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Body Image Among Older, Rural, African-American Women with Type 2 Diabetes

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A B S T R A C T

Type 2 diabetes and obesity co-occur in high prevalence among African-American women. The positive value placed on large body size has both historic and contemporary biosocial relevance. The maintenance of weight at medically recommended levels is a cornerstone of both prevention and treatment of Type 2 diabetes. This study of overweight, elderly, rural African-American women with Type 2 diabetes found they generally preferred smaller body sizes compared to previous studies. Normal to slim body images as presented in a photographic array were selected as being more attractive, less likely to have diabetes and hypertension, healthier and to be more medically compliant than obese, grossly obese or very thin images. Body image is a psychosocial variable that should be included in weight control initiatives.

Key words: *body size, aging, diabetes, prevention*

Introduction

Self-image of body size and shape is an important factor in weight control, self-perception, self-esteem, and self-efficacy[1,2]. Few studies assess body image although it is clinically relevant for medical conditions that require weight reduction such as Type 2 diabetes, hypertension and coronary heart disease[3]. African-Americans have the highest prevalence of obesity[4] and the third highest prevalence of Type 2 diabetes[5] among U.S. ethnic populations. Eighty percent of African- American women with diabetes are obese, compared to 50% without diagnosed diabetes[6].

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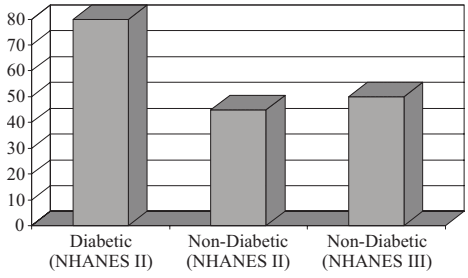

Fig. 1. National Health and Nutrition Examination Survey II (1976–80) National Health and Nutrition Examination Survey III (1988–91).

Body weight is a factor in the etiology and management of Type 2 diabetes and its complications[7–9]. Weight reduction leads to a decrease in insulin resistance, a decrease in impaired glucose tolerance and better management of diabetic complications[7,10]. However, the key therapeutic intervention of decreased obesity with long-term maintenance of weight at medically recommended levels has not been achieved for the majority of individuals with Type 2 diabetes[8,11].

Studies assessing perception of body size, shape and body satisfaction indicate that African-American women prefer body sizes that are larger, on the average, then those preferred by a sample of age-matched non-Hispanic white women[12–15]. Becker and colleagues[14] found that in an urban, low-income sample, that body image sizes for »current self,« »ideal self« and »ideal for the opposite sex« where all significantly larger for African-American than white women. Furthermore, overweight (BMI ≥ 25) and obese (BMI ≥ 30) African-American women thought their current body sizes to be more attractive, more attractive to the opposite sex, and more healthful than age matched white women[12,16,13,14]. Demarest and Allen[17] concurred in their findings that African-American women had the most accurate perceptions of what men found attractive relative to white women who thought that men preferred lower body weights and slimmer images than they actually preferred. They considered their findings as did Stevens, Kumaniyka and Keil[13] to indicate that African-American women had more positive self-perceptions; and therefore, were less likely to diet but also less likely to engage in harmful dieting practices related to bulimia and anorexia. Even among older (mean age of 73 years) white and African-American women, African-American women where 0.6 times as likely to feel guilty after overeating, 0.4 times as likely to diet, 2.5 times as likely to be satisfied with their weight and 2.7 times as likely to consider themselves attractive.

Research on body image discrepancy has found that white women experienced body image discrepancies at lower BMI's relative to black and Hispanic women. Black women did not report dissatisfaction or discrepancy until BMI's were ≥ 29.2[15]. In a large sample of adult women (n=500), 40% of moderately overweight and obese African-American women age 25–64 considered themselves to be attractive or very attractive[18]. Other studies have indicated that regardless of sex or ethnicity, individuals who are actually overweight based on BMI will select a desirable body size that is significantly smaller than they perceive their current size to be[1,16,12]. These findings suggest that obesity treatment programs need to consider cognitive aspects and body image issues in their design of effective weight loss and weight maintenance interventions.

