

Physical Activity and Perception of Body Image of African American Women

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Abstract

The purpose of this study was to examine the amount of daily physical activities performed by African American women and their perceptions of their body image, obesity status, physical fitness, and satisfaction with their physical appearance. The study was conducted at a local church in an urban area on the east coast of the United States. A total of 51 African American women completed the International Physical Activity Questionnaire (IPAQ) to gather data on their physical activity participation. Another questionnaire developed by the researchers examined respondents' perceived body image and current knowledge of physical activity and its benefits. The study found that the average Body Mass Index (BMI) value for the respondents was 29.9, indicating that over 82% were either overweight or obese. Moreover, almost 55% perceived themselves to be overweight. Findings also indicated 58.8% of respondents were dissatisfied with their physical appearance. Respondents reported engaging an average of 69 minutes of moderate and vigorous recreational activity over a seven day period. This was considerably lower than the recommended amount of moderate and vigorous physical activities. The current study confirmed the need for physical activity programs for African American women. It was also suggested that church-based provision of recreational physical activity may be an effective cultural approach for reaching African American women.

Key Words: Physical activity, recreation, African American women

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Introduction

Obesity, combined with a lack of physical activity, is a growing problem in the United States (Miles, 2007). The Centers for Disease Control and Prevention (CDC, 2011) reported that more than one third of American adults are obese. People who are obese possess health risks which include hypertension, coronary heart disease, type 2 diabetes, and other chronic illnesses. Between 1980 and 1990 the number of obese people increased 40% (CDC, 2011). Although these statistics were common in men and women of all ethnicities, minority groups were at greater risk for being obese (Kumanyika, 2008).

African American women have been identified as being at a higher risk for high blood pressure, cardiovascular disease and stroke, type 2 diabetes mellitus, and obesity than other ethnic groups in the United States (Wilbur, Chandler, Dancy, & Lee, 2003). Miles reported that African American women are one of the least physically active subgroups of the population (2007). A reported 43% of African American women who completed a national survey stated that they live an inactive lifestyle (Young & Stewart, 2006). Results from the 2010 Behavioral Risk Factor Surveillance System (BRFSS) indicated that only 33% of African American women were physically active in the previous month.

As participation in physical activity has dropped for the general population, parks and recreation professionals are becoming more involved than ever before with promoting a better quality of life (Henderson, Neff, Sharpe, Greaney, Royce, & Ainsworth, 2001). Studies also indicate a strong relationship between physical activity participation and one's perception of body image (Ata, Ludden, & Lally, 2007; Kumanyika, 2008; Miles, 2007). The limited number of studies in this area creates the need for a clearer understanding of both physical activity participation and perception of body im-

age among African American women.

Literature Review

Body Image

Being overweight presents a perception of a lethargic, unattractive, and pathetic individual (Grabe, Ward, & Hyde, 2006). This, in turn, can place a stigma on the notion of body image and how it is perceived. Depending on the culture or subculture, stakes can become higher across all ages. Body mass index (BMI) can be an important determinant to the perception of body image. In general the Western ideal is for a thin female while in some cultures, plumper women are preferred (Grabe et al.).

At any rate, 56% of women of all ethnicities in the United States claimed to be dissatisfied with their body image (Zabinski, Calfas, Gehrman, Wilfley, & Sallis, 2001). Zabinski et al. found that over 60% of college women reported having had an experience with an eating disorder, which is related to body image issues, psychological problems, and society's preference in these women.

The media can influence people to try and maintain a certain look. According to Ata et al. (2007) 69% of women reported they were mostly influenced by the media, and 40% reported a desire to lose weight. The media can indirectly influence women to believe what is attractive and what is unattractive. As women refer to magazines, they may internalize the ideas that are conveyed, and use what was learned to try to improve their appearance. Influences by the media can result in women becoming dissatisfied with their physical appearance (Grabe et al., 2006).

