Published in final edited form as:
J Acad Nutr Diet. 2014 June ; 114(6): 889–896. doi:10.1016/j.jand.2014.02.004.

Intuitive Eating Practices Among African-American Women Living With Type 2 Diabetes: A Qualitative Study

Amanda L. Willig, PhD, RD,
Assistant Professor, Division of Infectious Diseases, Department of Medicine, University of Alabama at Birmingham. BBRB 256J, Birmingham, AL, 35294. Phone: 205-975-5464; Fax: 205-934-1640

Brittany S. Richardson, BS,
Medical student, Department of Medicine, University of Alabama at Birmingham. FOT 1203, Birmingham, AL, 35294

April Agne, MPH, and
Research Coordinator, Division of Preventive Medicine, Department of Medicine, University of Alabama at BirminghamMT 415, Birmingham, AL, 35294. Phone: 205-975-7908

Andrea Cherrington, MD, MPH
Assistant Professor, Division of Preventive Medicine, Department of Medicine, University of Alabama at Birmingham. MT612, Birmingham, AL, 35294. Phone: 205-996-2885; Fax: 205-934-7959

Amanda L. Willig: mandyrd@uab.edu; Brittany S. Richardson: britrich@uab.edu; April Agne: aagne@uab.edu; Andrea Cherrington: cherrington@uab.edu

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 this 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 in 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 of 52±9 years, mean body mass index of 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

Corresponding Author/Reprints: Amanda Willig.

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 impact of intuitive eating interventions on dietary habits among low-income African-American women with type 2 diabetes.

Keywords

Intuitive Eating; Diabetes; African-American; Obese; Diet

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 impact treatment outcomes for type 2 diabetes.[2–4] However, African-American women are less likely to report attempts to lose weight compared to other racial/ethnic groups, despite having higher levels of obesity (body mass index > 30).[5–7] Gavin and colleagues observed that African-American women were more likely than other groups to report an intention to follow dietary recommendations following diabetes diagnosis.[6] Additional studies, though, have indicated that these women continue to consume higher amounts of total calories, 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 caloric intake and glycemic index during nutrition interventions, and Framson et al noted an inverse association of body mass index with scores on a validated intuitive eating questionnaire.[13–15] 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 this 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

The study was conducted through a partnership of the University of Alabama at Birmingham (UAB), Cooper Green Hospital (CGH) 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 CGH, 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 2-session (9 hours total) course, and many never attended a single session.

Participant eligibility was determined using the health system's diabetes education database. 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 UAB Institutional Review Boards, and each woman provided written informed consent prior to focus group participation.

Study Design and Data Collection

This qualitative study used focus groups to collect data on perspectives related to food and intuitive eating concepts. Prior to 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: 1) disinhibition, the inability to stop eating even when full, 2) awareness, being aware of and appreciating the effects of food on the senses, 3) external cues, eating in response to environmental cues, 4) emotional response, eating in response to negative emotional states, and 5) distraction, focus on other activities while eating.[14] This scale, developed by Framson et al, was developed using previously validated instruments that assess eating behavior and mindfulness. Responses to twenty-eight 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' gender 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 non-verbal behavior and level of engagement on various topics. The moderator's guide included open ended questions regarding the impact of diabetes on perceptions of food and diet as well as questions based on the 5 domains of IE described above (Table 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. 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 while 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 over-arching sense for the conversation. Afterwards, 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 in order 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.

Several strategies were employed to enhance rigor and ensure trustworthiness of the data.[18,19] The primary reviewer in this study has a doctoral degree in nutrition and a research focus on health disparities. To reduce researcher bias, a multidisciplinary, racially diverse team of reviewers (multiple independent coders) participated in the analysis and included a medical student with a background in biology and a physician investigator with expertise in community-based research and qualitative methods. During the review phase, preliminary data were presented to the full research team for peer review and reflection on potential researcher bias. Additionally, a confirmatory focus group was conducted with previous participants for respondent validation of focus groups findings, also called “member checking”. All focus group participants were invited to attend a follow-up focus group; 14 participants provided feedback on the results.

RESULTS

Four focus groups were conducted, with a range in group size of 4–10 women. A total sample of 35 women participated and descriptive characteristics are presented in Table 2. The women were on average 52 years of age, obese, and a majority (63%) rated their current health status as fair or poor compared to peers of the same age. Total intuitive eating scores averaged 2.5 ± 0.3 (range 1.72–3.43).