Although African-American women are subjected to the same thinness-depicting and promoting media as the rest of the population[19–25] they are more conflicted concerning body images than white women because of countervailing cultural pressures of African-American communities[2,13,16,21,26]. African-American women receive mixed messages. United States

society generally values slimness, while African-American communities generally value larger body size[16]. There is strong cultural pressure to be self-accepting of one's physical shape, to »be happy with what God gave you« and to make the most of one's appearance[2]. One sample from a university-affiliated rural community health center of young and middle-aged African-American women found that the pressure to be self-accepting conflicted with dissatisfaction of their own appearance and weight. They believed they could lose weight »if they put their mind to it« but they lacked social support and resources to facilitate the weight loss[2]. African-American women face multi-layered realities that can compromise their ability to lose weight in spite of weight reduction therapies that are the foundation of diabetes control[26].

There are a number of historical factors that lead to a positive image and association of large body size among African-American women. Brown's[27] survey of traditional societies, including a number from Africa, showed that of 81% favored »plumpness« and »being filled out« as attractive attributes for females. In Social Aspects of Obesity edited by Igor de Garine and Nancy J. Pollack[28], favorable aspects of obesity are described for a number of societies. Individuals of large body size are considered to be of higher status and have a number of advantages including that of health, fertility, wealth, and beauty. Brink[29] describes prenuptial fattening rooms and rituals among the Annang of Nigeria and de Garine[30] describes the more unusual practice of male fattening among the Massa of Cameroon. Prenuptial fattening indicates that a family can do without the labor of the individual and that they are wealthy enough to provide especially high caloric foods for the bride-to-be[29]. Fatness not only confers desirable individual traits but also reflects positively on the family and larger social group.

Size, including tallness, fatness and muscularity are particularly important for mature women. Size is indicative of fertility, both in a psychosocial sense as well as having physiological stores to support pregnancy and lactation[31,32]. Women of large body size generally give birth to large babies relative to shorter and slimmer women[31]. David Barker[33] and colleagues have shown that low birth weight, especially associated with high adult weight, confers a high risk for Type 2 diabetes. Energy and protein reserves provide an advantage when there are annual food shortages. For example, among the Kalahari San, there is an annual 10% weight loss among women leading to changes in reproductive physiology[27]. Seasonal fattening is a hedge against periods of famine or low food intake and is particularly important for nutritionally vulnerable members of society. Women, during their reproductive years, have periodic increased energy demands associated with pregnancy and lactation[34]. Although energy reserves confer an advan- tage during periodic caloric deficit or high-energy demand, life-styles in the United States no longer involve extensive caloric shifts.

Historical epidemiology and ethnomedical beliefs support the fact that wasting and low body weight are signs of illness, for example, in the diseases tuberculosis and cancer and now AIDS. Larger body size with sufficient energy and protein stores were, and to a lesser extent remain, important in reducing morbidity and mortality. This is especially critical when there are prolonged bouts of illness leading to a lack of food intake, or when repeated bouts of illness leads to loss of nutrients as with diarrheal illness[35,36]. African-Americans still have limited access to health care and health insurance leading to delays in diagnosis and treatment, greater reliance on traditional mo-

des of treatment and possibly prolonged and repeated bouts of illness[5,37].

During the period of U.S. slavery, a lack of control of the body characterized the relationship that enslaved Americans had with plantation owners. Some anthropologists are examining this notion of a lack of control over the body as a way of understanding internal and external locus of control issues with regard to not only obesity but other health concerns of women[38]. Furthermore, contemporary sexual abuse and domestic violence have been linked to over-eating and obesity among African-American women[39].

