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Low-income, Pregnant African American Women's Views on Physical Activity and Diet

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Abstract

Introduction—This research was conducted to gain insight into how low-income, pregnant African American women viewed physical activity and approached nutrition during pregnancy.

Methods—Three focus groups with a total of 26 women were conducted utilizing open-ended questions related to physical activity and diet during pregnancy. Content analysis was used to analyze the verbatim transcripts. Groups were compared and contrasted at the within and between group levels to identify themes.

Results—Two themes were identified that related to physical activity during pregnancy: *1*) *fatigue and low energy dictate activity, and 2*) motivation to exercise is not there. Three themes were identified that related to diet: (a) despite best intentions, appetite, taste, and cravings drive eating behavior, (b) I'll decide for myself what to eat, and (c) "eating out" is a way of life.

Discussion—Women reported that being physically active and improving their diets was not easy. Women indicated their level of physical activity had decreased since becoming pregnant. Attempts at improving their diets were undermined by frequenting fast food restaurants and cravings for highly dense, palatable foods. Women ceded to the physical aspects of pregnancy, often choosing to ignore the advice of others. A combination of low levels of physical activity and calorie dense diets increased the risk of excessive gestational weight gain in this sample of women, consequently increasing the risk for weight retention after pregnancy. Health care providers can promote healthy eating and physical activity by building on women's being "in tune with and listening to" their bodies. They can query women about their beliefs regarding physical activity and diet and offer information to ensure understanding of what contributes to healthy pregnancy outcomes. Intervention can focus on factors such as cravings and what tastes good, suggesting ways to manage pregnancy effects within a healthy diet.

INTRODUCTION

Physical activity and nutritional intake are important factors in the health of pregnant women. Being physically active has positive effects on pregnancy outcomes, including limited pregnancy weight gain, improved cardiovascular function, and decreased risk of gestational diabetes mellitus and pregnancy hypertension.¹ Furthermore, women experience changes in appetite and eating patterns during pregnancy, a critical time period for good nutrition.² Persistence of unhealthy diets during pregnancy is of particular concern; nutrition

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is especially important for fetal development³ and poor diet could program the infant for future obesity and disease.⁴ Low income and minority populations are frequently at high risk for low physical activity and poor diet due to limited resources to purchase healthy foods and to engage in safe exercise.⁵ The environment of urban, low-income African-American women may not be conducive to maintaining activity levels or eating a healthy diet during pregnancy. Attitudes and beliefs of women affect their behaviors when they are pregnant.⁶ Yet, little is known about the thoughts and experiences of low-income African American women regarding physical activity and diet while pregnant. The goal of this study was to understand how urban, low-income, pregnant African American women viewed physical activity and how they approached nutrition while they were pregnant.

BACKGROUND AND LITERATURE REVIEW

Physical activity is reported to decrease as pregnancy progresses. Few women achieve the recommended levels of more than 30 minutes of daily activity during pregnancy.^{1,7–8} Furthermore, the decrease in physical activity that occurs by the second trimester frequently persists until at least 6 months postpartum,⁹ or longer.¹⁰ Physical changes during pregnancy and maternal concerns about safety and reduced motivation contribute to decreased activity levels.^{11–12} For example, in a sample of low income, non-white pregnant women it was found that women were unsure about the safety of activity, especially vigorous activity during pregnancy.⁷

Findings regarding whether women actually change their eating behavior during pregnancy are inconsistent. In a comparison study of pregnant and non-pregnant women (N = 278) pregnant women reportedly had a significantly higher intake of fiber, fat, fruit, beef, milk and dairy desserts, along with avoidance of certain foods such as raw vegetables or fish for safety reasons in comparison to non-pregnant women.² In a descriptive correlational study of 150 low-income pregnant women, women reported that they consumed healthier foods like fruits and vegetables and avoided 'junk food', fried food, or other foods considered unhealthy while they were pregnant.¹³ The sample included both African American (56%) and Caucasian women (40%) and data were collected using open-ended questions during interviews in prenatal clinic waiting rooms. Conversely, it has been reported in two studies that dietary patterns of pregnant women did not change from before to during pregnancy.^{14–15} Both of these studies were longitudinal and included dietary assessment data from prior to pregnancy until at least the third trimester in samples of non-African American women. The differences in findings may be due to variation in methodology and the race/ethnicity of the women.

