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Weight Control Behavior and Women: A Cross-Cultural Perspective

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Abstract[2]

The objective of this study was to seek directly from culturally diverse women information on their weight control behavior. Specific questions were: What types of weight control behavior are practiced by women? 2) What factors influence participation in weight control behavior? and 3) what are the cultural influences on women's motivation and ability to participate in weight control behavior? Face-to-face indepth interviews were conducted with a convenience sample of 135 middle-income women (African American, Caucasian, Mexican American, Puerto Rican) in their homes, offices, and at other places in their neighborhoods. Additional data collection included measuring body weight and height. The lived experiences of weight control behavior were similar for culturally diverse women and many factors, including, cultural influences, affect women's ability and motivation to participate in weight control behavior. Conclusions suggest that weight control experiences of culturally diverse women need to be reflected in obesity risk reduction programs.

Keywords: African-American Women, Hispanic Women, Obesity, Weight Control

Introduction

Despite the proliferation of diet-related products and programs, rates of obesity increased dramatically over the last three decades (Flegal, Carrol, Kuczmarski, & Johnson, 1998; Mokdad, Bowman, Ford, Vinicor, Marks, Kaplan, 2001) in all races and age groups. In the United States, obesity and its associated morbidities cost over $100 billion annually and account for approximately 6.8% of direct health care costs (Rigby, Kumanyika, & James, 2004; Surgeon General, 2001). Although there has been an increase in studies exploring factors influencing weight control behavior of obesity in African-American and Caucasian women, few cross-cultural studies have explored factors influencing the behaviors among Mexican American and Puerto Rican women. The purpose of this article is to examine psychosocial factors influencing weight control behavior in culturally diverse women through a series of approximate replication studies. These studies were conducted with 135 middle–income women (68 African-American, 28 Caucasian, 22 Mexican-American, 17 Puerto Rican). Approximate replication involves repeating studies under similar conditions and methods (Burns & Grove, 2003). The intent was to explore cross-cultural similarities and differences in women's experiences with weight control behavior. Weight control behavior is defined as participation in activities that influence weight loss and weight loss maintenance. Weight control practices can include decreasing caloric and

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sugar intake, engaging in physical activity, taking special products such as diet pills and liquid supplements, or participating in an organized weight control program.

Previous Findings

Attempts to control weight are common in the U.S. population (Serdula, Mokdad, Williamson, Galuska, Mendlein, & Health, 1999). Women are more likely to participate in weight control behavior than men (Serdula, Williamson, Anda, Levy, Heaton, & Byers, 1994), and Caucasians more likely to participate than members of ethnic minority groups (Kumanyika, 1994). African-American and Caucasian women have consistently been found to differ in several domains related to weight control behavior. African-American women experience less social pressure about their weight, participate in dieting behavior later in life, and are significantly less likely than Caucasian women to diet during puberty, after pregnancy, and during menopause (Striegel-Moore, Wifley, Caldwell, Needham & Brownell, 1996). Other research has shown that African-American women are just as likely to attempt to lose weight as Caucasian and Hispanic women (Serdula, et al., 1994), not as likely to lose weight as Caucasian women (Williamson, Serdula, Anders, & Byers, 1991; Kumanyika, Obarzanek, Stevens, Herbert & Whelton, 1991; Williamson, 1993) and less likely than Caucasian or Hispanic women to maintain weight loss (Serdula, et al, 1994). Caucasian women are more likely to exercise than African-American and Hispanic women (Crespo, C.J., Smit E., Anderson R.E., Carter-Pokras, O., & Ainsworth, B.E. 2000). Studies of cultural attitudes and weight control behavior among ethnic minority groups revealed that African-American (Allan, Mayo, & Michel, 1993; Kumanyika, Wilson, & Guilford-Davenport, 1993; Rand & Kuldau, 1990) and foreign born Hispanic women (Dawson, 1988) were less likely than Caucasian women to view themselves as overweight or consider a larger body image as unattractive. Whereas while U.S. born Hispanic women were just as likely to consider themselves overweight as Caucasian women, African-American women who did not consider themselves overweight, in spite of objective criteria, used their overweight peer group as a reference point (Gore, 1999). Harris and Koehler (1992) revealed that Mexican-Americans were also less concerned with weight than Caucasians and were less likely to believe that exercise or other factors would help them lose weight. Additionally, the Mexican-American women in the study had attempted to control the consequences of their eating more than men, were more likely to eat in response to internal stimuli, and less likely to believe that Americans would be healthier if they were to lose weight. Studies have also shown that the more acculturated to American life Mexican Americans become the more likely they are to exercise (Marquez, McAuley & Overman, 2004). Eating behavior is just the opposite in that greater acculturation leads to unhealthy eating habits.