Culture can also play an important role in one's perceptions of obesity and body image (Kumanyika, 2008). In the African American community, it is common for women and girls to appreciate their larger body size and not consider themselves to be overweight (Kumanyika). Heavier African American wom-

en tend to be accepted more than those of the Caucasian culture. Webb, Looby, and Fults-McMurtery reported that, in the African American culture, their views, beliefs, actions, and behaviors are due to their heritage (2004). Grabe et al. noted that there may be more pressure for African American women to gain weight rather than lose weight (2006). There has always been an acceptance of women who were larger and considered to be voluptuous (Webb et al.). Thus, such cultural beliefs may contribute to the inactivity of African American women.

Physical Activity among African American Women

Henderson et al. (2001) defined physical activity as movement through the body created by skeletal muscles that generates long-lasting energy. Physical activity can consist of sporting activities, exercise, chores in or out of the house, and any other recreational activities. The most common physical activities according to the U.S. Department of Health and Human Services (2008) are walking and gardening. Early in the 1990s there was both a decline in physical activity among adults as well as decreases in time spent walking to school and in physical education classes during school among youth (CDC, 2011). Obesity has more than doubled in American women over the last four decades with African American women being the most prevalent (Kumanyika, 2008). This can change the opinion of one's self when it results in being overweight, which may beget depression, corporeal grievance, and low self esteem (Ge, Elder, Regnerus, & Cox, 2001). Lack of physical activity as it relates to body image can produce various psychological barriers including lack of confidence and lack of immediate positive reinforcements (Miles, 2007).

In addition, there is a disparity between African American women and Caucasian women when it comes to body weight (Sharpe, Graner, Hutto, Wilcox, Peck, & Addy, 2008). From

2003-2004, approximately 82% of African American women over the age of 20 were overweight compared to 48% of Caucasian women (Sharpe et al.). Webb et al. (2004) found that African American women were less concerned about overweightness and were more accepting of their bodies than those of different races. In addition, according to the Behavioral Risk Factor Surveillance Survey of 2010 African American women were less likely to participate in leisure time physical activity across age, occupational, and income groups compared to Caucasian women.

Factors that appear to be determinants of physical activity include: (1) personal lifestyles and habits, (2) environmental aspects including financial difficulty, (3) psychological barriers, and (4) cultural factors (Miles, 2007). As a personal lifestyle and habit, African American women were least likely to use diet or exercising to reduce weight (Sharpe et al., 2008). As an environmental factor, in urban areas with high population densities, study findings indicate higher rates of obesity and lower rates of physical activity (Garden & Jalaludin, 2008). Economic factors such as financial difficulty were found to constrain participation in physical activities (Sharpe et al.). Similarly, people with financial difficulties may also have limited access to healthy fresh fruits and vegetables due to lower-paying jobs offering fewer benefits (Sharpe et al.). Miles (2007) also listed the following psychological barriers to physical activity among African American females: (1) lack of time, (2) lack of attention and adequate care from healthcare providers, (3) not enough experience with physical activity, (4) lack of self-worth, (5) low confidence (6) low self-esteem, (7) social humiliation, (8), no knowledge of a proper workout regimen (9) upset about not losing weight, (10) exercising is uncomfortable, (11) being overweight disallows physical activity, and (12) uninterested with physical activity.

In summary, African American women tend to lack physical activity participation and tend

to be over-weight. However, the perception of women's body images in their culture may also contribute to obesity among African American women in some way. In 2000, Healthy People 2010 projected that African Americans were at a higher risk for illnesses such as heart disease, diabetes, colon cancer, and high blood pressure than many other groups in the United States (U.S. Department of Health and Human Services, 2000).

Purpose of Study

The purpose of this study was to examine the amount of daily physical activities being performed in African American women and their perceptions of body image, obesity status, physical fitness, and satisfaction with their physical appearance. Specific research questions investigated were: (a) What is the level of current participation in daily physical and recreational activities among the participants?; (b) What are the obesity rates among the participants?; and (c) What are their perceptions of their own weight, body image, physical fitness level, and satisfaction with their physical appearance?

Method

Participants

The study was conducted at an African American church serving an urban area on the east coast. The church was established in 1927 and had approximately 150 members. Eligible study participants had to be female, African American, and at least 18 years old.

