

## An Evaluation of African American Adolescent Health Status With Gender Comparison

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### Abstract

The goals of Healthy People 2010 are to increase the quality of life and life expectancy, and eliminate health disparities. There is no clear picture, however, if these goals are being addressed by African American adolescents. This study was conducted to evaluate health status of African American adolescents aged 13-19 in Florida's Big Bend Region. Healthy People 2010 objectives were consulted for the evaluation. Responses from a convenience sample of 35 participants (63% female, 34% male) who completed a survey comprised of questions based on Likert scale are summarized here. The results show that the African American adolescents are engaging in some physical activity; however, only about half of them reported maintaining a healthy body weight. The majority of the adolescents reported avoiding smoking, but fewer adolescents reported avoiding drinking alcohol. Only a small percentage of the adolescents reported that their friends carried a gun or knife to school within the last 30 days; the percentage increased when the adolescents were asked if their friends got into a fist fight within the last 30 days. The adolescents sampled in this study have only achieved the Healthy People 2010 objectives in one of the health concern areas examined herein. It is also important to note that there are substantial gender-based disparities. In order to meet all Healthy People 2010 objectives, health education and promotion must be increased. Future research should explore different aspects of health status of adolescents in general, and further examine gender disparities and contributing factors.

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### Introduction

Healthy People 2010 outlines a comprehensive set of disease prevention and health promotion objectives to be achieved in a short time frame (U.S. Department of Health and Human Services, 2001). There are two simple goals to HP 2010: increase quality and years of healthy life, and eliminate health disparities. There are 28 focus areas and 467 different objectives that have been identified as major health issues to be addressed. The objectives, which address but are not limited to physical activity, obesity, cigarette smoking, alcohol consumption, and violence; are intended to help everyone better understand the importance of health promotion and disease prevention. A second intention is to encourage wide participation in education and intervention designed to improve the nation's health status by the end of this decade.

The purpose of this study is to evaluate the health status of African American adolescents as a group and by gender using Healthy People 2010 objectives. The aforementioned health concern areas were considered in this study.

The remainder of this paper is organized as follows. In the background section includes pertinent information regarding the objectives addressed herein. The methods section explains the data collection process for this study. The results section follows with a summarization of the self-reported data. Lastly, the discussion section provides interpretation of the results and recommendations for future intervention and investigation.

### Background

American children and adolescents are less physically active as a group and more likely to be overweight and have higher cholesterol,

insulin levels, and blood pressure than at any time in our history (Gahagan, 2004). Lack of physical activity is associated with the development of obesity, type 2 diabetes mellitus, and cardiovascular morbidity and mortality.

Drug use endangers the future of a society by harming its youth and potentially destroying the lives of many young men and women (Drugs and Society, 2002). When gateway drugs, such as alcohol and tobacco are used at an early age, a strong probability exists that the use will progress to other drugs. Several research findings have indicated that tobacco is more of a serious gateway drug than previously expected. Nearly all heroin addicts initially began using gateway drugs such as alcohol and/ or tobacco products.

Access to firearms and other weapons significantly contribute to the rise in violence-related injury in the United States (Forrest, Zychowski, Stuhldreher, & Ryan, 2000). Some factors associated with weapon carrying have been identified as age, male gender, and African American ethnicity. Among adolescents family disorganization and having witnessed or been a victim of violence have been found to be associated with adolescent violence and weapon-carrying as well.

### **Physical Activity and Obesity**

Regular physical activity throughout life is important for maintaining a healthy body, enhancing psychological well-being, and preventing premature death (US DHHS, 2001). Physical activity increases muscle and bone strength, helps decrease body fat, aids in weight control, enhances psychological well-being, and appears to reduce symptoms of depression and anxiety and to improve mood (U.S. Department of Health and Human Services, 2001). However, physical activity declines as youth transition from childhood to adolescence (Schmitz, Lytle, Phillips, Murray, & Birnbaum, 2002). Research has show that physical activity is low among adolescents (Gordon-Larsen, Nelson, & Popkin, 2004). In 2003, 55% of African American students in grades nine through 12 engaged in vigorous physical activity. There were substantial gender disparities, however, the

proportion of females engaging in vigorous physical activity was 45%, while it was 65% in the case of males (Centers for Disease Control and Prevention, 2004).

Obesity is a major contributor to many preventable causes of death. On average, higher body weight is associated with higher death rates (Neumark-Sztainer, Croll, Story, Hannan, French, & Perry, 2002). Weight-related concerns and behaviors are prevalent among adolescents (Neumark-Sztainer, Croll, Story, Hannan, French, & Perry, 2002). Over the last two decades, there has been an upward trends in obesity among adolescents (Kaur, Choi, Mayo, & Harris, 2003). The proportion of African American adolescents in grades nine through 12 years who were overweight in 2003 was 18%. The proportion of overweight females was 16%, and of overweight males, 19.5% (CDC, 2004). Efforts to maintain a healthy weight should start early in childhood and continue throughout adulthood, as this is likely to be more successful than efforts to lose substantial amounts of weight and maintain weight loss once a person become obese (U.S. Department of Health and Human Services, 2001).