Food environment is another factor that affects eating patterns. Overall consumption of foods away from home in the US has increased to the point that it accounts for 77% of sales,¹⁶ and has become increasingly central to the American diet. Restaurant foods are usually higher in calories and less nutritive than food prepared at home, thus increasing daily caloric intake and reducing diet quality,¹⁶ contributing to health risks such as type 2 diabetes and obesity.¹⁷

Environmental factors such as fewer supermarkets and higher numbers of convenience stores and fast food restaurants in urban areas have contributed to the development of 'food deserts' in many low-income, minority neighborhoods.¹⁸ These food deserts potentially contribute to consumption of high-density, low nutritive food, although it is unclear if it is the environment or cultural influences that have the greater impact on food choices.¹⁹

Eating more food, foods high in fat or low in fiber, more sweets and low physical activity contribute to high gestational weight gain,²⁰ which then contributes to long term weight retention.²¹ Animal models suggest that eating energy dense, palatable processed foods high

in fat, sugar and salt during pregnancy promotes obesity in offspring, as well as early onset of hyperglycemia and hyperlipidemia.²² Furthermore, a recent study indicates that maternal diet in the first trimester potentially programs the fetus for future disease and obesity by the process of DNA methylation.⁴

Physical activity and eating patterns play an important role in the health of expectant mothers and their offspring. The goals of this study were to 1) understand thoughts about physical activity during pregnancy, and 2) ascertain a better understanding of eating patterns in pregnancy in a sample of low-income, currently pregnant African American women.

METHODS

Design and Sample

This qualitative descriptive study used focus groups to elicit women's views of physical activity and dietary intake. Focus groups are useful for obtaining rich information ²³ because they elicit the thoughts and experiences of individuals, and the group interactions lead to greater depth of conversation as a result of stimulation of thoughts by what others have said.²⁴

A sample of adult, low-income pregnant African American women was recruited from the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) services and prenatal clinics in a medium-sized northeastern city. Low-income status was determined by the type of health insurance women had at the time of recruitment. Inclusion criteria included; 1) at least 18 years of age, 2) pregnant, and 3) self-identified as African American.

Procedures

Women were invited to participate in the study by distribution of informational flyers in WIC and prenatal clinic waiting rooms. Women interested in participating were given information about the next scheduled focus group and attendance was considered consent. There were three demographically similar focus groups of 7–10 women each that were held in a convenient location, lasted for 90 to 120 minutes, and were guided by the same moderator who was African American. No personal identifiers were collected and the study was approved by the University of Rochester IRB as an exempt study.

An interview guide was developed using standard procedures,²⁵ with questions created to gain insight into what women: 1) thought about physical activity during pregnancy and 2) ate while they were pregnant, and 3) where they ate. Questions moved from the general to specific. Questions such as 'have you made any changes in your activity or exercise since you became pregnant, and 'what do you think about exercising while you are pregnant' were used for physical activity. For diet questions such as 'are you eating differently than when you are not pregnant,' and 'how do you think women need to eat while pregnant' were used. All questions were reviewed by an expert in research with minority populations for clarity, relevance, and cultural sensitivity prior to implementation.

The facilitator ensured that all participants had an opportunity to engage in the discussion topics. A debriefing session followed each focus group in which the facilitator and investigators who attended the focus group as note-takers discussed overall impressions and procedures. Interview questions were modified following each focus group and incorporated for the next focus group.²⁴ Focus groups were audiotaped and audiotapes were transcribed verbatim for analysis.

