cost and accessibility barriers to healthy food choice for low-income individuals (Drewnowski, 2004; Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008). Of possible consequence, low-income women consume diets that are high in refined grains,

saturated fat added sugars, and sodium (Guenther, Jensen, Batres-Marques, & Chen, 2005; Rehm, Matte, Wye, Young, & Frieden, 2008; Siega-Riz & Popkin, 2001) and low in whole grains, fruits and vegetables (Dubowitz, Subramanian, Acevedo-Garcia, Osypuk, & Peterson, 2008; Giskes, van Lenthe, Avendano-Pabon, & Brug, 2011). Over time, this repeated exposure to less healthy food among low-income populations may influence personal factors contributing to food choice, such as a preference for less healthy foods, because liking of foods is related to exposure and early environment (Mela, 2001; Skinner, Carruth, Bounds, & Ziegler, 2002; Sullivan & Birch, 1990).

Although liking for certain food does not exclusively determine food choice, hedonic response is an influential personal factor that reinforces food intake (Mela, 2001), along with other factors including health and weight concerns, preference for convenience (Glanz, Basil, Maibach, Goldberg, & Snyder, 1998) individual-level psychological factors (Baranowski, Cullen, & Baranowski, 1999; Walker et al., 2004) and educational attainment (Turrell & Kavanagh, 2006). Furthermore, it has been surmised in the literature that deriving greater pleasure from foods may contribute to overeating and conditions of excess weight (Mela, 2001; Nasser, 2001). However, to our knowledge, actual liking of foods is one area that has not been studied in this population, and of the existing literature examining personal and behavior factors related to food choice in low-income populations, most fails to differentiate

[☆] Acknowledgements: We would like to thank all of the women who participated in this study. Further, we would like to thank Diana Brostow for her early assistance with this project. This project was funded through USDA SNAP-ED.

^{*} Corresponding author.

E-mail addresses: dress107@umn.edu (H. Dressler), csmith@umn.edu (C. Smith).

between healthy weight women and overweight/obese women (Antin & Hunt, 2012; Lawrence & Barker, 2009). Given the poor diet quality of low-income women (Giskes et al., 2011; Guenther et al., 2005; Richards & Smith, 2010), investigation of food liking and other related factors influencing food choice in both weight categories, may provide additional insight into the dietary behaviors of this high-risk population, and help to inform future research and behavioral interventions.

Therefore, the purpose of this novel research was to explore food liking of a variety of foods and food categories, and to investigate other factors that may affect food choice and eating behavior in a group of lean/normal and overweight/obese participants living in similar, low-income environments. To fulfill these objectives, focus group discussions were used to examine differences in personal, and behavioral influences on food choice and eating behavior. Additionally, taste-testing sessions were held to see if hedonic response to both healthy and less healthy foods, within a variety of food categories, would differ between weight lean/normal and overweight/obese categories.

Methods

For this study, mixed methodology was employed and both qualitative (focus groups) and quantitative (taste testing and demographic information) data were collected with women ($n = 83$), aged 18–64 years, who qualified for the US's Supplemental Food and Nutrition Assistance Program (SNAP) ($\leq 130\%$ poverty level) and resided in low-income neighborhoods within the Twin Cities Metropolitan area. Although inherently different, the combined use of qualitative and quantitative methodologies in research has been shown to be effective in understanding the complex interactions characteristic of human behavior (Abusabha & Woefel, 2003).

Participants were recruited through flyers and in-person recruiting at libraries; food shelves; homeless shelters; community centers; hot meal sites and Special Supplemental Nutrition Program for Women, Infants and Children (WIC). Because this study sought to compare and contrast food liking and the importance of various factors related to food choice between lean/normal women and overweight/obese women, participants were purposefully recruited according to their respective body weights and were asked their height and weight when they called to enroll. Women were recruited on a rolling basis, and the same group of women in a focus group, attended the same taste testing sessions. Focus groups were held 1 week prior to taste testing sessions. Upon arrival at focus groups, participants provided written consent, completed a demographic questionnaire, and had their actual height and weight measured, using a standard protocol (Lee & Nieman, 1996). Body mass index (BMI) was calculated as kg/m^2 and participants were categorized as lean/normal weight ($\text{BMI} < 25$) and overweight/obese ($\text{BMI} \geq 25$) (Centers for Disease Control, 2012). Cash was provided as compensation for their time. The study was approved by the University's Institutional Review Board.