In sum, diverse attitudes and practices influence weight control behavior in women. Most studies described the experiences and responses of one racial/ethnic group or compared differences and similarities between two groups. There is a dearth of research exploring weight control experiences and factors influencing the experiences among the African-American, Caucasian, Hispanic racial/ethnic groups of women in the United States. Nevertheless, it is important to carefully identify and address weight control behavior in culturally diverse populations. Knowledge of women's perceptions of factors influencing weight control behavior has important implications for intervention interactions in health care settings, especially as they relate to the delivery of nursing services. The study

questions are: 1) What types of weight control behavior are practiced by women? 2) What factors influence participation in weight control behavior? and 3) what are the cltural influences on women's motivation and ability to participate in weight control behavior? An ethnoscience approach was used to guide this research. Ethnoscience is a formalized and systematic study of people and their views in order to obtain an accurate account of how people know, classify, and interpret their life experiences and the universe. A basic assumption of this approach is that inside views, values, meanings and experience can be obtained if the investigator remains an active listener and recorder of information (Leininger, 1991).

Method

Sample

This convenience sample consisted of 135 culturally diverse women (68 African-American, 28 Caucasian, 22 Mexican-American, 17 Puerto Rican) between the ages of 23 and 75 years, in a large Midwest metropolitan area. The first phase of the study included African-American women, the second phase, Mexican-American and Puerto Rican women, and in the third phase, Caucasian women were interviewed. Women were included in the study if they were 21 years and older, employed, English speaking, and had post-secondary education. Few studies address the weight related issues of middle-income ethnic minority women. The education criterion was developed to ensure that women with higher socioeconomic status were included in the study. To obtain the sample, the investigator contacted various professional and social organizations. Additional recruitment included referrals by study participants (snowball sampling) and personal investigator solicitation of study participants. Informational redundancy (data saturation) determined sample size (Lincoln & Guba, 1985) for Caucasian, Mexican-American and Puerto Rican women. Saturation began occurring after 34 interviews with African-American women, 27 with Caucasian, 20 with Mexican- American, and 15 with Puerto Rican women. Data collection continued after saturation with the African-American women because of the investigator's interest in this population.

Data were collected by audio taped, face-to-face interviews using a semi-structured interview guide. Additional data collection included measuring body weight with a portable scale and height (without shoes) using an expandable ruler with head block.

Instrumentation

The interview guide was investigator developed to explore personal weight control behavior, beliefs, attitudes, and perceptions about factors influencing the weight control behavior (Walcott-McQuigg, 1994) of African-American women. It was adapted to include the other groups of women in this study. Experts on African-American, Caucasian, Mexican-American and Puerto Rican women reviewed the interview guide for cultural and context sensitivity.

An example of interview questions to identify weight control behavior included: "What types of activities assist you to manage your diet?" "Have you ever been on a diet for any reason?" "In what types of exercise do you participate?" Factors influencing the behavior were explored by a series of questions designed to elicit barriers and benefits to engaging in the behavior. The following question explored the women's perceptions of the cultural influence on weight control behavior: "Are there influences in the American culture,

African-American culture or Hispanic culture that help to determine the importance of weight control behavior?" The interview process was initially pilot tested on three college-educated African-American women and the language was modified for subsequent groups. For instance, when exploring factors relevant to each group of women, appropriate ethnic/racial terms were used (e.g., Mexican-American, Puerto Rican or Caucasian were substituted for African-American). The principal investigator conducted all the interviews which ranged in length from 1 to 4 hours. They were conducted at a time and place convenient for the participants, such as women's homes, offices, neighborhood libraries, and the investigator's office.