Instruments

The International Physical Activity Questionnaire (IPAQ) (Booth, 2000) was used to gather data on physical activity participation of study participants. The IPAQ is a self-administered long survey that was developed for physical activity surveillance in Geneva in 1998 and contains five physical activity domains: (a) job-related physical activity, (b) transportation physical activity, (c) house work, house maintenance,

and caring for family, (d) recreation, sport, and leisure-time physical activity, and (e) time spent sitting. The questionnaire solicits physical activity data from the previous seven days through a combination of 27 closed-ended and numerical questions.

The reliability and validity of the instrument were tested in 12 countries, and the study results supported its reliability and validity (Craig, Marshall, Sjöström, Bauman, Booth, Ainsworth, Oja, 2003). Overall, the IPAQ questionnaires produced repeatable data (with Spearman's Rho clustered around 0.8), with comparable data from short and long forms. Criterion validity had a median rho of approximately 0.30, which was comparable to most other self-report validation studies. In this study, the IPAQ long form was used to determine the amount of physical activity performed within the last seven days of the participants in the five domains, which were described earlier. The long form required a summary of the duration (in minutes) and frequency (days) for every physical activity in each domain.

A 12 item questionnaire examining perceived body image and current knowledge of physical activity and its benefits was developed by the researcher and was also distributed to the participants. To enhance content validity the items were reviewed by two therapeutic recreation faculty members with research interests in physical activity outcomes, and a graduate student majoring in physical education. Since developing a standardized instrument to measure perceptions of those areas was not the purpose of this study, no further testing of the items such as factor analysis was conducted. In addition, due to the simple nature of the questions that required yes or no responses, the researchers did not feel the necessity of a reliability test. The questionnaire also included demographic questions to obtain background information from participants.

Procedure

The study was approved by the Human Sub-

jects Committee of a Midwestern university and by the steering committee of the church. One of the researchers scheduled two dates to conduct the questionnaire after Sunday church services. The researcher explained the purpose of and voluntary nature of the study before participants read and completed consent forms. Non-participants were not allowed to stay within the sanctuary to prevent possible distraction. The researcher remained available to answer questions. It took approximately 15 to 20 minutes for respondents to complete the questionnaires, after which the consent forms and questionnaires were collected by the researcher. Of the 72 eligible African American church members who attended the two services, 57 questionnaires were collected. Six were discarded because some respondents were unable to comprehend the questionnaire and did not finish, resulting in a response rate of 70.83%.

Data Analysis

Data were input into the SPSS Statistics Software for analysis. Descriptive statistics obtained included frequencies, means, and percentages for demographic information, amount of time spent on daily physical activities, and perceptions of body image. BMI was obtained by using the following formula: $BMI = \text{mass}(\text{lb}) \times 703 / (\text{height}(\text{inches}))^2$.

Results

Background Information

There were 51 African American women who completed the questionnaires. Table 1 shows summary statistics for the demographic information collected from respondents. Of the 51 respondents, 44 (86.3%) were employed and seven (13.7%) were unemployed. A majority of respondents reported living in urban areas (78.4%). More than half (52.9%) reported to have one or more of the following health related risk factors listed on the questionnaire: heart disease, high blood pressure, diabetes, cancer,

gallbladder disease and gallstones, osteoarthritis, gout, breathing problems, and sleep apnea, or asthma. Of those who reported to have health risks, nearly half (48%) indicated they had two or more risks. The remaining respondents (47.1%) reported no health risks.

The mean value of respondents' BMI was 29.9 ($SD = 6.17$) with a range between 19.2 and 46. The BMI value was calculated from respondents' self-reported height and weight. According to Engstrom, Paterson, Doherty, Trabulsi, and Speer (2003), women typically overestimate height and underestimate their weight. Therefore, it should be noted that inaccurate measurements of both height and weight may cause inaccuracies in calculation of BMI. Put differently, it is possible that the mean value of respondents' actual BMI may be higher than 29.9.