Three primary themes identified during the coding process included: the influence of diabetes diagnosis on food choices, feelings of stigma and guilt associated with diabetes, and lack of recognition of intuitive eating practices (Table 3).

Influence of diabetes diagnosis on diet

Common subthemes related to the influence of diabetes diagnosis on diet included 1) a heightened awareness of dietary choices following diagnosis and 2) social stigma and guilt associated with having type 2 diabetes. Most women had attempted to change their eating habits, but reported limited success. They commonly tried to decrease the amount of candy and other sweets consumed. However, they felt constrained by the "diabetic diet" and what they perceived to be "good foods" and "bad foods". The women expressed frustration that "good foods" did not taste good and they did not enjoy eating them. Many participants held the belief that fruit was a "bad food" for diabetics and should be avoided, and most continued to use refined grains instead of switching to whole grains. They also reported difficulty with shopping and meal planning even when they could define which foods were better for glycemic control.

> "When you go in a grocery store, I feel there should be a diabetes aisle just for us because a lot of things we cannot have and I think it would make it much easier if we had foods on an aisle that was just for diabetes, and then that would you know, help a lot of people. But my mama used to tell me that all the food is the same, it's just how you prepare your own food…but I don't know."

Participants also felt that their diet greatly influenced their health status; however, only one woman mentioned positive benefits obtained from eating a healthier diet. The other women reported the perceived negative effects of poor dietary choices, including high cholesterol, symptoms of hypo/hyperglycemia, and weight gain.

> "It'll affect you, food does, because when I'm being healthy, I feel like a totally different person, and when I eat junk like I do sometimes…I feel sluggish."

Stigma and guilt associated with diabetes

Many women reported difficulty eating a healthy diet due to community stigma surrounding diabetes and their inability to inform most family and friends of their diagnosis. They reported a perception of being the sole individual in their communities living with type 2 diabetes. They also expressed guilt during times when they felt nonadherent to a diabetic diet. Some women felt guilty that they had "caused" their diabetes, and were now "trapped" in a certain dietary pattern, regardless of whether they followed what they thought was a healthy diet.

> "You eat what they're eating because you don't tell everybody you're a diabetic, so you're just going to eat it."

> "…because it's almost like this is silent. I don't know anybody else really with diabetes."

The women also expressed frustration that when they did reveal their diagnosis, family and community members changed their interactions with participants, and were judgmental about participants' lifestyle choices. Many women reported that family and friends would refuse to "allow" the women to consume available foods perceived as unhealthy, and expressed frustration that they were not allowed to make this decision for themselves (Table 3).

> "You tell some people you're a diabetic…and you don't mention it to a lot of people because they act different…they go say, 'you know you're not supposed to eat that'."

> "No…you know how to fix your own plate, but you don't want nobody else knowing that you're a diabetic because you don't want to hear that all night. 'Oh, she can't eat this. She can't eat that. Oh, you know better.'"

Intuitive eating practices

Two prominent themes to emerge were 1) a belief that an individual will eat when she is hungry, and stop eating when she is full, and that 2) an individual knows she is full when she feels "physically uncomfortable", "sleepy", or "sick". One participant noted that she stops eating "because it don't taste as good anymore." However, despite multiple statements by participants that hunger was the predominant reason for eating, and a lack of hunger was the primary reason to stop eating, participants consistently reported frequent instances of eating in the absence of hunger. The most common response for how participants knew when to stop eating in these situations was when the food was no longer available or time constraints necessitated a change in activity. Most women who were employed stated that while they preferred to eat at home, they actually found it easier to eat "healthy meals" at work. One participant stated that "when I'm at work I can eat right…but when I get home for dinner, I feel like I got to just really eat, you know, just let it go". The women further identified several themes consistent with IE-related issues.

Disinhibition—Participants overwhelmingly acknowledged the importance of portion control, but reported multiple situations in which they would overeat or seek out foods they perceived as unhealthy (Table 3). It was observed that when food was available outside of meal times that "look good, but I probably couldn't cook nothing that looked like this… Uh-hmm, I'll probably overeat then." The women also reported eating additional portions of food items at buffet-style settings and in the home.

> "I try to eat like a little portion of the turnip greens and maraconi and cheese, you know. If it's something like that, I try to eat a little portion, but if I, like -- at one o'clock if I eat that for lunch, I might go back and eat a little portion again."