Analysis

Content analysis was used to identify themes. Analysis focused on meaning, intention and context, and included between-group and within-group analysis of common responses.^{26–27} Initially, two study team members read transcriptions for key concepts and wrote notes on first impressions.²⁸ Team members then discussed overall impressions, followed by line-by-line review to identify significant statements, and developed codes that were organized into themes.²⁹ Consensus was reached for all coding differences. Discussion was used to refine themes and descriptions. The themes were identified in all three groups. Trustworthiness of the analytic process was optimized by: 1) the facilitator used summaries and reiteration to confirm with participants what they were saying during the focus groups, 2) debriefing of the facilitator and researchers immediately after each focus group, 3) independent and team approaches to analysis, and 4) providing an audit trail.³⁰

RESULTS

Thirty-six women were invited to participate. Of those, 5 refused and 5 did not attend, resulting in a sample of 26 women (See Table 1). The women ranged from 18–39 years of age, with the majority in their 20's. Over 60% of the women were in the first 20 weeks of pregnancy. Women's comments during the focus groups revealed that all of them were urban. Some were employed and others were not. Many women had family members who lived nearby, and some had other children, while for others it was their first pregnancy.

Women frequently counted on family members and friends to carry out activities they would normally do when not pregnant. They depended on their support systems for motivation, meals, childcare, and household chores. Furthermore, these women were challenged by the tasks of juggling household, jobs, and children. Women who worked outside of the home frequently used weekends to catch up on rest and household activities.

Two themes were identified that related to physical activity: *1) fatigue and low energy dictate activity, and 2) motivation to exercise is not there.* Three themes were identified that related to diet: *1) despite best intentions, appetite, taste and cravings drive eating behavior, 2) I'll decide for myself what to eat, and 3) "eating out" is a way of life.* (See Table 2)

Fatigue and Low Energy Dictate Activity

Lack of energy was pervasive. As one woman said "I think the hardest part for me to actually do something is like actually get up and start doing it, but once I'm doing I'm like alright, I can do it."

Coping with a lack of energy was common, especially for women in the earlier stages of pregnancy. As one woman put it

...I could just sleep all day. I have a good mom, good sisters, because they take care of me, pay the bills, I don't even walk nowhere, I drive, anywhere I go. I hate even waking up in the morning, that's not...the only time I wake up is when I throw up and I have to eat something and I go right back to sleep. My mom be taking care of the kids while I do, I have a good mom, so I'm just lying back right now.

The women were unequivocal in their reports that fatigue was a major barrier to being physically active and slowed them down. There was a variety of coping mechanisms reported. Some women took a positive approach and determined to take advantage of the days where they felt good. Alternatively, some were proactive even when they had no energy by making an effort to get up and out despite how they felt. Others depended on family members and friends to manage the activities they felt they could not handle. There

Motivation to exercise is not there

The general consensus was that it is good to exercise during pregnancy. As one woman indicated

I think a pregnant woman should exercise just to help with the weight gain, not to gain too much weight but [I] don't exercise much...I've been feeling lazy. But, I work and I go to school, so that's what I do.

Sometimes they depended on other people to motivate them. As one woman said

Well at the beginning of my pregnancy I didn't want to exercise, but now you know I've heard my doctor saying to my mom and everybody else around me, that I need to exercise more. So what me and my boyfriend do, we try to get out every night and go for a walk...that gets me active and motivated and I actually look forward to the next day.

Although the women expressed that being physically active and/or exercising is important in pregnancy the majority of them were not intrinsically motivated to do so. Similar to their response to fatigue, their feelings dictated their behavior. If they did not feel like exercising or being active they did not push themselves to do so. An element of fear was expressed as well—a fear that it might be harmful to the baby or the pregnancy if they were too active, even an activity as benign as walking.

Despite Best Intentions, Appetite, Taste and Cravings Drive Eating Behaviors

When the topic of diet was discussed it was evident the women were very interested in the topic: they were animated and fully engaged in discussing the foods they were eating, where they ate, and their dietary changes since they became pregnant. Despite good intentions to adopt healthy eating patterns cravings, appetite, and taste drove their food choices. These tastes and cravings compelled them to consume dense, high fat foods.