According to the CDC (2011), BMI ranges are classified as follows: (a) a value of 19 or less corresponds to individuals who are underweight; (b) a value of 19.0 - 24.9 corresponds to individuals who are of normal weight; (c) a value of 25.0 - 29.9 corresponds to individuals who are overweight; and (d) a value of 30 and above corresponds to individuals who are obese, severely obese, morbidly obese, or super obese. The average BMI value for study respondents was 29.9, which is categorized as overweight.

Daily Physical Activities

In terms of job-related physical activity, respondents ($n = 44$) reported an average of 79 minutes per week of walking at work, or a daily average of 11 minutes. Moderate physical activity (MPA) at work (e.g., carrying light loads) averaged 69 minutes per week (or 10 minutes daily), and vigorous physical activity (VPA) at work (e.g., heavy lifting, climbing stairs, heavy construction, etc.) averaged 18 minutes per week (or 2.5 minutes daily). In total, respondents spent approximately 24 minutes per day on their job-related physical activity including 11 minutes of walking.

Physical activity was measured as a mode of

Table 1: Demographic Information of the Respondents

	Frequency	Percent	Cumulative Percent
Race			
African American	51	100.0	100.0
Age			
18-30	15	29.4	29.4
31-40	5	9.8	39.2
41-50	14	27.5	66.7
51-60	13	25.5	92.2
61+	4	7.8	100.0
Employment Status			
Employed	44	86.3	86.3
Unemployed	7	13.7	100.0
Area of Residence			
Urban	40	78.4	78.4
Suburban	11	21.6	100.0
Weight Type*			
Normal Weight	9	17.6	17.6
Overweight	21	41.2	58.8
Obese	21	41.2	100.0
Reported having health risks**			
One health related risk	14	27.5	27.5
Two health related risks	9	17.6	45.1
Three of more health related risks	4	7.8	52.9
Reported having no health risks			
	24	47.1	100.0

* Calculated BMI formula was based on reported height and weight of each respondent.

** These risks include heart disease, high blood pressure, diabetes, cancer, gallbladder disease and gallstones, osteoarthritis, gout, breathing problems, and sleep apnea, or asthma.

transportation such as walking and bicycling. Respondents ($n=51$) averaged 70 minutes per week walking from place to place as a mode of transportation, or 10 minutes on a daily basis. In terms of bicycling, there was only one respondent who used a bike as transportation to work, and that respondent averaged less than one minute per week.

Physical activity was reported for housework, house maintenance, and caring for family. Respondents reported spending an average of 40 minutes per week (or 5.6 minutes daily) doing vigorous garden or yard work activity, and an average of 40 minutes weekly (or 5.6 minutes daily) of moderate garden or yard work. The average number of minutes spent doing moderate chores inside the house was 112 minutes weekly, with a daily average of 16 minutes. It should be noted that the study was conducted in spring time when people begin to do gardening and yard work. Despite the gardening sea-

son, the time spent on gardening or yard work per day was only 11 minutes.

Physical activity levels were also reported in terms of recreation, sport, and leisure-time activities. On average, respondents ($n=51$) walked 37 minutes per week (or 5.2 minutes daily). In terms of physically active moderate leisure time activity (e.g., bicycling, jogging, etc.) respondents reported an average of 18 minutes per week with an average of 0.5 times per week, and 14 minutes per week of vigorous leisure-related activities (e.g., running, sporting activities, etc.). Participation in physically active vigorous leisure activities (e.g., running, sporting activities, etc.) was similarly limited with weekly averages of 14.2 minutes (or 2 minutes per day). On the contrary, respondents ($n=51$) reported sitting an average of 701 minutes (i.e., nearly 12 hours) during the week. All of these results are displayed in Table 2.