In the maternal role, self-esteem is related to being »a good mother« and indicates that individuals can use resources wisely, have sufficient food, are good cooks and managers and as a result have a larger body size. In addition, mothers are gatekeepers for food in the household. Asking a woman to go on a »special diet« or weight reduction regimen challenges her role as the food preparer and gatekeeper for the family. These competing demands along with other maternal role demands, may prove to be in direct conflict with family desires, her perception of a good mother and cook, and the economic constraints of the family. Furthermore, recent affluence signals a time for individuals to enjoy food and not to postpone gratification for some possible future adverse health outcome[32].

In spite of these positive behaviors and the ideas associated with large body size and the pressure to over consume high calorie foods, the prevailing view of large body size described as »social obesity« carries a stigma. There are a number of associated negative stereotypes, particularly for obese women. Jeffery Sobal[40,41] documents the psychosocial and economic problems obese girls and women face in the United States, regardless of ethnicity or race. Slim bodies are associated with better health, better job and job performance ratings, better grades in school and more lenient treatment in the criminal justice system. The reality is that African-American women are getting mixed messages. Historical precedents and experience, contemporary desirability for a »little meat on the bones,« sexual preferences, and attractiveness associated with large size are countermanded by the media and medical messages promoting slimness and health.

Material and Methods

Perceptions of body size were assessed in older, rural, low-income African-American women with Type 2 diabetes. Through network sampling, these women were selected from two rural Florida communities. Ten individuals in there 60's and 70's and one individual in her 80's participated in a 18-month study of home management strategies for diabetes. The study assessed health beliefs, dietary intake, activity levels and patterns, compliance with diet and medication therapy. Seven individuals participated in a portion of the study that assessed body images. Images were presented in four sets of photographs developed by Emily Massara and Albert Stunkard[42]. These photographic images, enlarged or reduced in size using an anamorphic lens, were determined to have body weights above or below the desirable weight based on consensus of geriatric physicians (reliability coefficient 89). The ranges in weight are from a –27% to –23% (very thin) through +45% to +110% (grossly obese). The weight categories are very thin/emaciated, thin, normal, obese and grossly obese. Participants were asked to describe these images in terms of 15 different attributes (Table 1). These were morphological attributes, psychological/personality attributes, behavioral attributes and disease status. Fifteen attributes were assessed with 48 possible assignments for each attribute, by asking

TABLE 1
PHOTOGRAPHIC IMAGE ATTRIBUTES

1. Attractiveness
2. Health
3. Likelihood of diabetes
4. Body size (thin-fat)
5. Cooking ability
6. Likelihood of hypertension
7. Niceness
8. Patient behaviors (compliance)
9. Successful
10. Happiness
11. Identified body size
12. Desirable body size
13. Longevity
14. Worrying behavior
15. Friendliness

for an assignment of the images to the extremes of the attribute (e.g., most attractive/least attractive, most likely to have diabetes/ least likely to have diabetes) (Table 2).

Results

Twenty percent of the variables had one or two different responses indicating a very high consensus among the subjects. Fifty percent of the variables had three to five different responses. Thirty percent had five or more different responses indicating differing perceptions within the group. Seventy-eight percent of the sample's choices indicated very thin to normal images were the most attractive and all agreed that the grossly obese images (+45% or more of the desirable body weight) were considered to be unattractive. In terms of health, 86% of the time normal to overweight images were the healthiest whereas, 29% of the very thin and 67% of the grossly obese images were the least healthy. The grossly obese images were considered to have the greatest likelihood and the very thin to normal size images the least likelihood of having diabetes. The likelihood of having hypertension showed even greater consensus with 100% of the participants indicating obesity and gross obesity are associated with hypertension. Thin to normal images were assessed to be least likely to have hypertension. With the more complex issues of patient complaint behavior, asking who the best patient was and who was the worst patient, 74% of the thin to normal images had the attribute of being the best patient and 56% of the selections, the obese or grossly obese images, had the attribute of being the

TABLE 2
PHOTOGRAPHIC IMAGE ATTRIBUTES BY BODY SIZE IN AFRICAN-AMERICAN WOMEN WITH DIABETES (N=7, 24 IMAGES/48 ASSESSMENTS FOR EACH ATTRIBUTE)