A signed consent form indicated willingness to participate. A copy of the consent form containing a description of the study and the investigator's telephone number was left with the informant. Confidentiality was guaranteed.

Data Analysis

Each audio taped interview was transcribed verbatim. Constant comparison (Lincoln & Guba, 1985), an analysis matrix (Miles & Huberman, 1994), and the Ethnograph (Version 5.0) computer program (Seidel, Friese, & Leonard, 1998) were used to organize and analyze transcribed data. Analysis matrices enable the investigator to display qualitative data such as short blocks of text, quotes and phrases. Matrices have defined rows and columns. The need for eyeballing data in an exploratory way or for caring out detailed analyses determines the extensiveness of the format.

The Ethnograph qualitative analysis computer program is designed to handle data collected from interview transcripts, field notes, open –ended survey responses or other text-based documents. Interrater reliability (.90) was established on the initial coding scheme (Walcott-McQuigg, 1995; Walcott-McQuigg, Sullivan, Dan & Logan, 1995).

Each area of data were summarized by percent of women identifying the item within each area as an influence on their weight control behavior and presented in three parts by racial/ethnic group. The data were first presented by responses to questions about weight control behavior; second, according to factors influencing the behavior, and third, by the impact of cultural influence on the weight control behavior. In reporting the narrative data the following letters were placed after the comments: African-American women (AAW), Caucasian women (CW), Mexican-American Women (MAW), and Puerto Rican women (PRW).

Results

The average ages of the women were: African-American 40 years, Caucasian 45, Mexican-American 39, and Puerto Rican 36. Table 1 lists education and marital status of the women. Most of the women had obtained a baccalaureate degree or higher. Puerto Rican women were more likely to be single, African-American women, divorced and Mexican-American women, separated. Sixty percent of African-American, 62.9% of Caucasian, 36.9% of Mexican-American and 42.9 percent of Puerto Rican women earned over $30,000 a year. Ninety-eight percent of the women were employed full time. The number of children ranged between 1 and 6, with 60% of Mexican-American, 57% of African-American, 50% of Caucasian, and 35% of Puerto Rican women having at least one child.

Table 1. Education and Martial Characteristics*

	African American[1]	Caucasian[2]	Mexican American[3]	Puerto Rican[4]
Variable	**Percent**			
EDUCATION				
Post Secondary Degree	4.8	3.6	23.8	0
Associate	10.0	0	14.3	6.3
Baccalaureate	30.1	28.6	42.8	75.1
Masters	46.8	50.0	14.3	18.7
Doctoral	8.3	17.8	4.8	0
MARITAL STATUS				
Never Married	25.0	33.3	28.6	56.2
Married w/ Spouse	48.4	50.0	52.4	31.3
Divorced	18.8	12.5	9.5	12.5
Separated	4.7	4.2	9.5	0
Widowed	3.1	0	0	0

***N=135 1 n=68 2 n=28 3 n=22 4 n=17**

Body mass index (BMI), calculated by dividing the body weight in kilograms by the square of height in meters, was used to determine the range of body weight by category. BMI corresponds closely to percentage of body fat and represents a preferable indicator of obesity (Perri, Nezu, & Viegener, 1992). The mean BMI was similar for all groups: African American, 26.9± 5.7, (range 16-40); Caucasian, 26.7± 6.7, (range, 14-46); Mexican-American, 27.1± 6.0, (range, 18-42); Puerto Rican, 27.3± 5.9 (range, 19-40). A BMI below 25 is considered normal weight, 26-29 overweight, and over 30, obese. In this sample, 46 percent of African American, 36 percent of Caucasian, 55 percent of Mexican-American, and 44 percent of Puerto Rican women were obese. Approximately 80% of African-American women gained excess weight in childhood or adolescence, whereas 60% of Caucasian, 68% of Puerto Rican, and 75% of Mexican-American women gained excess weight as adults.

Weight Control Behavior of Women

Weight control behavior is defined as participation in behavior to lose weight and maintain body weight after weight loss or before weight gain. This behavior includes dieting and/or exercising. In Table 2 women's rates of participation in weight control behavior are listed.