Awareness—Participants overwhelmingly reported dissatisfaction with the variety and flavor of the perceived "diabetic diet", and noted several strategies to overcome this issue, including the use salt- and fat-based flavorings.

> "And I don't like Splenda or Sweet 'N Low…I got to have the real sugar."

The women did acknowledge that eating a meal they enjoyed made them feel generally "relaxed"; however, they did not mention any attempts to enjoy or improve upon the appearance or presentation of a meal/snack to increase enjoyment.

External cues—Many women indicated an awareness of when external cues prompted them to eat regardless of whether they were hungry, but no participants identified strategies to minimize the influence of external cues on eating behaviors. Women reported that they

found it most difficult to refuse food or extra portions of food when placed in situations where friends were unaware of the type 2 diabetes diagnosis, or where the women would have historically overeaten prior to diagnosis, such as family situations and church gatherings. The women likened these situations to “a drug addiction” for which they did not have coping skills and could not tell others of their addiction. Participants further observed that situational cues had a strong influence on their desire to eat independent of actual appetite, with women saying that “if she’s got a piece of cake over there, she[‘s] got to give me a piece. That’s the way I feel”; and “when you think about certain foods, you know, you’ll just have a tendency to get hungry...then you’ll want to eat.” The women also reported that their medication schedule determined when they ate planned meals or snacks.

Emotional response—Most women reported a strong emotional response associated with frequent snacking and overeating, with the most commonly cited issues being stress and depression. They would often use food as a coping mechanism when they felt stressed about work or family issues. Participants also frequently reported that stress and frustration over being diagnosed with diabetes or lack of glycemic control would often lead to “rebellious” eating of perceived bad foods.

> “I really don’t want to be a diabetic. I want to be normal like other people. Like they can eat everything they want, so sometimes I do go into the denial that I’m not [diabetic].”

Many women also reported the great difficulty they had in not overeating snack foods such as ice cream and potato chips when available at home. While some women discussed the attempts they had made to keep these items out of the home, most women reported frequently being exposed to snack foods perceived as unhealthy that were kept in the home for other family members and friends.

Distraction—Participants mainly focused on external distractions that competed for their attention while they were eating. Most women reported eating meals in front of the television and not paying attention to how much they actually consumed until they felt nauseous or sleepy. They also discussed frequent interruptions by family members (in person and by telephone) that impaired their ability to focus solely on the meal or snack they were consuming.

DISCUSSION

The results of this study reveal poor alignment of self-reported dietary practices with intuitive eating concepts among this sample of African-American women with type 2 diabetes. They also highlight issues such as the social stigma surrounding type 2 diabetes in the African-American community that may impact the success of diabetes-related care. Our findings suggest that IE programs could be a valuable tool to improve compliance with dietary practices known to enhance glycemic control.

A common theme among participants was that a feeling of extreme fullness or nausea is interpreted as satiety. Brewer et al. showed that African-American women actually self-report few instances of eating beyond satiation (defined as continuing to eat “at meals even

though you are not hungry anymore"). However, African-American women were more likely to be obese with a higher odds of becoming overweight earlier in life when reporting that they ate beyond satiety.[20] African-American women with type 2 diabetes also report confusion over the issue of portion control, citing a disconnect between defined standards and the individual's perception of what a portion is.[21] These patients feel that the larger someone is, the more calories they are supposed to eat to support daily activities, and thus find recommendations to eat less following a diabetes diagnosis counterintuitive.[21,22] Collectively, the literature suggests that African-American women may not interpret satiety in the same way as health care providers and researchers, and may underestimate instances of eating beyond satiation. Since IE programs are designed to help an individual recognize satiety and satisfaction prior to reaching such extreme physical sensations as nausea, education on how "satiety" is defined should be considered a critical component of these interventions. Additional research is needed to determine the most effective and culturally appropriate ways to explain the concepts of portion control and satiety to this population.

