RESEARCH
Qualitative Research

Intuitive Eating Practices among African-American Women Living with Type 2 Diabetes: A Qualitative Study

Amanda L. Willig, PhD, RD; Brittany S. Richardson; April Agne, MPH; Andrea Cherrington, MD, MPH

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ABSTRACT
Intuitive eating programs that improve self-efficacy and dietary habits could enhance glycemic control in African-American women with type 2 diabetes. The goal of our study was to investigate how current eating practices and beliefs of African-American women living with diabetes aligned with intuitive eating concepts. African-American women with type 2 diabetes referred for diabetes education class during 2009-2012 were recruited for a qualitative study using focus groups for data collection. Verbatim group transcriptions were analyzed by two independent reviewers for themes using a combined inductive-deductive approach. Participants (n=35) had an average age 52±9 years, mean body mass index 39±7, and mean time with a type 2 diabetes diagnosis of 10±10 years. Participants' self-reported dietary practices were poorly aligned with intuitive eating concepts. The women reported a lack of self-control with food and regularly eating in the absence of hunger, yet stated that the determinant factor for when to stop eating was to recognize a feeling of fullness. Participants reported knowing they were full when they felt physically uncomfortable or actually became sick. Women frequently cited the belief that individuals with diabetes have to follow a different diet than that recommended for the general public. Many women also discussed diabetes-related stigma from family/friends, and often did not tell others about their diabetes diagnosis. These findings demonstrate that intuitive eating techniques are not currently applied by the women in this sample. Future studies should assess the influence of intuitive eating interventions on dietary habits among low-income African-American women with type 2 diabetes.
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AFRICAN-AMERICAN WOMEN ARE DISPROPORTIONATELY diagnosed with type 2 diabetes, and diabetes-related complications are the leading causes of disability and mortality among this minority group.[1] Weight control and dietary practices may greatly influence treatment outcomes for type 2 diabetes.[2-4] However, African-American women are less likely to report attempts to lose weight compared with members of other racial/ethnic groups, despite having higher levels of obesity (body mass index >30).[5-7] Gavin and colleagues[6] observed that African-American women were more likely than other groups to report an intention to follow dietary recommendations following diabetes diagnosis. Additional studies have indicated that these women continue to consume higher amounts of total energy, saturated fats, and sugars and maintain higher body weights than recommended for type 2 diabetes control.[5,8] This discordance between perceived and actual dietary practices could further exacerbate poor glycemic control in a population already at risk for high rates of diabetes-related complications.

Researchers have proposed that intuitive eating (IE) (also referred to as mindful eating) may improve the association between perceived and actual dietary practices.[9,10] Intuitive eating is a learned skill that involves awareness of the physical and emotional sensations experienced while eating or in a food-related environment.[11,12] Intuitive eating practices have been associated with lower energy intake and glycemic index during nutrition interventions, and Framson and colleagues[13-15] noted an inverse association of body mass index with scores on a validated intuitive eating questionnaire. The current IE practices and perceptions of personal IE behaviors among African-American women have not been explored, and it is unknown whether IE practices can be successfully incorporated in dietary interventions for this population. The goal of our study was to qualitatively investigate the nutrition beliefs of African-American women living with diabetes, and how women's perceived current eating practices aligned with intuitive eating concepts.

METHODS

Sample and Recruitment

Our study was conducted through a partnership among the University of Alabama at Birmingham, Cooper Green

Hospital, and Congregations for Public Health, a 501(c)3 organization dedicated to promoting health equity among community members. Participants were recruited using a homogenous sampling technique from within Cooper Green Hospital, a public safety net health system that provides care for residents of the Birmingham-Hoover Metropolitan Area. A recent internal assessment within the health system revealed that among the nearly 700 patients referred for diabetes education last year, only 19% completed the two-session (9 hours total) course, and many never attended a single session.