Table 2. Weight Control Behavior*

	African American[1]	Caucasian[2]	Mexican American[3]	Puerto Rican[4]
Variable	**Percent**			
Exercise	54.5	54.5	54.5	58.8
Weight Management	39.4	50.0	59.1	47.1

***N=135 1 n=68 2 n=28 3 n=22 4 n=17**

A significant number of women in all groups were involved in exercise activities three or more times a week (Table 2). The women's exercise activities included walking, jogging, health club activities, and use of home exercise videos. Caucasian women were more likely to play tennis and swim than the other groups of women. Many of the ethnic minority women enjoyed swimming. However, as found in a pervious study with African-American women ((Walcott-McQuigg, Sullivan, Dan & Logan, 1995), the women were less likely than Caucasian women to feel comfortable in swim suits:

I don't feel comfortable wearing a bikini anymore. I know I can get away with a nice one piece. But I have not been to the beach in the last five years because of my appearance. I would feel that I was unattractive (PRW).

Women in all groups were less likely to participate in weight management activities than they were to exercise. The types of weight management activities in which the women participated included self-imposed calorie reduction diets, use of liquid products such as Slimfast©, visits to dietitians, and participation in Nutrisystem© and Jennie Craig© diet centers. Women who were not involved in any of the behavior, exercise, or weight management were more likely to be overweight and obese.

Perceived Benefits and Barriers to Weight Control Behavior

Most of the women were able to identify three benefits to participating in weight control behavior. Over 50% of women in each group identified physical health, mental health and physical attractiveness benefits to engaging in weight control behavior (Table 3).

Table 3. Perceived Benefits and Barriers to Participation in Weight Control Behavior

	African American[1]	Caucasian[2]	Mexican American[3]	Puerto Rican[4]
Variable	**Percent**			
Perceived Benefits				
Improved Physical Health	88.0	96.0	95.0	69.0
Physical Attractiveness	70.0	57.0	75.0	82.0
Improved Mental Health	80.0	84.0	62.0	56.0
Perceived Barriers				
Time Constraints	80.0	82.0	76.0	56.0
Life Events (e.g.) Work, marriage, pregnancy, illness	65.0	75.0	71.0	69.0
Stress	60.0	50.0	33.0	31.0
Structural Issues	54.0	45.0	48.0	56.0
Lack of Self Control	49.0	48.0	29.0	56.0
Lack of Motivation / Commitment	39.0	30.0	19.0	25.0
Social/ Professional Activities	35.0	20.0	14.0	25.0
Decrease In Activity	-	4.4	29.0	50.0

***N=135 1 n=68 2 n=28 3 n=22 4 n=17**

Physical health benefits included reduced cholesterol and blood pressure levels and an increase in energy.

Well the health benefits certainly. I was amazed and pleased that my cholesterol was lowered by my diet. I just had a great physical a week ago. The health benefits have been very noticeable. In 1983 I started to seriously exercise for mental health benefits. I think there's physical benefits and there's self-esteem mentally. In terms of physical it's just generalized. I am approaching 40 and I don't want to get older and gain extra weight. I am concerned about the pressure on my bones and joints. In terms of self-esteem, I will be going out soon to look for a job. I want to look and feel my best (CW).

African-American women were more likely than other women to express the belief that the behavior helped them to reduce their susceptibility to diabetes, hypertension, and heart disease.

Physical attractiveness benefits outranked the physical health and mental health benefits for Puerto Rican women. A higher percentage of Puerto Rican women than other women also suggested that they engaged in weight control behavior because of the physical attractiveness benefits. "Looking good" and wearing attractive, stylish, fashionable clothing was a frequently identified motivator for participation in weight control behavior. Below one woman describes her constant thoughts associated with the benefit:

If I lost weight I would fit into my clothes. I wouldn't feel that my belly was so big. I wouldn't feel so unattractive. Sometimes when I go out with my husband and we are all dressed up and we look nice I make it a point not to look too big and frumpy. There are people who shouldn't wear certain outfits and I will say, "Lord, please help me not to look like that." Sometimes I will have a dress like one of those women and I will say if I look like her I will die (PRW).

