

ATTITUDES AND BELIEFS ASSOCIATED WITH LEISURE-TIME PHYSICAL ACTIVITY AMONG AFRICAN AMERICAN ADULTS

Objective: More than 60% of African American adults do not meet recommendations for moderate physical activity. We sought to discover the extent to which health attitudes and beliefs are associated with leisure-time physical activity in this population.

Design: Cross-sectional study.

Setting: African American adults were asked about their health attitudes and beliefs during a national survey.

Participants: Participants were 807 African American men and women aged 18 years and older. Random-digit dialing was employed, sampling telephone numbers by geographical region, area code, and population size.

Main Outcome Measures: Participants were asked six health belief questions on the importance of exercise and body weight in health. Logistic regression was used to determine which of these factors were associated with physical activity participation.

Results: The percent of respondents participating in some form of physical activity during the past month was 87.1% in men and 82.9% in women. Factors associated with previous month physical activity in men were perceived personal importance of exercise ($P < .001$) and necessity of exercise for health ($P = .018$). In women, perceived personal importance of exercise ($P < .001$), necessity of exercise for health ($P = .006$), and having enough activity space ($P = .017$) were associated with physical activity participation.

Conclusion: Though the direction of causation is unknown, having the attitude that it is important to exercise or be physically active for health predicts physical activity participation in both African American men and women. Creating a sense of importance of physical activity to relieve stress and foster good health may stimulate physical activity participation in African American adults. (*Ethn Dis.* 2011;21: 63–67)

Key Words: Physical Activity, African American, Attitudes, Beliefs, Survey

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INTRODUCTION

The benefits of physical activity are well-documented.^{1–4} Regular physical activity has been shown to be associated with improved cardiovascular outcomes, reduced cancer risk, and reduced risk of developing osteoporosis.^{1–3} Additionally, physical activity is associated with improved mental health, particularly for those dealing with depression or stress.^{4–6} However, despite the scientific evidence and public health efforts to promote physical activity, a large number of US adults are insufficiently active. This is especially true among African Americans, who have the lowest prevalence of being physically active of all major ethnic groups in the United States.⁷

The *2008 Physical Activity Guidelines for Americans* state that the minimum recommended aerobic physical activity required to produce substantial health benefits in adults is 150 minutes of moderate-intensity activity per week, or 75 minutes of vigorous-intensity activity per week, or an equivalent combination of moderate- and vigorous-intensity physical activity.⁸ According to the most recent Behavioral Risk Factor Surveillance System (BRFSS) data, approximately 64.5% of US adults reported meeting the current physical activity recommendations. However, there was a significant difference in activity levels when considering ethnic group, with the prevalences of being physically active among Caucasians and African Americans reported as 67.5% and 56.5% respectively.⁷

The purpose of this study was to examine the association between attitudes, beliefs and leisure-time physical activity in a national sample of African American adults.

Many factors may influence an individual's decision to engage in physical activity, including environmental and social factors. Though there is a complex relationship between the environment and physical activity, evidence supports that the environment can be a facilitator or a barrier in one's decision to be physically active.^{9,10} Social factors and self-efficacy also contribute to physical activity behaviors.¹¹ Berkman suggested that interpersonal relationships may influence physical activity by providing social support and establishing social norms that constrain or enable health-promoting behaviors.¹² Individuals are more likely to engage in physical activity if it is established as a positive social norm in their social networks.¹³ It is unclear whether social norms influenced by cultural attitudes and beliefs may play a role in the adoption and maintenance of physical activity. Therefore, the purpose of this study was to examine the association between attitudes, beliefs and leisure-time physical activity in a national sample of African American adults.