Participant eligibility was determined using the health system's diabetes education database (Diabetes Management System version 5.8c, 2012, Harborsoft Software Int). African-American women were informed of their eligibility for focus group participation if they had a physician diagnosis of type 2 diabetes and had received care within the health system between 2009 and 2012. Investigators sent letters to potential participants informing them of the study purpose and providing them the opportunity to opt out of future communication about the study. Women were then contacted by telephone and provided with additional information about the study along with an invitation to participate. The study was approved by both Cooper Green and University of Alabama at Birmingham institutional review boards, and each woman provided written informed consent before focus group participation.

Study Design and Data Collection

Our qualitative study used focus groups to collect data on perspectives related to food and intuitive eating concepts. Before each focus group, women completed an interviewer-read questionnaire about demographic information and IE practices. The latter was assessed using a validated scale that includes five domains related to food intake and IE: disinhibition, the inability to stop eating even when full; awareness, being aware of and appreciating the effects of food on the senses; external cues, eating in response to environmental cues; emotional response, eating in response to negative emotional states; and distraction, focus on other activities while eating.[14] This scale, developed by Framson and colleagues,[13-15] was developed using previously validated instruments that assess eating behavior and mindfulness. Responses to 28 questions were answered using a 4-point Likert-scale ranging from 1=strongly disagree to 4=strongly agree. Higher scores on the questionnaire indicate greater adherence to IE principles, with an average score of 4 representing very high adherence, and a score of 1 indicating poor to no adherence to IE techniques. Average scores >3.00 have been observed in normal weight men and women, scores >2.70 noted in overweight participants, and average scores of 2.54 in obese men and women.[14] Questionnaires were read to participants to account for potential low levels of literacy and health literacy in the study population. Participants were allowed any amount of time they required to answer questions. Participant height and weight were measured the day of the focus group by trained project staff using a standardized protocol.

A moderator trained in qualitative methods and matched to the participants' sex and ethnicity led each group using a guide; a designated note taker was also present to capture women's comments on a flip chart and to keep track of nonverbal behavior and level of engagement on various topics. The moderator's guide included open ended questions regarding the influence of diabetes on perceptions of food and diet as well as questions based on the five domains of IE described previously (Figure 1). Audio from all focus groups was recorded and transcribed. Debriefing sessions attended by the project investigators, moderator, and note taker were held immediately following each focus group to compare notes on the overall process and impressions unique to each group.

Data Analysis

Descriptive statistics were computed to characterize the sample using SAS version 9.2 (2008, SAS Institute, Inc). Qualitative content analysis was conducted using a combined inductive and deductive approach to identify major categories and substantive themes.[16] Specifically, an inductive approach allows themes to emerge from the data and is useful when the intent is exploratory and descriptive, whereas a deductive approach is more descriptive and is indicated when the intent is explanatory and confirmatory.[17] In this case, the authors used a combination of both approaches, using predetermined, open-ended questions related to intuitive eating to drive deductive analysis while remaining open to and noting emergent themes during the coding process consistent with inductive analysis.

To begin, an initial transcript was read in its entirety by three independent reviewers to gain an overarching sense for the conversation. Afterward, each reviewer went through the transcript, identifying meaning units in the forms of phrases and sentences. Meaningful units were further condensed and codes were created and assigned to each meaning unit. Authors then met to discuss codes to reach consensus on a codebook that would be applied moving forward. Codes were further categorized and themes were identified based on the data. Two authors applied the codebook to each subsequent transcript, noting emergence of any new themes, with coding discrepancies decided by the third independent reviewer. Upon completion of the fourth focus group, saturation of themes was achieved and no further groups were conducted.

1. How, if at all, do you think the food we eat affects our health?
2. How, if at all, has having diabetes changed the way you think of food?
3. Where do you eat?
4. What other things, if anything, competes for your attention while you are eating?
5. While you are eating, what do you do to really enjoy your food?
6. How do you know when you are ready to stop eating?
7. What sorts of things make it difficult to eat healthy?

Figure 1. Focus group questions about dietary practices and intuitive eating presented to 35 African-American women with type 2 diabetes mellitus.