Barriers (Table 3) were factors that interfered in the initiation and maintenance of weight control behavior. The barriers included, time constraints, life events, stress, structural issues, lack of self-control, motivation and commitment, and social/professional activities. Over 50% of the women in each group identified time constraints due to higher educational pursuits, work and family responsibilities as major barriers to weight control behavior:

Three years ago I was in graduate school. I was a single parent and working full time. And then just having time for my boyfriend and myself was difficult. Losing weight was last on the list (AAW).
Sometimes I am too busy and all of a sudden I look at my clock and I am starved and it's 2:30 and I just go down stairs and bolt something that I can get down in a minute. And that's going to be a cheeseburger more than it's going to be a salad. Sometimes life is just too busy to eat carefully (CW).
I work all day and by the time I get home, it's not enough time to be walking. Saturdays and Sundays it is cleaning house and washing clothes, traveling up and down that basement stairs so I am always tired and busy (MAW).

Life transitional events were defined as interruptions in lifestyle patterns. For women in this study many of these events were associated with weight gain. Work, marriage, and pregnancy, were major life transitional events influencing the women's ability to participate in the weight control behavior. The events usually resulted in more sedentary behavior, higher rates of cooking activity, and the consumption of larger meals. Once the women gained the weight during pregnancy, very seldom were they able to return to their pre-pregnancy weight. Many of the women continued to gain weight with each subsequent pregnancy.

I started gaining weight shortly after we were married. I suppose I began to eat more, have more scheduled meals and decreased my activities. Once the children started coming it was much harder to control the weight (MAW).

Family illness created chronic unexpected stress for many of the women. One African- American woman had recently been the primary caretaker for a sibling with AIDS, a Caucasian woman cared for a disabled daughter, and a Puerto Rican woman cared for her aging parents.

Structural barriers such as weather, safety issues, and location and hours of business at health clubs were factors in the environment influencing women's participation in weight control behavior. The women were more likely to feel "lazy" and less likely to exercise outside in the winter. Safety was also a factor for women who did not feel it was safe to exercise in their neighborhood. For women who did not have cars traveling to health facilities on public transportation was perceived as "not always safe," especially after dark. Finding a baby sitter was cumbersome for some women:

It wasn't always easy to leave the baby somewhere while you go and exercise somewhere. You always have to find a babysitter (MAW).

Worksite and personal stress influenced the women's eating behavior and their ability to develop and maintain weight control strategies. Many of the women "snacked more" in response to stressful experiences. Caucasian women were more likely to identify "sexist language and conditions" as sources of stress. African-American, Mexican-American and Puerto Rican women identified stressful work events due to cultural insensitivity of coworkers, customers, and patients. Workload factors, such as functioning as translators, created stressful conditions for Spanish speaking women:

There is a lot of stress related to the fact that I am bilingual, so therefore I end up with more responsibilities like translating during admissions because half of the patients only speak Spanish, sometimes that includes the whole floor. Since I have more responsibility I work double versus the other nurses. Sometimes I am pulled to another floor to translate. And then I have to do my regular work. I am upset about that. I end up staying overtime to complete my work (PRW).

Self-control was a barrier to weight control behavior for many women, especially before their menstrual cycle:

Like I said my weakness is sweets. I love sweets. It's that craving, it's there and I have got to have it. I am trying to stay away from them. I love chocolate, it is my weakness. It's like I have to have chocolate, especially around my time of the month, you know near the menstrual cycle. (MAW).

Lack of motivation and commitment interfered with women's ability to engage in the behavior:

I think the hardest thing for me is trying to get into the thing about the exercise. I think if I walked more, or exercised more I think I could knock down a lot of calories but that's something I have not been really up to (CW).

Most of the women frequently found themselves in situations during their social and professional activities that influenced their ability to maintain a weight control program. The situations included attending meetings and social gatherings that were held at times that interfered with their exercise programs or included tempting foods that interfered with their ability to maintain control over their eating behavior:

I would have to say that when you walk in the door the greeting is like revolving around food. Especially family, it's like whatever they have from the minute you walk in to the minute you leave they indulge you. That's just their personality and they are just being hospitable (PRW).