METHODS

Study Sample

This study includes data derived from the 2004–2005 Inter-university

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Table 1. Participant characteristics: % or mean (SD)

	Men, n=297	Women, n= 510
Age, yrs*	46.4 (16.7)	48.9 (15.9)
Age groups, %		
18–29	18.2	12.8
30–44	28.0	27.5
45–64	39.7	42.8
>64	14.1	17.0
Education, %		
<High school	13.1	10.4
High school	57.6	58.6
College	29.3	31.0
Described weight status, %†		
Underweight	6.7	3.1
Average weight	64.0	52.9
Overweight	29.3	43.9
Physically active last month, %	88.6	84.9

* $P < 0.05$,

† $P < 0.001$

Consortium for Political and Social Research Study (ICPSR) No. 4154 CBS News/Black Entertainment Television (BET) Monthly Poll, July 2004.¹⁴ Verbal consent was obtained for each participant prior to administration of the telephone survey. The original sample contained 986 individuals. However, 111 women and 68 men were excluded due to missing data. Based on independent *t* test comparisons, there was no difference in the education level of excluded participants when compared to included participants, though on average excluded participants were 7.7 years older than included participants. Using only those individuals for whom we have complete data, our sample consisted of 807 African Americans (297 men and 510 women), aged ≥ 18 years, having a telephone at home. Random-digit dialing was employed, utilizing blocks of 100 telephone numbers identical through the eighth digit and stratified by geographical region, area code, and population density. Within-household sampling methodology was used to obtain person-level data. Details of the data collection methodology are available at the ICPSR website.¹⁴

From a larger battery of survey questions, participants were asked the following questions pertaining to health attitudes and beliefs, participation in leisure-time physical activity, and weight status.

Health Attitude and Belief: 1) In order to relieve stress and maintain your health, how important is it for you personally to exercise—is it very important, somewhat important, not very important, or unimportant? 2) In order to relieve stress and maintain your health, how important is it for you personally to get enough rest and relaxation—is it very important, somewhat important, not very important, or unimportant? 3) Do you feel there are enough places in your neighborhood to be physically active, such as recreation centers, fitness centers, outdoor space, etc.? 4) Do you think it is possible for a person to be overweight and still be healthy, or does being overweight mean a person is unhealthy? 5) Do you agree or disagree with this statement? Exercise is necessary to be healthy. 6) Do you think that being overweight can increase a person’s risk of getting a disease like cancer, or not?

Physical Activity Participation: During the past month, other than your

regular job, did you participate in any physical activities or exercise such as running, aerobics, golf, gardening, or walking for exercise?

Weight Status: How would you describe your weight right now? Would you call yourself underweight, average weight, or overweight?

Statistical Analyses

Summary statistics were calculated for continuous (mean and SD) and categorical variables (%). An independent *t* test was performed to examine the difference in mean age between men and women and Chi-square tests were also used to examine the differences between the categorical variables between these groups. Multivariate logistic regression was used to determine which of the health attitude and belief factors were associated with leisure-time physical activity participation.

RESULTS

Table 1 shows the characteristics of participants included in the analysis. The study sample included 807 participants of which 63% were women. On average, the women in this sample were slightly older than the men, yet had a similar age distribution overall. Both women and men reported a high prevalence of being physically active in the past month. Further, the large majority of both women and men reported that it was important for them to exercise and that exercise is necessary to be healthy as reported in Table 2. However, women less frequently felt that there were enough spaces in the neighborhood to be physically active when compared to men (53.7% vs 63.6%). Women also had a higher frequency compared to men of reporting the need for rest and relaxation to relieve stress and maintain health. There was no significant difference between women’s and men’s responses regarding the association between being healthy or at risk for disease and overweight.

Table 2. Responses to survey questions by sex, %

	Men, n=297	Women, n=510
Questions and responses		
Importance of exercise		
Very important	74.4	67.1
Somewhat important	20.2	25.3
Not important	4.4	4.7
Unimportant	1.0	2.9
Importance of rest and relaxation†		
Very important	75.4	89.6
Somewhat important	21.6	8.8
Not important	1.7	1.4
Unimportant	1.4	0.2
Enough space to be active*		
Yes	63.6	53.7
No	36.4	46.3
Overweight and health		
Possible to be overweight and healthy	51.5	51.0
Overweight means unhealthy	40.7	41.0
It depends	7.7	8.0
Necessity of exercise and health		
Yes	85.2	84.7
No	14.8	15.3
Overweight increases disease risk		
Yes	61.6	55.9
No	38.4	44.1