Qualitative data

Utilizing Social Cognitive Theory (SCT) as the theoretical framework, focus group questions were developed from a review of the literature and previous research with low-income women in the same geographical area (Dammann & Smith, 2010; Dammann & Smith, 2011; Dammann et al., 2011; Richards & Smith, 2006a; Richards & Smith, 2006b; Smith et al., 2010). Commonly used in nutrition research (Contento, Manning, & Shannon, 1992; Richards & Smith, 2010; Smith & Morton, 2009; Wiig-Dammann & Smith, 2009), SCT describes an individual's behavior as a reciprocal

interaction between personal, environmental, and behavioral constructs (Bandura, 1971). Constructs of interest that were addressed by SCT questions included environmental situation, emotional coping response, and self-control. However, focus groups questions were used to elicit broad discussion and some other SCT related constructs emerged from those discussions that were not directly addressed in questions. Examples of open-ended questions include, "How do you make food choices?" (prompted with—"What factors are most important prompted with—personal preference, cost, convenience, or children?"); "If you have a craving for a food, what type of food do you crave?" (prompted with—"Is it usually something hot, sweet, or salty?"); "Do you ever eat because you're sad, happy, stressed-out?" (prompted with—"Can you tell us more about that?"). Focus groups were comprised of 3–7 women, adequately allowing each woman to express her thoughts. Sessions were conducted by two researchers trained in focus group methodology, and lasted approximately 90 min in length. Audio recordings were transcribed verbatim and researchers then independently read transcripts. While reading the transcripts, researchers created codes by assigning a label to participants' comments, a process known as open coding method (Corbin & Strauss, 1998). Following independent analysis the researchers met and discussed discrepancies between coding, reconciled differences, and organized codes into themes and subthemes (Morgan & Krueger, 1998). Quotes from lean/normal women and overweight/obese women were methodologically separated and organized according to themes/subthemes into spreadsheets and examined, allowing for patterns to emerge between these groups (Morgan & Krueger, 1998). This was a rigorous, systematic process, and is an acceptable method of examining the variations in comments between groups (Morgan & Krueger, 1998).

Quantitative data

Foods and food categories used for the blinded taste testing are displayed within Table 1. Healthy and less healthy (Table 1, footnote) commonly consumed foods were selected for the taste testing and grouped into either a food group, eating occasions (i.e. snacking), and type (i.e. soda). Liking of healthy and less healthy food items, as well as food categories, were of interest because the consumption of certain food groups (Ledoux, Hingel, & Baranowski, 2011; Van Loan, 2009), eating occasions (Piernas & Popkin, 2010), food types (Malik, Schulze, & Hu, 2006), in addition to the nutritional qualities of individual foods including saturated fat, added sugar, sodium, and refined grain content, have been linked to weight (Field et al., 2007; Cohen, Hailpern, Fang, & Alderman, 2006; Elliott, Keim, Stern, Teff, & Havel, 2002; Lui et al., 2003) and consumption among low-income groups (Darmon & Drewnowski, 2008). Foods were classified as healthy or less healthy utilizing a method established by the United States Department of Agriculture's Economic Research Service (Carlson & Frazão, 2012). According to this method, foods containing either >4 g saturated fat, 480 mg sodium, or one teaspoon of added sugar per serving are considered moderation foods, and if under those cut-off values, they are classified as healthy foods (Carlson & Frazão, 2012). However, healthy and less healthy were preferred as descriptors in the current study. Additionally, this study classified soft tub margarine as healthy, and solid trans fat-containing stick margarine as less healthy, and whole grain foods as healthy and refined grain foods as less healthy, because these nutrient qualities are a distinguishing feature of a food product that has been linked to health (Lui et al., 2003; Mozzafarian, Aro, & Willet, 2009).

Individual stations were set up for each of the 15 food categories with one participant at each station at a time. The order in which subjects tasted foods was randomized with each participant starting the session at a different station and then after tasting all

Download English Version:

<https://daneshyari.com/en/article/7311036>

Download Persian Version:

<https://daneshyari.com/article/7311036>

[Daneshyari.com](https://daneshyari.com)