IE concepts have been utilized in dietary intervention focused on weight control and glycemic control, raising the possibility that such programs could benefit African-American women with type 2 diabetes. IE interventions have resulted in statistically significant weight loss, less binge eating, greater self-efficacy, and lower C-reactive protein among men and women.[9,13] Miller et al. found IE adherence was associated with glycemic control in a predominately white sample of women with type 2 diabetes.[15] Additionally, while there is no established cut point for acceptable IE practices using the IE questionnaire designed by Framson and colleagues, the average score for our sample is consistent with those previously noted for adults (90% white, 10% minority) classified as obese, and lower than the average score for adults with a BMI < 25 (normal weight).[14] Further investigation of specific dietary patterns associated with these scores, rather than body weight alone, is warranted. However, the women in our study discussed several meal practices inconsistent with the themes of IE, including susceptibility to external cues and internal emotions that trigger eating in the absence of hunger, and frequent instances of disinhibition related to food intake. These findings are consistent with literature revealing that African-American women may not support dietary patterns associated with weight loss or maintenance.[23–25] African-American women with type 2 diabetes have also identified self-control of food consumption as a barrier to diabetes management, which was echoed among our participants.[26] As self-efficacy is a strong predictor of successful diabetes management, the inclusion of training to improve self-efficacy and increased awareness in IE interventions could thus be beneficial to African-American women with diabetes.[27]

In addition to struggles with dietary intake, our participants repeatedly discussed the stigma surrounding type 2 diabetes. Many of these women did not disclose their diagnosis to friends and family members, which could impair their ability to make positive dietary choices when in a public setting. Wellard and colleagues also reported social stigma related to type 2 diabetes in Australia.[15] However, most research related to health stigma in the African-American community has reported on issues such as obesity, depression, and HIV/AIDS.[16,28,29] Additional studies that investigate issues of diabetes-related stigma in the African-American community and how to address stigma in the context of an IE intervention are needed.

This study has limitations. Data are from a convenience sample. Some of the participants knew each other and shared common interests, decreasing our ability to generalize the results to other groups. Similarly, all of the participants were living in the Southeast, and thus, the results may not generalize to groups living in other regions of the United States. However, the current study does provide important information about the perspectives of African American women with diabetes regarding dietary practices and concepts related IE that is currently lacking in the scientific literature.

CONCLUSIONS

These results highlight the need for interventions that provide tools for managing meal intake and hunger cues effectively among African-American women with type 2 diabetes. Increased understanding of how the environment is related to immediate food consumption, along with practice of strategies focused on controlling one's food environment, could lead to improved food choices by these patients. Future research should determine the feasibility and acceptability of IE programs among this population, and whether such programs can have a measurable impact on diabetes-related treatment outcomes.

Acknowledgments

FUNDING/SUPPORT DISCLOSURE

This project was funded by the American Diabetes Association (# 191605); and grants from the: National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases the University of Alabama Birmingham Diabetes Research and Training (P60DK079626), and the Agency for Healthcare Research and Quality (K12HS019465). A.L.W. received financial support from a National Institutes of Health Ruth L. Kirschstein National Research Service Award (grant 5T32AI52069-08SI) and the UAB-VA Health Services Research/Comparative Effectiveness Research Training Program. The funders had no input into the design and conduct of the study, or analysis and reporting of the data.

References

1. Cowie CC, Rust KF, Ford ES, et al. Full accounting of diabetes and pre-diabetes in the U.S. population in 1988–1994 and 2005–2006. Diabetes Care. 2009; 32(2):287–294. [PubMed: 19017771]
2. Sargrad KR, Homko C, Mozzoli M, Boden G. Effect of high protein vs high carbohydrate intake on insulin sensitivity, body weight, hemoglobin A1c, and blood pressure in patients with type 2 diabetes mellitus. J Am Diet Assoc. 2005; 105(4):573–580. [PubMed: 15800559]
3. Sumlin LL, Garcia AA. Effects of food-related interventions for African American women with type 2 diabetes. Diabetes Educ. 2012; 38(2):236–249. [PubMed: 22454408]
4. McNabb WL, Quinn MT, Rosing L. Weight loss program for inner-city black women with noninsulin- dependent diabetes mellitus: PATHWAYS. J Am Diet Assoc. 1993; 93(1):75–77. [PubMed: 8417099]
5. Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999–2010. JAMA. 2012; 307(5):491–497. [PubMed: 22253363]
6. Gavin JR 3rd, Fox KM, Grandy S. Race/Ethnicity and gender differences in health intentions and behaviors regarding exercise and diet for adults with type 2 diabetes: a cross-sectional analysis. BMC Public Health. 2011; 11:533. [PubMed: 21729303]
7. Tyler DO, Allan JD, Alcozer FR. Weight loss methods used by African American and Euro-American women. Res Nurs Health. 1997; 20(5):413–423. [PubMed: 9334795]