* P<.05, † P<.001

Several factors were significantly associated with leisure-time physical activity in this sample. Indicating that exercise was of personal importance was strongly associated with leisure-time physical activity in women. Women who responded that it was very important (OR=7.49 [2.33, 24.11]) or somewhat important (OR=5.57 [1.65, 18.78]) for them personally to exercise were much more likely to have engaged in leisure-time physical activity than women who responded that it was unimportant. However, among men, there was no significant association between the personal importance of exercise and leisure-time physical activity in the past month. Both women and men were nearly 3 times as likely to have engaged in leisure-time physical activity in the past month if they indicated that they believed exercise is necessary to be healthy (Table 3). There

was a significant association between leisure-time physical activity in the past month and women reporting themselves to be average weight. However, there was no association between leisure-time physical activity in the past month and women reporting themselves to be overweight or underweight. Education level was also strongly associated with women being physically active in the past month. Women who were college graduates were almost 10 times as likely to have been physically active in the past month compared to women who had not completed high school.

DISCUSSION

In this study examining the association between attitudes, beliefs and leisure-time physical activity in a national sample of African American

adults, the vast majority of participants reported that they had been physically active in the previous month and that being physically active was of personal importance. Further, women and men who stated that being physically active was of personal importance were 5 and 8 times more likely to have engaged in leisure-time physical activity, respectively. Other beliefs reflected in participant responses were that rest and relaxation are important to relieve stress and maintain health, that there are enough places in the neighborhood to be physically active, and that exercise is necessary to be healthy. Finally, about half of participants believed that it is possible to be overweight and healthy, while 40% believed that being overweight means being unhealthy.

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The US Department of Health and Human Services has suggested that effective health interventions must be consistent with the shared beliefs, values, and practices of the universe of the target population.¹⁵ Our findings identify attitudes and beliefs that may play a role in physical activity adoption and maintenance in African Americans. Our findings suggest a possible shift in the mindset of African Americans, who reported in several qualitative studies in the 1990s that exercise was more of a stressor and that more rest and stress relief was needed for improved health.^{16,17} In contrast to previous findings, not only did our sample identify rest and relaxation as an important factor, they also identified

Table 3. Factors associated with leisure-time physical activity in past month

	Men (n=297) OR (95% CI)	Women (n=510) OR (95% CI)
Personally important to exercise		
Very important	4.93 (.39, 61.46)	7.49 (2.33, 24.11)
Somewhat important	2.53 (.19, 33.25)	5.57 (1.65, 18.78)
Not very important	0.39 (.03, 5.98)	2.23 (.55, 9.07)
Unimportant	1.00	1.00
Exercise is necessary to be healthy		
Yes	2.79 (1.18, 6.62)	2.86 (1.52, 5.39)
No	1.00	1.00
Described weight*		
Underweight	-	1.22 (0.25, 5.90)
Average weight	-	2.17 (1.25, 3.75)
Overweight	-	1.00
Education level*		
College grad	-	9.59 (3.62, 25.43)
High school grad	-	2.44 (1.20, 4.97)
<High school	-	1.00

* Variables were not retained in the model using logistic regression analysis.

exercise as being important to relieve stress and maintain health. Approximately half of this study sample felt that there were enough places in the neighborhood to be physically active. It is unclear whether these responses reflected differences in the participants' perceptions of their neighborhoods or actual differences in the participants' neighborhoods. Further research is needed to examine how availability of space in neighborhoods may be associated with physical activity. While access is frequently highlighted as a barrier to being physically active,¹⁸⁻²⁰ literature also suggests that improving the built environment alone may not improve physical activity behaviors for subgroups living in low income neighborhoods due to other factors such as perceived safety.²¹

A strength of this study is the inclusion of a significant number of African American males who are often absent from research on attitudes and beliefs related to physical activity. The study is limited by data being self-reported. A 2008 systematic review examining the extent of agreement between self-report and direct measures

of physical activity showed that self-reported physical activity was both overestimated and underestimated when compared to direct measurements of physical activity.²² Given these findings, assuming that any inaccurate reporting in our sample did not occur in a systematic manner, it is reasonable to speculate that our findings are not significantly biased away from the null hypothesis by self-report of physical activity behaviors.

Having the attitude that it is personally important to exercise or be physically active for health predicts physical activity participation in both African American men and women. Creating a sense of the importance of exercise or physical activity to relieve stress and foster good health may stimulate physical activity participation in African American adults.

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