Some women focused on improving their diet for their own health, as well as to ensure a healthy baby. As one woman said

I have changed my eating habits not just because I'm pregnant but because there is a lot of health issues down the line in my family. My grandmother's diabetic(...) my mother is borderline diabetic, my father has heart issues. I really don't want to go through all of that so I figured that the hardest time to really change your eating habits is during pregnancy because you want to eat you know, for me it's what appeals to me like it could be a fat juicy bacon cheeseburger and I'll be that's it, and if that appeals to me I'm going to load it up with tomatoes, lettuce, peppers you know(...)I have to eat that or I'm going to be sick [with] anything else I eat.

However, most women focused on taste and cravings. As one woman said

I'm working and a lot of Pizza Hut and...but I try to get stuff that's healthy for kids and me like I'll try to get Pizza Hut's Alfredo pasta, something like that. It's something about pizza. I don't know if it's the toppings but I think it's kind of feeding the food groups we need and it's kind of like all in one. It's comfort food and it's got some of those food groups in there, it kind of satisfies...it's convenient; everything you need is on there.

The food choices women reported making were driven to a greater extent by what they wanted than what they thought was appropriate to eat while they were pregnant. There were

attempts to eat healthy, with frequent references to decreasing fried foods, avoiding foods that could be harmful if there was a risk for developing gestational diabetes, or increasing fruits and vegetables. However, what they wanted to eat at the moment was the determining factor in their diet. They had advice from care providers, family and friends but ultimately what sounded good or tasted good was what they chose to eat. A couple of women suggested that the baby itself determined their ability to eat something. If the baby did not like the food selection, even when the mother did, there would be an inability to swallow it or if swallowed, it would come back up.

I'll Decide for Myself What to Eat

When asked whose advice they followed for eating initial responses were "My stomach's", "Mine," "My own, my taste buds," or "My mom's." As one woman stated "Everybody is going to have their own opinions but I don't try to listen to nobody else."

Women were very definite about whose advice they would follow when deciding what to eat. They would listen to others primarily out of respect but in the end, decided what was foolish and what was worth listening to. There was recognition that everyone around them seemed to have opinions of how pregnant women should eat, but that common sense should prevail. They believed times had changed and ultimately, they and their bodies knew best what they should eat.

"Eating Out" is a Way of Life

When asked how much they ate out there were a variety of answers such as:

Breakfast, lunch, and dinner. My snacks will be like home cooked stuff(...)my actual plate of food, what you would consider breakfast, lunch, and dinner will be Taco Bell and a breakfast place or a diner;

I eat out at Wendy's, once a day. Taco Bell too, I love Taco Bell. My mom cooks every day, [but] we still go out;

I go out, like, not go out to a restaurant every day, that's like, two times a week but I have to go to a fast food every day.

Women reported frequently eating out in a variety of food establishments. The places they chose ranged from fast food eateries, to take out, to family style restaurants. Even when main meals were prepared at home there was a tendency to daily obtain at least one meal or snack from an outside source. A few of the women did indicate a decrease in eating outside of the home and often that was related to a desire to control how the food was prepared.

DISCUSSION

The majority of the women in this study endorsed being physically active and trying to improve their diets to ensure a healthy baby. However, attempts at improving their diets were undermined by frequenting fast food restaurants and cravings for highly dense, palatable foods. Furthermore, there appeared to be a belief that they should listen to what their bodies or the baby "wanted", which resulted in appetite, cravings and lack of energy shaping their behavior.

Physical Activity

The decrease in physical activity reported by these women was consistent with literature that indicates women become less active during pregnancy.^{31–32} Although they considered being active a good thing, they were not motivated and fatigue and lack of energy determined what they did. This finding is consistent with literature of pregnant non-African American women

who reported fatigue as a barrier to being physically active.¹² A lack of attention to physical activity could be a result of competing demands, or it could be a lack of knowledge about the benefits of exercise during pregnancy. Although we did not measure or specifically ask how many days out of the week these women exercised, what they described suggests consistency with reports that very few pregnant women achieve the recommendations for physical activity.^{1,7–8}

Dietary Patterns

What women chose to eat and their patterns of eating were based on appetite and what was appetizing. This is consistent with literature that reports African American women take cravings seriously during pregnancy,³³ and factors that influence eating behaviors in pregnancy are predominantly physical in nature.³⁴

There were attempts, based on health concerns, to improve their diets, which is also consistent with the literature.¹³ However, cravings and what tasted good tended to be the stronger influence on eating patterns. Although they heard the advice of others they frequently chose to ignore that advice and instead listen to their bodies.

