

PARAMETERS OF OBESITY IN AFRICAN-AMERICAN WOMEN

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Non-Hispanic African-American women have the highest incidence of overweight in the United States, at 48%. For non-Hispanic white females, the prevalence is 32.9%. This striking difference can be expected to have a great impact on morbidity and mortality within this culture. The purpose of this study is to ascertain, by descriptive analysis of data derived from a questionnaire, whether there are modifiable factors specific to African-American women that could lead to an increased prevalence of obesity. Forty adult, African-American obese women were given a questionnaire covering personal socioeconomic, dietary habits, educational level, exercise patterns, childhood exposures, and stress management. Data from the questionnaire were grouped and collated to determine whether specific trends could be discerned. This descriptive evaluation found that hair care issues had some effect on exercise patterns. In addition, a lack of childhood role models for exercise and an adult pattern of sedentary lifestyles appeared to be significant factors contributing to obesity. After this pilot study, a comparative study with a white group of obese women or a group of nonobese African-American women should be the next step in evaluation to further define and understand these observations. (*J Natl Med Assoc.* 2000;92:481-484.)

Key words: hypertension ♦ diabetes ♦ obesity ♦ controllable

African Americans have been demonstrated to suffer the ravages of diabetes, cardiovascular disease, hypertension, and renal failure in greater severity than the general population.¹⁻³

Obesity is known to be a contributing factor and is often a precursor to these maladies.³⁻⁵ It is further known that genetics play a significant role in the development of these diseases, and that environmental management can have a modifiable effect on disease outcomes. Nongenetic factors of behavior and

the personal health belief model contributes to the genesis of obesity, particularly in black females.^{6,7} This survey is an effort to identify modifiable risk factors and further the process of ascertaining how we can further reduce obesity within this subculture.

METHODS

African-American women during routine office visits to a metropolitan family medicine residency program were offered an opportunity to complete a nine-page questionnaire and to participate in a study on being overweight. Women were selected if their body mass index (weight (kg)/height (m²) = BMI) was greater than or equal to 27.3.^{1,8} A predominantly multiple choice survey gathered descriptive data in six different areas:

- background and family structure;

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Table 1. Eating Habits

How many grams of fat do you think you should eat per day?	
1. Number of women with incorrect knowledge of desirable 24 h fat intake	33 of 40 (82.5%)
2. Number of women eating "fast foods" greater than twice weekly	19 of 40 (47.5%)
3. Number of women often skipping breakfast (no breakfast 4 of 7 d)	31 of 40 (77.5%)

- socioeconomic status;
- physiologic status and lifestyle;
- current caloric intake;
- current exercise profile;
- stress management assessment.

The participants signed a consent form prior to taking the survey, and either the investigative assistant or the chief investigator answered questions, serving as proctors for the survey as needed. The height and weight of all participants were measured, along with waist to hip ratios. Each participant's survey was assigned a number and all identification data were removed from the survey, rendering each questionnaire anonymous and blinding survey evaluators to the body mass index and any other identifying data for each participant. Names and corresponding numbers were kept under lock and key.

RESULTS

The survey questionnaires qualified 40 women for the study, with body mass indexes greater than or equal to 27.3. The ages ranged from 29 to 69 years. No pregnant or recently (within 1 year) pregnant women were entered in data collection. Although many women were under treatment for hypertension, diabetes, and/or other illnesses, none were ill at the time of the interview and none had been hospitalized for a serious illness that might have affected her weight in the six months before entry into the study.

The responses of the participants were grouped into five categories, listed on Tables 1 through 5.

Under the category of Caloric Intake (Table 1), 77.5% regularly skipped breakfast and nearly 50% ate "fast foods" more than twice weekly. When asked about daily intake of grams of fat, 85% of the respondents were not aware that 30% or less of their total daily calorie intake should be fat.

The exercise habits of the group were sedentary at best, with 68% of the women participating in no exercise at all at the time of the survey (Table 2). Seventy-five percent who did any exercise did so only once weekly. The majority (65%) of the women felt exercise was rarely, if ever, considered "fun."

Nearly one-half of the respondents stated that hair care issues affected when and how long they exercised (Table 3). Eighty-five percent of participants had not received encouragement or significant input from family members or peers regarding need for repetitive exercise and its pleasures or potential benefits (Table 5). Although greater than 75% of the women knew they did not exercise enough, 0% of the group selected exercise as a primary means of dealing with life stresses. Rather, they selected from a list of alternatives, such as prayer, sleeping, shopping, and or talking with a friend to deal with problems. It is notable that alternatives selected were of fairly low calorie expenditure. Only one woman of the 40 responding felt that exercise was essential to her well being.