Social gatherings were a special problem for Hispanic women, especially if they were dieting to lose weight. When high calorie foods were offered they were very concerned about offending the hostess by refusing to eat what was prepared:

I don't think they would say anything. But I just don't want to do that. I want to please them. I want them to feel comfortable. If you refuse them they will think it has to do with their cooking. Also when people come to my house I like to offer them what they like, if its butter deserts whatever, I want to be a good hostess (MAW).

Cultural Influences on Weight Control Behavior

Table 4 lists the cultural factors identified by the women. Cultural factors included, eating and cooking patterns, cultural diversity, value of weight and body size, and attitudes. African-American, Mexican-American and Puerto Rican women were more likely than Caucasian women to discuss the influence of traditional cooking and eating patterns on weight control behavior:

We used to be very poor and mom fed us a lot. Frying is a cheap way of cooking. You can use the same grease over and over. You know how people save the bacon grease and store it in cans and jars and put it in the refrigerator. Well mom cooked like that, fried chicken, fried pork chops. And even food that wasn't fried had so much fat in it, like neck bones and salt pork in the greens. And of course all that fried and fatty food tastes good (AAW).

The majority of food that Mexicans eat, it has to be fried or you know, involve some kind of grease or oil. Like with the beans for instance, if you want to eat refried beans, in order for you to have them refried you have to use lard, which is very fattening. You could use something else to fry it in but it would not have the same flavor (MAW).

Table 4. Cultural Factors Influencing Participation in Weight Control Behavior

	African American[1]	Caucasian[2]	Mexican American[3]	Puerto Rican[4]
Variable	**Percent**			
Eating and Cooking Patterns	56.0	0	52.0	44.0
Cultural Diversity	42.0	0	19.0	19.0
Value of Weight/ Body Size	33.0	55.0	43.0	63.0
Attitudes	25.0	36.0	29.0	19.0

***N=135 1 n=68 2 n=28 3 n=22 4 n=17**

I think it's because we love to eat. And we have good tasty food. I mean some American food is very boring. My parents were born in Puerto Rico and because I grew up at home a lot of the customs were from there. My mother used to fry foods in lard. I remember when I was little seeing big buckets of lard being used for cooking and frying. We now fry less and use vegetable oil (PRW).

All the women shared similar beliefs about lower socioeconomic status women's likelihood of continuing harmful eating and cooking patterns due to lack of knowledge about the potential health effects of these patterns:

Like I said before, a lot of Hispanic women that I know are not knowledgeable. They don't know a lot of things and they don't have the opportunity to read or to be informed about health habits, and how to control their diet (MAW*).*

Women described the role of cultural diversity as it related to importance of weight control behavior. African-American, Mexican-American and Puerto Rican women suggested that Caucasian women were "cultured to look skinny", that weight control behavior is "more emphasized in the 'White culture', and that they had no desire to achieve the same degree of "thinness":

I don't see myself, you know as, like the white women being 118 or 120 pounds; it is just not realistic for someone with my body frame. I mean, I think 135 is a good weight for me and I think beyond that or below that I would just look anorexic. And I don't have a problem not being at that lower level, you know that they consider acceptable (MAW).

I think it is the environment. Our environment shapes who we are. And I think each ethnic group comes from a distinct environment. African-American, Hispanic, and Native American women's environment is so totally different from the Caucasian environment. Our life cycles, everything to me is so distinctly different. So the environment would have to impact on health, diet, the food we eat, body size, our stress, everything, you know (AAW).

Mexican-American women suggested it is only appropriate to be concerned about weight control when you are a single woman. The women suggested that there's "a tendency for it to be less important after marriage because of the importance of the children and the household."