Attributes	Positive (most, best)	Negative (least, worst)
Attractiveness	78.5% (very thin to normal)	100% (grossly obese)
Health	86% (normal to obese)	29% (very thin) 67% (grossly obese)
Likelihood of diabetes	78.5% (grossly obese)	100% (very thin to normal)
Likelihood of hypertension	100% (obese to grossly obese)	100% (very thin to normal)
Patient behavior	74% (thin to normal)	56% (obese to grossly obese)
Desirable body size	76% (thin to normal)	13% (very thin) 86% (grossly obese)

worst patient. One interpretation is that adherence does not necessarily lead to the physician-desired outcome of weight loss. For example, individuals who may consider themselves to be compliant or adherent to medical regimen may not be slim. Only a slight majority (56%) of the selected images that were obese or grossly obese were considered to be in poor compliance. For desirable body size, 76% of the thin to normal body size images were chosen as desirable for themselves. They also chose as least desirable very thin images (13%) and much more frequently the grossly obese images (86%).

Discussion

The findings support a favorable perception of larger body size (normal to overweight) as »healthy.« However, for diabetes and hypertension, normal to thin body images are chosen as those conferring or indicating lowest disease risks. There is also a consensus that gross obesity is »too« large a body size and associated with negative outcomes in attributes of attractiveness, psychosocial features and disease. The extreme of too thin also is negatively assessed regarding general health and desirable body size but not disease risk for diabetes or hypertension. Health, therefore, is being the »right size,« normal to overweight and not being either too thin or too fat. However, attractive and desirable body size images and those related to specific disease risk tended to be thinner than those chosen as »healthy.«

Women in the current study choose slimmer body sizes associated with positive attributes more frequently than anticipated based on previous studies[12–19]. The results of this study indicate a complex, multi-dimensional assessment of body size where desirable size varies by attribute. There is recognition that both obesity and thinness are »unhealthy« although the former state is acknowledged to confer greater risk for diabetes.

Body image is embedded in both historic and contemporary socio-cultural matrix that has conflicting messages. Massive obesity is not a desirable body size although the prevalence of obesity continues to rise[4]. Simply promoting slimness and even providing the mechanisms such as low calorie foods, exercise programs, and nutrition education have not led to sustained weight loss for individuals[43]. The media messages belie the fact that we live in an environment that has a surplus of obesogenic forces and a deficit of obesity-inhibiting ones[44]. A comprehensive approach to weight control for both diabetes prevention and treatment will necessitate the coupling of body image and other psychosocial variables with alterations in the obesity-promoting elements of our environment[44,45].

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SLIKA TIJELA U STARIJIH, RURALNIH, AFROAMERIČKIH ŽENA S DIJABETESOM TIPA 2

S A Ž E T A K

Dijabetes tipa 2 i pretilost javljaju se zajedno u visokoj prevalenciji kod afroameričkih žena. Pozitivna vrijednost koju ima veliko tijelo i u povijesnoj perspektivi kao i u današnjem vremenu ima veliko bio-socijalno značenje. Održavanje težine tijela u okviru medicinski preporučenih granica kamen je temeljac i prevencije i liječenja dijabe-

tesa tipa 2. Ova studija pretilih, starijih, ruralnih afroameričkih žena s dijabetesom tipa 2 pokazala je da ispitanice općenito preferiraju manju veličinu tijela, u usporedbi s rezultatima prethodnih studija. Normalne do mršave slike tijela predstavljene nizom fotografija ispitanice su smatrale privlačnijima, s manje vjerojatnim rizikom da imaju dijabetes i hipertenziju, zdravije i više u skladu medicinskim kriterijima od pretilih, jako pretilih, te jako mršavih slika. Slika tijela je psihosocijalna varijabla koju bi trebalo uključiti u inicijative kojima je cilj kontrola tjelesne težine.