Ceding to the physical aspects of pregnancy by decreasing activity and eating based on appetite and cravings is perhaps reflective of reports in the literature that pregnant women have an increased awareness of the physical self, or their physical bodies.¹³ However, for these women it went further than physical awareness because physical effects of the pregnancy state shaped their activity and eating behaviors. A unique concept that a couple of women offered was that their eating was affected by what the baby wanted. This approach was not pervasive enough to be considered a theme but it does extend the idea that women did not always feel as if they had control over the eating patterns and choices.

The majority of women frequently ate outside of the home. This finding is consistent with statistics that indicate eating away from home is a pattern in American life.¹⁶ It has been reported that less education, blue collar employment and low income households are all positively associated with fast-food frequency.³⁵ In addition, cravings, convenience and availability have been found to promote fast food eating in low-income AfricanAmericans.³⁶ The consumption of restaurant food, especially fast food, places women at risk for obesity and type 2 diabetes(T2D).¹⁷ Development of gestational diabetes (GDM) is predictive of later risk for T2D.³⁷ Publications reporting a relationship between GDM and fast food intake during pregnancy were not located, nor were descriptions of fast food intake by pregnant women.

The reported frequent use of fast-food restaurants in this sample of women could be reflective of the higher availability of fast food restaurants in lower-income and minority neighborhoods.^{38–39} Furthermore, it is likely reflective of the time constraints and challenges associated with maintaining a job and household on a limited budget. Approximately 60% of these women already had children. Employed parents are challenged with integrating demands of work and home when providing meals.⁴⁰ Depending on a parent's coping strategy, multiple competing demands frequently result in main family meals being eaten at fast-food restaurants, as well as grabbing something quick before or after work rather than preparing a sit down meal. Pregnancy fatigue in all likelihood compounded the challenge of juggling work and household responsibilities for these women as they coped with the multiple challenges they faced.

Further research is needed to gain an understanding of how low-income, pregnant African American women make food choices for themselves and their families. Data collected in this study did not provide sufficient insight into how or why women made decisions to

frequent fast food or other food establishments. There are a variety of factors that could influence their food choices such as time constraints, personal preferences, lack of access to other food sources, and/or other unidentified reasons.

Limitations

As with all focus group studies, the themes and descriptions described in this study are reflective of the participants and are not necessarily transferable to other populations. The results of the study are suggestive and based on a small sample of pregnant African American women from one northeastern city. These women should not be assumed to be representative of all women. However, they do provide insight into how pregnant women thought about physical activity and approached dietary intake.

Clinical Implications

Women chose not to listen to health care providers or their families about dietary intake, suggesting there is a need to create new ways to intervene with dietary patterns to promote a healthy pregnancy. By building on women's being "in tune with and listening to" their bodies and how women feel, health care providers can promote healthy eating and physical activity using an approach similar to what one participant suggested - taking advantage of the 'good days'- and encouraging women to prepare healthy foods and engage in activity that they enjoy on those days. Health care providers can query pregnant women about their beliefs regarding physical activity and diet and offer information to ensure understanding of what contributes to healthy pregnancy outcomes.

Interventions can focus on factors such as cravings and what tastes good, suggesting ways to manage these pregnancy effects within a healthy diet. Health care providers can challenge women to negotiate around cravings rather than regularly succumbing to them. Initially, during the early stage of pregnancy health care providers frequently focus on encouraging women to eat whatever they can. These findings suggest that it might be important to revisit dietary counseling when a woman is feeling better to promote nutritional intake that corresponds to healthy pregnancy outcomes

The women did not place a priority on physical activity and may have been unaware of exercise benefits during pregnancy. Health care providers can intervene with education about the role of exercise in pregnancy. These women turned to their support systems for motivation and assistance, which suggests that it would be advantageous to educate family and friends about the benefits of physical activity.