### **Tobacco and Alcohol**

Cigarette smoking is one of the most preventable causes of disease and death in the United States (Braithwaite, Griffin, Bhalakia, Braithwaite, & Arriola, 1999; Cropley, Mitchell, & Anderson, 2002; Price, Caler, Rao, & Jones, 1996). Many adolescents start smoking cigarettes despite public health efforts to dissuade youth from experimenting with tobacco (Robinson, Berlin, & Moolchan, 2004). Every day, an estimated 3,000 adolescents start smoking (Horn, Dino, & Momani, 1998; Price et al., 1996). These trends are disturbing because the vast majority of adult smokers tried their first cigarette before age 18 years; more than half of adult smokers became daily smokers before this age. Almost half of adolescents who continue smoking regularly will eventually die from a smoking-related illness (US DHHS, 2001). Smoking prevalence among African American high school students fell to 15% in 2003. Prevalence among females was about 11%, while among male was 19% (CDC, 2004).

Alcohol consumption is associated with many of this country's most serious problems (US DHHS, 2001). Alcohol consumption among adolescents is a significant public health concern (Spirito, Barnett, Lewander, Colby, Robsenow, Eaton, & Monti, 2001). Alcohol is among the drugs most frequently used by adolescents. For instance, in 2003, 37% of African American adolescents in grades nine to 12 reported drinking alcohol in the past month. Alcohol consumption among males and females in this group was about the same, 37.5% and 37% (CDC, 2004).

**Violence**

Many factors that contribute to injuries are closely associated with violent behavior (US DHHS, 2001). In recent years, there has been a marked increase in violence and weapon-carrying among America's youth (Forrest et al., 2000). In 2003, 7% of African American students carried a weapon such as a gun, knife,

or club on school property on one or more occasion in the past 30 days. A higher proportion of males (8%) carried a weapon as compared to females (5.5%). In the same year, about 10% of African American students were in a physical fight one or more times during the past 12 months; 34% in the case of females as compared to 46% among males (CDC, 2004).

**Methods**

Adolescents attending a church youth meeting were administered a 38-item questionnaire. A total of 35 youth completed the Youth Health Behavior Assessment (YHBA); 25 were from Tallahassee, five from Lake City, two from Quincy, and one was from Madison (Table 1). Two of the respondents did not disclose their city of residence. Twenty of the respondents were females and 12 were males. One participant did not disclose his/her gender (Table 1). Participants in the study ranged in age from 13 to 19 years.

Table 1  
Demographics

City	Gender		Total
	Female	Male	
Tallahassee	15	9	24
Lake City	3	2	5
Quincy	1	1	2
Madison	1	0	1
Total	20	12	32

Participants completed a jury-validated 38-item, Likert format, self-report instrument that assessed their level of involvement with nutrition and exercise, tobacco and alcohol, and risky behavior. For each item, participants indicated the current amount of relevance (1=none of the time, 2=some of the time, 3=all of the time). The YHBA included items from an instrument developed by the Council of Church Health Programs, Inc.

The survey instrument was administered after a 45-minute life-skills workshop discussion on problem solving, decision making, and time

management. Selection for participation in the survey occurred based upon registration for the meeting on a voluntary basis. The investigator requested that only individuals ranging in age from 13 to 19 complete the survey. The youth group's director provided consent and the workshop facilitator administered the survey. The facilitator reviewed the survey items with the participants prior to their response. The participants were reminded to complete the demographic section of the survey and include their city of residence. After completing the survey, the participants returned it to the facilitator, who, in turn, returned the surveys to

the investigator. The findings presented in this paper are the cross tabulations of survey responses by the four areas previously noted and in most cases stratified by gender.

**Results**

In Table 2, the results of the responses to the four aforementioned areas of health are presented. Forty nine percent of the African American adolescent respondents reported being engaged in some form of physical activity. Further, 54% of the African American

adolescents indicate maintaining a healthy body weight; the remaining 46% being either overweight or obese. A large majority of the African American adolescents (80%) reported avoiding smoking, indicating a 20% rate of cigarette usage. Nearly 66% of African American adolescents reported that they avoided drinking. Only 6% of the African American adolescents indicated that their friends carried a gun or knife to school within the last 30 days, while 17% of them indicated that their friends got into a fist fight during the same time frame.

