

Barriers that Affect African-American Female College Students from Using the Campus Exercise and Wellness Facility

影響非裔美國女大學生使用校園運動與健康設施的障礙

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Abstract

One group that is affected by the lack of being physically active is the African-American Female (AAF) population. For this study 107 AAF were surveyed to find out the barriers to using the campus exercise and wellness facility. Briefly, it was found that the AAF students were not physically active because of prior experiences in physical activity settings, and that the students were not motivated to be physically active. Also those AAF females did not feel comfortable exercising in the presences of men. This knowledge can give those supervising campus exercise and wellness facilities knowledge of the barriers of keeping AAF from being physically active.

Keywords: African-American females, physical activity, campus recreation centers, barriers

Introduction

Engaging in physical activity can help reduce the risks of chronic diseases and premature mortality (US Department of Health and Human Services, 1996). This applies to all age groups and groups of people. College-aged students are one group that is especially affected by physical activity, or lack thereof. (Behrens &

Dinger, 2003). College-aged students arrive on campus with a number of social activities, studies, work and other activities that may affect their level and duration of physical activity.

The literature has found many variables that affect college-aged student's physical activity levels. Buckworth & Nigg (2004) studied the relationship between exercise

and physical activity and sedentary behaviors of college-aged students. It was suggested that male college-aged students were more physically active than women during their college years. However, researchers also reported that men also spent considerable amounts of time in sedentary activities, such as viewing television. The researchers found that the most frequent sedentary behaviors in college males were watching television and watching videos. These behaviors were termed as recreational sedentary behaviors; examples of these behaviors were studying for exams or doing homework. Another study focusing on college-aged students studied the proximity to an exercise facility on a campus (Reed & Phillips, 2005). This study suggested that student's who lived the closest to the campus exercise facility were more intense in their exercise habits and that they exercised for longer periods of time than their peers who lived further from the facility. It was also found that freshman and sophomore student's living on campus frequented the exercise facility more often during a 7-day week than those students who resided off-campus. These studies emphasize that certain variables do have an impact on a students' physical activity.

Another study dealing with college-aged students, looked at barriers that affect their physical activity. Gomez-Lopez, Gallegos and Extremera (2010) investigated barriers of university students who have never participated in physical and sport activities in their spare time. The participants were surveyed in regards to physical activity habits in their free time. It was found that college-aged students lacked the social support (friends and family) to be physically active. These two barriers were considered external barriers. It was also found in this study that the college-aged students do not like being physically active or they do not find being physically active to be useful. This type of barrier is considered an internal barrier. It was concluded that the external barriers were easier to overcome than the internal barriers. The researchers suggested that college-aged students need to find a friend that will be willing to go along when they participate in physical activity. And schedule or make time to be physically active during their day of activities, which can include attending class, studying, and work.

Cultural background plays a role in physical activity behavior, especially within the African-American Female (AAF) population. D'Alonzo & Fischetti (2008) studied how cultural knowledge affects decisions to adhere to an

exercise program among African-American and Hispanic college-aged females. African-American and Hispanic college-aged females in this study believed that vigorous exercise is unfeminine. Also, both African-American and Hispanic women perceived their body type differently than Caucasian women do. In addition, many AAF felt pressured to exercise to conform to 'white' standards of beauty.

Studies nationally have found that AAF have the lowest levels of physical activity for both race and gender (Banks-Wallace & Conn, 2002) with 55% reporting that they are physically inactive (Ainsworth, Wilcox, Thompson, Richter, & Henderson, 2003). These numbers are sobering, especially with numerous negative health consequences for physically inactive AAF.

Physical activity in colleges and universities produces many positive health outcomes. Increased academic performance decreased cardiovascular risks in adulthood, a higher quality of life, and increased mood states are associated with physical activity programs in schools (Singh, Uijtendewilligen, Twisk, Mechelen, Chinapaw, 2013). Many colleges and universities are cutting physical activity classes as a part of graduation requirements (Cardinal, Sorenson, & Cardinal, 2012). Thus, this may lead to a potential disparity in gaining the benefits of physical activity, especially with minority populations (Gortmaker et al., 2012). Substantial benefits of physical activity in at-risk populations have been well documented (Heath et al., 2012), however to achieve these benefits, the barriers to physical activity must be addressed. Thus, the purpose of this study was to investigate differences in barriers to using the campus exercise and wellness facility in AAF college aged students who reported they were physically active vs. non-physically in high school.