8. Huffman FG, De La Cera M, Vaccaro JA, et al. Healthy Eating Index and Alternate Healthy Eating Index among Haitian Americans and African Americans with and without Type 2 Diabetes. Journal of Nutrition and Metabolism. 2011:1–8.
9. Dalen J, Smith BW, Shelley BM, Sloan AL, Leahigh L, Begay D. Pilot study: Mindful Eating and Living (MEAL): weight, eating behavior, and psychological outcomes associated with a mindfulness-based intervention for people with obesity. Complement Ther Med. 2010; 18(6):260–264. [PubMed: 21130363]
10. Cole RE, Horacek T. Effectiveness of the "My Body Knows When" intuitive-eating pilot program. Am J Health Behav. 2010; 34(3):286–297. [PubMed: 20001186]
11. Tribole, ERE. Intuitive eating: A revolutionary program that works. New York: St. Martin's Press; 2003.
12. Mathieu J. What should you know about mindful and intuitive eating? J Am Diet Assoc. 2009; 109(12):1982–1987. [PubMed: 19942013]
13. Timmerman GM, Brown A. The effect of a mindful restaurant eating intervention on weight management in women. J Nutr Educ Behav. 2012; 44(1):22–28. [PubMed: 22243980]
14. Framson C, Kristal AR, Schenk JM, Littman AJ, Zeliadt S, Benitez D. Development and validation of the mindful eating questionnaire. J Am Diet Assoc. 2009; 109(8):1439–1444. [PubMed: 19631053]
15. Miller CK, Kristeller JL, Headings A, Nagaraja H, Miser WF. Comparative Effectiveness of a Mindful Eating Intervention to a Diabetes Self-Management Intervention among Adults with Type 2 Diabetes: A Pilot Study. J Am Diet Assoc. 2012; 112(11):1835–1842.
16. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today. 2004; 24(2):105–112. [PubMed: 14769454]
17. Miles, MBH.; MA. Qualitative Data Analysis: An Expanded Sourcebook. 2. Thousand Oaks, Ca: SAGE Publications, Inc; 1994.
18. Cohen DJ, Crabtree BF. Evaluative criteria for qualitative research in health care: controversies and recommendations. Ann Fam Med. 2008; 6(4):331–339. [PubMed: 18626033]
19. Pope C, Mays N. Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research. BMJ. 1995; 311(6996):42–45. [PubMed: 7613329]
20. Brewer EA, Kolotkin RL, Baird DD. The relationship between eating behaviors and obesity in African American and Caucasian women. Eat Behav. 2003; 4(2):159–171. [PubMed: 15000979]
21. Bhattacharya G. Self-management of type 2 diabetes among African Americans in the Arkansas Delta: a strengths perspective in social-cultural context. J Health Care Poor Underserved. 2012; 23(1):161–178. [PubMed: 22643469]
22. Bhattacharya G. Psychosocial Impacts of Type 2 Diabetes Self-Management in a Rural African-American Population. J Immigr Minor Health. 2012
23. Kumanyika S, Wilson JF, Guilford-Davenport M. Weight-related attitudes and behaviors of black women. J Am Diet Assoc. 1993; 93(4):416–422. [PubMed: 8454809]
24. Myers HF, Kagawa-Singer M, Kumanyika SK, Lex BW, Markides KS. Behavioral risk factors related to chronic diseases in ethnic minorities. Health Psychol. 1995; 14(7):613–621. [PubMed: 8654339]
25. Epstein DE, Sherwood A, Smith PJ, et al. Determinants and Consequences of Adherence to the Dietary Approaches to Stop Hypertension Diet in African-American and White Adults with High Blood Pressure: Results from the ENCORE Trial. J Am Diet Assoc. 2012; 112(11):1763–1773.
26. Chlebowy DO, Hood S, LaJoie AS. Facilitators and barriers to self-management of type 2 diabetes among urban African American adults: focus group findings. Diabetes Educ. 2010; 36(6):897–905. [PubMed: 20974906]
27. Hunt CW, Wilder B, Steele MM, Grant JS, Pryor ER, Moneyham L. Relationships among selfefficacy, social support, social problem solving, and self-management in a rural sample living with type 2 diabetes mellitus. Res Theory Nurs Pract. 2012; 26(2):126–141. [PubMed: 22908432]
28. Egede LE. Beliefs and attitudes of African Americans with type 2 diabetes toward depression. Diabetes Educ. 2002; 28(2):258–268. [PubMed: 11924303]

29. Vyavaharkar M, Moneyham L, Murdaugh C, Tavakoli A. Factors associated with quality of life among rural women with HIV disease. AIDS Behav. 2012; 16(2):295–303. [PubMed: 21380494]

Table 1

Focus group questions about dietary practices and intuitive eating presented to 35 African-American women with Type 2 Diabetes Mellitus

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?