Table 2  
Survey Response Percentage by Group\*

<b>Healthy Behaviors</b>	<b>N</b>	<b>AT</b>	<b>ST</b>	<b>NT</b>
Participate in physical activity at least 30 minutes a day.	35	48.6	42.9	8.6
Maintain a healthy body weight.	33	54.3	40.0	5.7
Avoid smoking cigarettes.	35	80.0	20.0	0
Avoid drinking large amounts of alcohol.	35	65.7	5.7	28.6
During the last month, did any of your friends carry a gun or knife to school.	35	5.7	17.1	77.1
During the last month, did any of your friends get into a fist fight.	35	17.1	28.6	54.3

\*AT=All of the Time; ST=Some of the Time; NT= None of the Time

The gender-based cross tabulation (Table 3) shows that 36% of African American female adolescents reported physical activity compared to 67% of their male counterparts. Nearly 41% of the African American female adolescents reported weight falls within the healthy body weight range as compared to a higher proportion of males (75%). In other words, 59% of females are overweight or obese while only 25% of males fall in this category. While a large majority of African American adolescent females (86%) reported that they avoided smoking, only 67% of males avoid smoking. Cigarette use among females is only 14%, while usage among males is much more prevalent (33%). A higher proportion of females (73%) as compared to males (58%) reported avoiding drinking alcohol. In terms of violence, 4.5% of African American adolescent females indicated that their friends carried a gun or knife to school

within the last 30 days, while 9% of them indicated that their friends got into a fist fight within the last 30 days. Their male counterparts reported higher rates of weapon possession and fights, 8% and 25%, respectively.

**Discussion**

The findings presented here draw from a study that surveyed a small convenience sample of African American adolescents to evaluate their health status. The questions administered closely aligned with the Healthy People 2010 objectives. It is important to note that the results presented above are based solely on “all of the time” responses provided by the survey participants. Even though the small sample size is a limitation of this study, the results offer insights, albeit limited in scope, and are generally indicative and provide impetus for future work.

Table 3  
Survey Response Percentage by Gender\*

Healthy Behaviors	N	AT	ST	NT
Participate in physical activity at least 30 minutes a day.				
Females	22	36.4	50.0	13.6
Males	12	66.7	33.3	0.0
Maintain a healthy body weight.				
Females	22	40.9	54.5	4.5
Males	12	75.0	16.7	8.8
Avoid smoking cigarettes.				
Females	22	86.4	0.0	13.6
Males	12	66.7	0.0	33.3
Avoid drinking large amounts of alcohol.				
Females	22	72.7	4.5	22.7
Males	12	58.3	0.0	41.7
During the last month, did any of your friends carry a gun or knife to school.				
Females	22	4.5	13.6	81.8
Males	12	8.3	16.7	75.0
During the last month, did any of your friends get into a fist fight.				
Females	22	9.1	31.8	59.1
Males	12	25.0	25.0	50.0

\*AT=All of the Time; ST=Some of the Time; NT= None of the Time

The baseline for the Healthy People 2010 objectives was assessed in 1999. At that time, the 2010 target was set for each objective. With regard to vigorous physical activity, the objectives seek to increase the proportion of African American adolescents who engage in the activity from 55% to 85% (DATA 2010, n.d.). A majority of African American adolescents are not participating in the recommended amount of physical activity. Stratification of the data by gender indicates that there is a disparity in participation among males and females.

The objectives related to obesity suggest that a reduction in the proportion of African American adolescents who are overweight or obese from 13% to 5% is needed (DATA 2010, n.d.). The results presented here indicate that a substantially higher proportion of adolescents are either overweight or obese. Gender-based stratification indicates that the proportion of

overweight females is much higher than that of males.

Cigarette smoking objectives seek a reduction of use by African American adolescents from 20% to 16% (DATA 2010, n.d.). The study indicates that adolescents are smoking at a rate equivalent to that from with the Healthy People 2010 baseline was set in this area. One in five adolescents are actively engaging in cigarette usage, however, the rate among females is less than half that of males.

An increase in the proportion of African American adolescents not using alcohol from 82% to 89% is the aim of Healthy People 2010 objectives (DATA 2010, n.d.). Thus, a small proportion of adolescents are avoiding drinking large amounts of alcohol. Gender-based data indicate a large disparity in non-usage rates among males and females.

Reduction of homicide is also an objective of Healthy People 2010. This is to be accomplished by reducing violent behavior. The objectives seek to reduce the rate of weapon carrying from 5.0% to 4.9%, while reducing the rate of fist fighting from 41% to 32% among African American adolescents (DATA 2010, n.d.). Prior research indicates that survey-reported friend's behavior is a predictor of the respondent's behavior; therefore, the friend's behavior was directly compared with the Healthy People 2010 objectives for this area of the study. When evaluating these objectives, weapon carrying was more common than expected, while fist fighting was less common. When compared with their male counterparts, females in this group indicated a lower rate of weapon carrying and fist fighting.

The study reveals that this sample of African American adolescents has only achieved the Healthy People 2010 objective in area of violence, specifically, the goal related to reduction of fist fighting. All other objectives are nowhere close to the goals to be attained by the end of the decade. These substantial gaps need to be addressed, therefore, a concerted intervention is required. One recommendation is to target health education and promotion programs in the African American adolescent community. These programs should tailor interventions to address the needs of adolescents, and incorporate gender-based interventions. Future investigations should resample this population prior to year 2010 to track progress towards Healthy People 2010 objectives.

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