Methods

Participants

The participants for this study consisted of AAF from a university in the South plains of the United States (n=107). The ages of the students that participated in the study ranged from 18 to 27 years old. The Institutional Review Board (IRB) of the university approved the study prior to the study launch. Participants of the study were asked and gave their informed consent to participate in the study.

Instrument

A review of the literature failed to identify an instrument specifically designed to investigate reasons/barriers for AAF having low participation rates at their campus recreation centers. As such, the researchers constructed a survey from discussions with AAF regarding exercise and physical activity. The researchers created a survey of 34 statements. Seven survey statements were of the nature of participant's demographics, four survey statements asked the participants about their high school physical education experience, and one item asked about the importance of physical activity. Twenty-two survey items asked the participants common barriers to regular physical activity. Each survey question related to barriers began with the following stem, "It is difficult to be physically active because..." Participants were asked to answer each of these questions using a five-point Likert scale (1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; and 5=Strongly Disagree).

To establish content validity, the researchers had 2 highly qualified exercise/wellness professors and 15 African-American female students (not involved in the study) review the survey and found the statements from the survey valid. Researchers further conducted a reliability analysis of the barrier items and found the Cronbach alpha coefficient to be 0.89.

Procedures

For the study, the researchers contacted the university student leaders and advisor of the African-American club on campus to secure permission to conduct the study. After permission was secured to conduct the study, the researchers met with the African-American club at one of their monthly meetings and explained the study to potential participants. Participants were asked to volunteer, read, sign, and return the informed consent. After informed consent was obtained, the researchers passed out the surveys to the participants. The survey took approximately 15 minutes to complete. After the surveys were completed, the participants handed the surveys back to the researchers for data analysis.

Results

A total of 107 AAF participated in the study and fully completed the questionnaire. The mean age for participants in this sample was 19.45 years old. The sample was comprised of 34 freshmen, 38 sophomores, 18 juniors, 16 seniors, and one graduate student. Most participants (50.6%) came from areas that were well populated and had greater than 50,000 people residing in the community. Almost all participants (98.6%) reported that their high schools offered physical education classes, however only 68.8% of subjects reported that the physical education classes were required. Outside of school sponsored physical activity, only 50 of the participants (64.9%) reported being physical active (Table 1).

To uncover differences in barriers to physical activity between AAF who were physically active during high school and those who were not, researchers ran an independent t-test. As seen in Table 2, results suggest that AAF who were not physically active in high school compared to those who were, had significantly higher barriers to physical activity in college within eight of the variables (1) "I do not feel like I know how to be physical active" $\{t(1, 75) = -2.651; p=.021\}$, (2) "I do not have enough free time" $\{t(1, 75) = -2.499; p=.008\}$, (3) "I am not motivated to be physically active" $\{t(1, 75) = -3.041; p=.003\}$, (4) "I do not have experience because I have never been physically active before" $\{t(1, 75) = -4.104; p=.000\}$, (5) "I do not think exercise will help me achieve my body ideal" $\{t(1, 75) = -2.805; p=.006\}$, (6) "My family and friends do not support my physical activity" $\{t(1, 75) = -2.103; p=.039\}$, (7) "I don't feel comfortable working out in front of men" $\{t(1, 75) = -2.487; p=.015\}$, and (8) "It's too time consuming to re-do my hair when I'm done" $\{t(1, 75) = -2.250; p=.027\}$.

Discussion

The purpose of this study was to investigate differences in barriers to using the campus exercise and wellness facility in AAF college aged students who reported they were physically active vs. non-physically in high school. The findings indicate that 8 of the 22 survey statements were significant barriers for the AAF students to participate in physical activity during college.

One of the barriers to being physically active during college relates to the lack of prior experience with physical activity. This can be traced back to the students' middle school and high school physical education experience. Student responses from the survey were similar to what Barney, Pleban, Wilkinson and Prusak (2015) found from college student's high school physical education experience and its effects on their current physical activity. Students for this study were surveyed with an opportunity to respond to the survey questions. One of the survey questions asked the students if their high school physical education class(es) provided the knowledge and skills to be successful and comfortable being physically active throughout their lives. For many of the students in this study they felt that their high school physical education program did not provide them with the knowledge and skills to be successful and comfortable being physically active throughout their lives. One student stated, "we played a lot of basketball and volleyball, and at the time I was in high school it was fun. But now that I am in college, I wished I had played in activities I could play in on my own."

Another barrier AAFs had for not being physically active was that they were not motivated. The self-determination theory may better help us understand why they AAF are not physically active. The theory proposes that the social context shapes people's motives by reinforcing or impeding their natural drive toward developing a coherent sense of self (Ryan & Deci, 2000 & Ryan et al., 1997). The theory offers yet another way to think about how people develop intrinsic motives to be physically active. It assumes that people strive for competence (sense of mastery), autonomy (personal choice), and relatedness (satisfying social relations). People who are intrinsically motivated choose to be physically active because they enjoy it and find it personally meaningful and valuable.