Caucasian women who had gained the majority of their weight as children described early weight management intervention by family members:

I was heavy at between ages one year and four years. When I was ten years old my mother took me to lose weight, to a doctor. I was heavier during my college years and I probably am heavier since I have given up smoking and gone through menopause (CW). The first diet I was put on was when I was when I was five years old. My kindergarten teacher and some other person at the school, a school psychologist or social worker, this was about in the early 50s, approached my parents. They said to them she's so bright and she's also very fat. So they convinced my parents to send me to a facility. I lived away from my family for 13 1/2 months. I spent my first grade at a residential facility (CW).

Those early experiences with weight management experts contributed to the women's feelings of dissatisfaction with their bodies and their inability to have a normal relationship with food.

African-American, Mexican-American, and Puerto Rican women were more likely to suggest that a larger body size is valued within their culture. As plump children they were considered "cute" and "healthy":

I think being thin and shapely is more an acquired sense of self. In the Mexican culture it's acceptable for women to be chubby. Some women strive to be that way because they feel that's the way their men like them to be. The male macho image plays a role in it; you know what the man wants. It's acceptable to be a little on the heavier side. You are more of a homebody and its okay that way. I would see the elders tell a new bride; you are putting on a couple of pounds. That shows you are a good housewife (MAW).

My aunt is fat and she is two years older than me. Her husband is skinny. I guess another stereotype about fat people, in our culture is that it is not a major thing. What is important is that you always look nice. You have your lipstick, your perfume, and a nice dress or slacks and your hair is nice. If you are 300 pounds and you look nice then you are good looking. Most of my cousins are heavy and they are married. Nobody says anything unless you are thin. Then they think you are sick (PRW).

Caucasian women were more likely to have negative experiences associated with their body size and weight:

I think society is concerned with the tangible. I think that looking good and feeling good and the good life all goes with being slim and dieting. You can't be too thin or too rich. If you are overweight people tend to put you down no matter what your age. My daughter who is overweight has had some special problems with kids calling her names and throwing things at her because of her weight (CW).

Exploration of cultural attitudes regarding body size revealed that the ethnic minority women believed that the men in their race preferred a larger body size:

As for Hispanic men they like women that are fuller. I think that Hispanic men typically might like a heavier woman. They like their women to be fit. I don't think their ideas are yet like Caucasian men. I don't think Puerto Rican men like model thin women. They like their women more voluptuous and more shapely (PRW). We have a different value on weight. Most women, Hispanic women have their children and spread and all. The men, they know that's going to happen. And so I don't think that the Latino men are that concerned. It's not his idea to have some women who is really thin (MAW).

Caucasian women's experiences indicated that Caucasian men might prefer a thinner body size:

I have a brother who is really fat phobic. And he is a compulsive eater and a compulsive exerciser. And I know I am an exception to the rule. Basically he just doesn't like overweight people. He was afraid his oldest daughter was getting a little chunky. When she was 11 years old he considered sending her to a diet camp. It was really bothering him. His wife is skinny, works out all the time, and watches what she eats. He even monitors what she eats (CW).

To further assess the influence of cultural attitudes on weight control behavior the women were asked, "Do you think there is a relationship between weight and health?" African-American women were less likely (25% compared to 40% Mexican-American, 50% Puerto Rican and 80% Caucasian) than the other women to express a belief in a relationship:

I am not so sure. There are some research studies that suggest it and the general media would try to insinuate that it is. But I always felt like that's propaganda to try to encourage women to become involved in the weight loss programs. I not sure that there is a big relationship (AAW).

Several women indicated that they did not believe data describing higher rates of obesity for ethnic minority women than for Caucasian women:

I think that's a lie. I have seen many Caucasian women, American women with weight problems. The management staff in the office where I work is predominantly white and female. I can think of several women there who have a severe weight problem. I don't think the literature should narrow it down to just African- Americans and Hispanics It's hard to say that Hispanic women are having more weight problems than Caucasian women. I see a lot of overweight Caucasian women (MAW).

Other ethnic minority women acknowledged that the body weight differential information was true and speculated on reasons for the differential:

I think that Hispanic women tend to be heavier. I think it's changing though. Because I know so many Hispanic women who are weight and health conscious. As we live in this society we're picking up a lot of the beliefs. But even back home in Puerto Rico, the modernized working out is really big over there (PRW).

Mexican-American and Puerto Rican women expressed the belief that obesity is less of a problem in Mexico and Puerto Rico.