Table 2

Demographics of a cohort of 35 African-American women with Type 2 Diabetes Mellitus participating in focus group data collection including intuitive eating practices

Characteristic (m, SD or %)	Total Sample (n=35)
Age (years)	52.4 ± 9.9
Height (cm)	162.0 ± 6.8
Weight (kg)	100.3 ± 20.9
Body mass index	38.7 ± 7.3
Married, %	11.4
Employed, %	22.9
Years of education, %	
< 12	22.9
12–16	71.4
> 16	5.7
Household income, $ per month	1583.7 ± 3213.0
Years diagnosed with diabetes	9.7 ± 10.2
Self-rated health, %	
Poor/Fair	62.9
Good	31.4
Good/Excellent	5.7
Intuitive Eating Score	2.5 ± 0.3

Table 3

Coding themes used by researchers to categorize intuitive eating practices and influence of diabetes diagnosis on diet among 35 African-American women with Type 2 Diabetes Mellitus

Themes	Sub-themes	Illustrative Quotes
Diabetes Influences how one thinks about food		
	Heightened awareness of food choices	"And portion control, I mean, I eat more fruits and vegetables now than I ever ate in my life, you know…I can't eat 15 pieces of chicken like I used to." "It scares me because I can't eat but so much of this and I can't eat that." "The foods that are good is not good for you, most of them. So the food that you love to eat, they ain't good for you."
	Awareness of consequences of food choices	I just try to, you know, eat healthy, but I know I don't always eat healthy." "It'll affect you, food does, because when I'm being healthy, I feel like a totally different person, and when I eat junk like I do sometimes…I feel sluggish."
Negative emotional impact of diabetes		
	Social Stigma	"I mean you feel like you're not normal. Most of the people I'm around, they seem to appear to be healthy. They don't take as many pills as I take." "And they give parties, they have party food for diabetics and all that…they had their own table for the diabetics to sit…I tried to sneak over to the other table, you know, the table they had with the food on it…the real food."
	Guilt	"But I was eating all the wrong foods and preparing my food wrong, just eating whatever I wanted to eat, and now I really can't eat what I want to eat." "You feel guilty once you start, you know, eating all that Pepsi and cheese curls and grapes, you feel guilty, like I shouldn't have had that." "Sometime[s] I go in denial. Like I'm not a diabetic for real, so I could just eat like I used to, and it's not a problem. It's going to go away…I really don't want to be a diabetic." "And then after you eat you say, well I do, I shouldn't have eaten that." "It was just my own laziness and really not knowing enough, you know, about it that I wind up getting it."
Intuitive eating practices are not routine		
	Disinhibition	"You eat because you [are] hungry." "[You stop eating] when you're full." "[I know I'm full] when I feel stuffed, sick." "As fast as I finish one [Pepsi], I got to go get me another [Pepsi]. …I'm constantly buying Pepsis, and taking them and throwing them everywhere, all up under the sofas, all up under the children's bed, all up in the closet because I got to have it."
	Awareness	"I don't do nothing special [to enjoy a meal]. I just always get something that I know I like." "I make sure it's right before I sit down. Because I can't eat without Accent. If there ain't no Accent, I can't eat nothing." "I get me a good movie or make sure there's a movie on TV…to watch. And I sit down and smell it first and then I eat it slow."
	External cues	"When you think about certain foods, you know, you'll just have a tendency to get hungry...then you'll want to eat." "Cause it's like a drug, really…it's no different than a drug."
	Emotional Response	"Because I'm already a diabetic and I know I don't supposed to have it, but if I get stressed, that's the first thing I'm going to get…some candy or something sweet."
	Distraction	"I work 12 hours a day, so when I'm sitting at that computer, I'm snacking…12 hours straight." "I'm a cook, so I'm constantly cooking so, therefore, I can't be healthy and I be trying to…I just can't take a break when everybody else takes one." "My child, he always got something to say…Mama this, Mama that. Leave me along, I'm trying to eat."

Themes	Sub-themes	Illustrative Quotes
		“Everybody leave me alone and let me eat. I ain’t got to have nobody with me.”