Table 2: Average Amount of Vigorous and Moderate Daily Activities among Respondents

	Minutes per week (Times per week)	Minutes (day)
Part 1: Job-related physical activity ($n = 44$)		
Walking minutes while at work	78.8 (2.1)	11.3
Moderate activity at work	68.8 (1.6)	9.8
Vigorous activity at work	17.7 (0.8)	2.5
Part 2: Transportation physical activity ($n = 51$)		
Walking minutes from place to place	70.0 (3.4)	10.0
Bicycling minutes from place to place	0.8 (0.1)	0.1
Part 3: Housework, house maintenance, and caring for family ($n = 51$)		
Moderate chores minutes inside the house	111.6 (0.8)	15.9
Moderate garden or yard work minutes	39.7 (1.6)	5.7
Vigorous garden or yard work minutes	39.5 (3.1)	5.6
Part 4: Recreation, Sport, and Leisure-Time Activity ($n = 51$)		
Walking minutes during leisure-time	36.7 (1.3)	5.2
Physically Active Moderate minutes	18.1 (0.5)	2.6
Physically Active Vigorous minutes	14.2 (0.3)	2.0
Part 5: Time Spent Sitting ($n = 51$)		
Minutes Spent Sitting	701.0	100.2

Perceptions of Body Image, Obesity, and Physical Fitness

Respondents were asked several questions about perceptions of body image, obesity, and physical fitness (see Table 3). Of the 51 respondents, the majority (58.8%) indicated they were not satisfied with their body image. When asked if they perceive themselves to be overweight, 28 (54.9%) said yes and 23 (45.1%) said no. However, in fact, BMI calculations revealed that 42 respondents (82.4%) were either in the overweight or obese ranges. Therefore, it was found that some respondents' perceptions about their weights differ from the measurements of their actual weights. For the question, "do you perceive yourself as being physically fit," 12 respondents (23.5%) indicated yes. Responses to the question, "are others satisfied with your physical appearance," the majority ($n = 37, 72.5%$) replied yes. In summary, respond-

ents' perceptions about their body image, obesity, and physical fitness level were mostly negative. However, when asked if others' were satisfied with respondents' physical appearance, the majority (72.5%) responded positively.

Perceptions of the Benefits of Physical Activities

Respondents also answered three questions about the perceived benefits of physical activity. For the question, "Are you aware that physical activity can reduce health related risks," nearly every respondent ($n = 50, 98%$) answered yes. Similarly for the question, "Are you aware that physical activity can improve a person's disposition," most answered yes ($n = 47, 92.2%$). Finally, the same number of respondents ($n = 47, 92.2%$) answered yes to the following question, "Are you aware of the advantages physical activity has on a healthier lifestyle" (see Table 4).

Table 3: Self-perception of Respondents on Body Image, Obesity, and Physical Fitness

($n=51$)	Frequency	Percent	Cumulative Percentage
Are you satisfied with your body image?			
Yes	21	41.2	41.2
No	30	58.8	100.0
Do you perceive yourself as being overweight?			
Yes	28	54.9	54.9
No	23	45.1	100.0
Do you perceive yourself as being physically fit?			
Yes	12	23.5	23.5
No	39	76.5	100.0
Are others satisfied with your physical appearance?			
Yes	37	72.5	72.5
No	14	27.5	100.0

Table 4: Self-perception of Respondents on the Benefits of Physical Activities

(n=51)	Frequency	Percent	Cumulative Percentage
Are you aware that physical activity can reduce health related risks?*			
Yes	50	98.0	98.0
No	1	2.0	100.0
Are you aware that physical activity can improve a person's disposition?			
Yes	47	92.2	92.2
No	4	7.8	100.0
Are you aware of the advantages physical activity has on a healthier lifestyle?			
Yes	47	92.2	92.2
No	4	7.8	100.0

* These risks include heart disease, high blood pressure, diabetes, cancer, gallbladder disease and gallstones, osteoarthritis, gout, breathing problems, and sleep apnea, or asthma

Discussion

The purpose of this study was to examine the amount of time African American women spent on daily physical activities and their perceptions of body image, obesity status, physical fitness, and satisfaction with their physical appearance. The average BMI for the sample was 29.9. While 55% perceived themselves to be overweight, 41.2% reported that they were satisfied with their body images. Respondents also indicated that they walked an average of 37 minutes per week at an average frequency of 1.3 times per week.