Discussion

The findings from this study revealed: a) the lived experience of weight control behavior for women, while not statistically significant, is similar across racial/ethnic groups; b) many factors, including, cultural influences, affect women's ability and motivation to participate in weight control behavior. Results of this study are supported by information in the literature suggesting similarities in women's experience with weight control behavior (Wing, 1993) and variations among racial ethnic minority groups (Allan, 1998; Kuymanyika, 1994; Massara, 1989; Serdula, et al., 1999). The women's desire to control their weight was reflected in rates of participation in weight control behavior. The identification of benefits indicates how well informed this group of women were about the positive effects of participating in weight control behavior. The type and frequency of the barriers reveal the variation and extent to which the women in this study were unable to participate in the weight control behavior. As in other studies, participation in the weight control behavior was constrained by environmental barriers, such as family and work responsibilities (Kahn & Williamson, 1991; Reinli, Will, Thompson-Reid, Liburd, & Anderson, 1996; Wilcox, Richter, Henderson, Greaney, & Ainsworth, 2002), life transitional events such as pregnancy (Rosenberg, Palmer, Wise, Horton, Kumanyika & Adams-Campbell, 2003; Williamson, 1993) and psychosocial factors such as emotional eating (Ganley, 1989) in response to stress (Foreyt, et al., 1995).

Culturally patterned behaviors and beliefs play an important role in the development and maintenance of obesity (Klesges, DeBon, & Meyers, 1996; Kumanyika, 1994; Railey, 2000). As described in this study, ethnic minority cultures may be more accepting of a larger body size and thereby de-emphasize the need to participate in weight control behavior. In contrast a lack of sensitivity may expose Caucasian women to cultural expectations, which contribute to early negative experiences associated with their body weight. Anthropologists have identified body size attitudes in African cultures (Brink, 1989; Cassidy, 1991) that imply a positive response to a larger body size. The continuation of these African cultural attitudes may influence research findings with African descendants. Powell and Kahn (1995) found that African American men were more likely than European American men to consider dating "larger than ideal women" and less likely to experience social sanctions. In a study of a group of heterogeneous American ethnic women consisting of Anglo, Eastern European, Italian, Puerto-Rican, African and Afro-Caribbean (Haitians, Guyanese, Barbadians, Trinidadians) researchers reported that African-American and Afro-Caribbean women were more likely than the other groups of women to identify higher percentages above ideal body weights that were attractive to mates and peers (Mossavar-Rahmani, Pelto, Ferris, & Allen, 1996).

Although research has shown that ethnic minority women's experiences may contribute to higher rates of obesity, experiences of Hispanic women and weight have rarely been compared to other groups of women. When compared, as in this study cultural influences such as eating and cooking patterns, value of body size and cultural attitudes, toward weight control are similar to African-American women. Massara (1989) and Harris and Koehler (1992) found that Puerto Rican women and Mexican-American women, valued a larger body size. Mossavar-Rahmani, et al. (1996) also revealed that while Puerto-Rican

women identified a thin body image as attractive they were more likely than other groups of women to identify a higher percentage above ideal body weight as more attractive to their family.

While the literature suggests that Caucasian men are less likely to date overweight women than African-American men (Powell and Kahn, 1995), little is known about the perceptions of attractive body size held by Hispanic men.

In this study, African-American and Hispanic women rejected the information on prevalence of overweight and obesity in their ethnic/racial groups. This finding reflects the need to develop culturally sensitive health information that is believable, acceptable and designed to assist women to develop healthy weight standards (Wilmore, 1993).

Analysis of the weight control data among the women in this study did not reveal statistically significant differences. However, the women's responses to the questions varied based on cultural experiences and perceptions. Therefore, it is germane that we develop models to guide weight control interventions that are culturally sensitive (Gans, Kumanyika, Lovell, Goldman, Odoms-Young, Strolla, et al, 2003; Kumanyika, 1994; Thomas, 1995) and focus on the contextual influences in women's lives (Allan, 1998; Base-Smith & Campinah-Bacote, 2003; Johnson & Boradnax, 2003).

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