CONCLUSIONS

Low-income pregnant African American women reported decreased physical activity levels due to low levels of energy and a lack of motivation. These women also reported attempts to change eating behaviors to incorporate healthier foods, yet they continued to eat diets high in calorie dense foods with low nutritive value, primarily by frequenting fast food restaurants. Both physical activity and eating behaviors were strongly influenced by how the women felt: The physical effects of pregnancy were overriding factors that affected behaviors. The combination of low levels of physical activity and a calorie-dense diet increased the risk for excessive gestational weight gain in this sample of African American women, which subsequently leads to weight retention after pregnancy.⁴¹ In addition, it is possible that both the types of food they were eating and their potential for high gestational weight gain increased the obesity risk for their offspring.

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Table 1

Sample Characteristics (N = 26)

Characteristics	N (%)
Age ranges	
18–20	9 (35%)
21–29	13 (50%)
30–39	4 (15%)
Race	
Black	24 (92%)
Multiracial (including Black)	2 (8%)
Ethnic group	
Hispanic	1 (4%)
Non-Hispanic	23 (88%)
Unknown	1 (8%)
Gestation of pregnancy	
10-20 weeks	16 (61%)
21-30 weeks	8 (31%)
31-40 weeks	2 (8%)
Completed education	
Grade 8	1 (4%)
Grade 9–11	8 (31%)
Grade 12	12 (46%)
Grade 12+	1 (4%)
GED	2 (7.5%)
College	2 (7.5%)

Table 2

Participant Quotes by Theme

Themes	Participant Quotes	
Fatigue and low energy dictate activity	"I go to work and I work in retail so I'm on my feet walking around in the store all day, I don't sit down and then when I get homeI guess that's my physical activity" "I could just sleep all day." "In the beginning I didn't have any energy, at all. My energy is back and I just do regular things." "Sometimes I don't have enough energy to chase the children." "I find myself now—I'm tired. I'm a single parentI've got 2 kids and we got to be up in the morningstarting at like 6, 6:30 and I'm outwhen I get to my workplace, I have to be on my feetI am emotionally drained."	
Motivation to exercise is not there	 "I slowed down a whole lot, but I think it's still good that I get up and get out even though some days I just want to lay there forever." "At the beginning of my pregnancy I didn't want to exercise." "Because I work I'm doing enough right now. It would be too much for me personally [to exercise]." "I used to walk a lot but now, I really don't walk at all—I'm always tired" "I used to be at the gym and I used to like aerobics class and elliptical machine but it's hard for meI don't have the energy or determination like I did before." "I'm a single parent and once I get in about 5 o'clock I really don't want to go out [to exercise]." "I'm always busy. I'm at school, work or just doing different things and thenI'm knocked out like." 	
Despite best intentions, appetite, taste and cravings drive eating behavior	"I eat whatever I'm craving for." "I f I'm hungry at 9, I'm eating at 9. If I'm hungry at 11, I'm eating at 11." "I notice when I'm pregnant I have a taste for a whole bunch of different other stuff like pizza that I really wouldn't want otherwise, like Taco Bell I really like and I usually don't eat at those places a lot." "When I first got pregnant I loved junk—like candy cookies, muffinsI just eat junk all the time. Junk all day. Now I'll eat the dinner. I'll eat baked chicken or friend chicken. I try not to eat the junk." "My main thing that I eat would be Taco Bell, taco supreme andbacon, sausage, home fries. Like breakfast food and Taco Bell that's my thing." "I don't eat stuff that's going to harm my baby but at the same time I eat everything that my baby allows me to eat." "My thing is macaroni and cheese. I could eat macaroni and cheese with anything. Breakfast, lunch, dinner—macaroni and cheese. I crave it. I think this is my body craving for proteins and whatever I am not getting from other foods."	
I'll decide for myself what to eat	51 0	
"Eating out" is a way of life		