The U.S. Department of Health and Human Services (2008) notes several recommendations for physical activity. Each week adults between the ages of 18 to 64 year old should either incorporate 2.5 hours (or 180 minutes) of moderate aerobic-type activities or they should perform vigorous aerobic activities such as running,

jumping rope, and aerobic dancing for at least one hour and 15 minutes (USDHHS). In this study, respondents reported an average time of 69 minutes of moderate and vigorous recreational activity over a seven day period, which was less than half the recommended amount by the U.S. Department of Health and Human Services.

In this study, over 41% of the respondents were satisfied with their body image, whereas, almost 55% perceived themselves to be overweight. However, based on their BMI, over 82% were either overweight or obese. This is consistent with the study findings that obesity is more serious among African American women (Miles, 2007). Another finding revealed that 58.8% of respondents were dissatisfied with their physical appearance. This is somewhat contradictory with previous findings that African American women are more accepting of their body image (Webb et al., 2004). The re-

sults showed that the majority of respondents (72.5%) reported that other people (i.e., family, friends, significant others) were satisfied with their physical appearance. Still, there can be no certainty if others were really satisfied with the respondents' physical appearance since the results were based on respondents' self-reports. The result of others' satisfaction with large women may support the results of previous studies that are based on the black cultural beliefs, values, and traditions (Webb et al., 2004).

Study findings also indicated over 90% of respondents were aware of the benefits from physical activity. However, a majority of them were not engaged in sufficient amounts of physical activity. These findings indicate a gap between perception of physical activity benefits and in physical activity participation. Therefore, how to attract African American women to participate more in physical activity should be the focus of future investigations.

Additionally the role of culture in physical activity should be explored. According to Pittman (2010), physical activity programming for African Americans has been limited partly because of the shortage of African American professionals in exercise-related fields. Pittman also argued that culturally designed preventative services are in critical need for this population. In recreation, little is known about the extent to which culturally sensitive programs are offered or about how effectively professionals are trained to provide such programs. Pittman emphasized the importance of providing culturally designed exercise programs for African Americans whereby an African American instructor might teach an aerobic dancing class in a manner that would appeal to other African Americans.

Although public parks are often regarded as ideal venues for African Americans to engage in physical and recreational activities (Shores & West, 2008), church-based moderately vigorous aerobic exercise programs may be effective in promoting physical activity for this population.

In fact, Schiele (2000) argued the need for African Americans to develop their own human services institutions and emphasized that the church is a logical place for such services. It is essential that physical activity programs be based on the criteria of the 2008 Guidelines for Physical Activity for Americans (U.S. Department of Health and Human Health Services, 2008). In particular, such programs may be more effective and preventative if targeted for young African American females (World Health Organization, 2009).

Limitations of the Study

There were several limitations of this study. Not all the female members of the church were present at the time of testing, resulting in a small sample size. Future studies should include a larger sample to enhance the generalizability of the results.

The wording of the questionnaire was difficult for some to comprehend. Six respondents did not finish, while several others asked for help in understanding the meaning of several questions. It is recommended that future studies employ a simpler questionnaire for respondents to complete. Although the IPAQ was a helpful instrument for measuring physical activity levels, other systematic methods such as a time diary (Zuzanek & Box, 1988) or experiential sampling (Larson & Csikszentmihalyi, 1983) are better suited for small sample sizes.

A final limitation was the reliability of the researcher-developed questionnaire which examined perceived body image and knowledge of physical activity and its benefits. Future studies should use a well-established questionnaire to examine those research questions.

Conclusion

The current study confirmed the need for more physical activity programs designed specifically for African American women. The provision of recreation programs and activities based

on their culture, spirituality, and collectivism may help encourage African American women to become more physically active. There is a dearth of evidence in the recreation literature regarding the presence of such culturally sensitive physical activity program offerings. Future research should also examine the extent to which recreation professionals are trained to provide culturally sensitive physical activity programs. It is proposed that church-based preventive health care delivery methods in the African American community and the development of church-based physical activity programs may yield positive results in promoting physical fitness and wellbeing among this population.

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