DISCUSSION

Descriptive epidemiologic studies provide general observations concerning the relationship of disease to basic characteristics.⁹ This survey seeks to suggest solutions, by recognition of common pat-

Table 2. Exercise Habits

Have you stopped all sporting activity as of this interview?	
1. Number of women who have ceased routine exercise at time of interview	27 of 40 (67.5%)
2. Number of women who decline exercise in inclement weather	27 of 40 (67.5%)
3. Number of women who exercise once a week or less	30 of 40 (75%)
4. Number of women who directly cancel outdoor exercise due to weather	27 of 40 (67.5%)
5. Exercise is rarely, to never, fun	26 of 40 (65%)

Table 3. Hair Care Issues

As you think back about it, does hair maintenance change your recreational patterns?	
1. Number of women who feel that hair care directly affects their exercise patterns	18 of 37 (48.6%)
2. Number of women attending hairdresser at least twice a month	23 of 40 (57.5%)
3. Number of women who would even consider wearing their hair "natural"	24 of 40 (60%)

terns, associated with the high prevalence of obesity among African-American females. The survey did not attempt to assess specific genetic contributions in each case.⁷ Although most investigators agree that despite genetic predisposition in most cases, environmental factors have the potential of modifying the outcomes.^{6,10,11} Another factor, not taken into account in interpretation of data, is the problem of predicting future exercise habits of someone who has currently ceased all exercise. If a subject is not exercising, regardless of the environment, it becomes difficult to assess how rain or snow would effect them, until they had decided to commit to an routine exercise regime. Also, if an individual had no desire to exercise on a regular basis, it is impossible to tell whether hair care would have been affected if they participated in some exercise at all. Despite these limitations, we observed clear patterns of behavior, which could be contributory to the overweight syndrome. This survey is a descriptive pilot study serving as a precursor to comparative studies of one subculture (black vs. white) to another, or possibly a comparison of two sets of African-American women, one obese and one non-obese.

The obese women participants in this study were also largely sedentary and seemed to have been so most of their lives in terms of pursuit of routine exercise programs or participation in ongoing physical activity as adults. Of the six women who stated they had been encouraged to exercise and participate in sports as a child, only two (one-third) of the total continued into adulthood with some weekly exercise at all.

Having an artificially produced texture of hair that is not "exercise friendly" could have a conscious or subconscious effect on the decision to risk exercise. Many women, after paying for hair treatment, opt to avoid exercise and its associated sweating, which thereby negates their investment until after a period of time passes pending other more highly prioritized activities.

The ingestion of fast foods and skipping breakfast, linked with a sedentary lifestyle, are major contributing factors for generating obesity. The overweight participants in this survey frequently ate meals later in the day after breakfast, with large calorie intakes when eating did occur.

Stress response patterns, which exclude exercise as a part of coping, can be contributory to the overweight syndrome. This adds greatly to an overall sedentary habituation pattern.

CONCLUSION

It has been previously documented that socioeconomic status and education does have a bearing on the prevalence of obesity.^{9,10} What remains to be factored into the equation is how to create culture-specific weight-loss plans that take into account the complicated effects of childhood and family influences or noninfluences, hair care issues, and cultural stress-response patterns. Information collected from this descriptive survey sheds light on many contributory factors that serve as possibilities in explaining why African-American females suffer a higher prevalence of obesity.

Table 4. Childhood and Youth Influences

Can you name any person in your life who strongly influenced you to exercise or participate in any physical activity while you were a child or youth?	
1. Number of women stating that as a child no one emphasized value of exercise (85%)	34 of 40
2. Number of women who were not seriously involved in sporting activity in high school	23 of 40 (57.5%)
3. Number of women who felt they had been sexually, physically, or emotionally abused as a child	7 of 37 (18.9%)
4. Number of women who both had no strong influences as a child to exercise and currently were not exercising or participating in sports	30 of 40 (75%)

Table 5. Stress Pattern Responses

1. Women who feel that they do not exercise enough	31 of 40 (77.5%)
2. Number of women who sought out exercise to deal with stressful life events	0 of 40 (0%)
3. Number of women stating exercise was essential to their "well being"	1 of 40 (2.5%)
4. Number of women who know they need exercise but don't have energy	37 of 40 (92.5%)

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