Results from the data analysis suggested many of the AAF students did not feel competent in their abilities to participate in physical activities at the campus exercise and wellness facility. Also, the AAF students felt no relatedness to be physical activity. They had no family or friends supporting them or being with them to be physically active. This response clearly shows how important having the support or encouragement of family and friends can have on a person's motivation to exercise. These results are similar to what Gomez-

Lopez, Gallegos and Extremera (2010). Because of this, health educators have begun to create programs aimed at supporting physical activity in the AAF population. One program titled, Black Women 'Do' Workout (BWDW) (Tomlinson, 2011) uses Facebook as a tool to encourage regular exercise participation among AAF. This program is based on information sharing and by showing praise, encouragement, inspiration, and support in the way of sisterhood and by championing individuals for their fitness goals, which ultimately keep others motivated to want to do the same. The BWDW program presents a best practice model for building supportive and effective health networks within communities of African descent. This example illustrates that AAF can get support in their efforts of being physically active.

Another barrier AAF students had expressed that kept them from being active at the campus exercise and wellness facility was that they did not feel comfortable working out in front of men. Once again, this barrier to the AAF students desire to use the campus exercise and wellness facility could be traced back to the students experiences in high school physical education. Kimball, Jenkins, and Wallhead (2009) examined university student's perceptions of the influence their high school PE program had on their current level of physical activity. Through a mixed-method design of taking a survey and being interviewed, female students indicated that participating with male classmates was not a positive experience. The following comments were given from the female students regarding the participation with male students, "Soccer would have been fun, but the guys took it way too seriously. Girls just weren't as aggressive," "Dodge ball was also horrible. They would say, hit the girls, and we'd get bruises on our legs from just standing there." They continued by saying, "I didn't like basketball because no fouls would get called and I would get smacked." These types of experiences did not help the female students desire to be physically active in the company of men. The results from this study, once again add to the literature the importance of physical activity for college-aged students, and more specifically in the AAF population.

Conclusions

The current study suggests that there are differences in physical activity barriers in AAF women who were physically active in high school vs. those that were not. Researchers found a statistical significant difference in 8 of the 22 identified barriers to physical activity. The current trend to cut physical education classes and after school physical activity opportunities should be avoided at all costs, especially in high AAF populations. School districts should begin to stress the importance of physical activity for AAFs as well as all students both inside and outside of the classroom. Within physical activity classes or after school programs, a special focus should be on increasing support & motivation, building confidence, giving the opportunity for physical activity, and working out with members of the opposite sex. One way to do this is to coordinate with the campus exercise and wellness center staff to offer a variety of classes, with the hope that a number of the classes offered will enticed the AAF to participate in the classes offered. Another suggestion for the campus exercise and wellness center staff is offer classes for females only. This may also enticed AAF to be more physically active. By continuing to offer and creating physical activity programs that go beyond physical education classes, colleges and universities can help shape the future health of AAFs by reducing barriers they may face later in life.

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Table 1. Demographic Characteristics of Sample.

Group	Total	Physically Active in High School	Not Physically Active in High School
Age			
18-19	51	41	15
20-21	46	20	19
22-23	10	7	5
Academic Classification			
Freshman	34	20	14
Sophomore	38	25	12
Junior	18	6	13
Senior	16	9	7
Graduate Student	1	1	0
Community Size			
< 500	4	1	0
501-3,000	19	10	6
3,001-10,000	18	11	6
10,001-50,000	19	12	7
50,001-200,000	17	10	10
200,001-1,000,000	17	13	6
> 1,000,00	13	10	5
Did your high school have Physical Education Classes?			
Yes	106	69	37
No	0	0	0
Don't know/Don't remember	1	1	0
Was Physical Education Required?			
Yes	73	53	19
No	32	19	13
Don't know/Don't remember	2	1	2

Table 2. Mean $\pm$ Standard Deviation for Overall Common Barriers to Physical Activity and Individual Barriers to Physical Activity in Total Sample and Separated by High School Physical Activity Level.

	Total Sample (N = 107)	Physically Active in High School (n = 61)	Not Physically Active in High School (n = 46)
Individual Barrier			
"I do not feel like I know how to be physically active"	1.56 $\pm$ 0.83	1.38 $\pm$ 0.69	1.89 $\pm$ 0.97*
"I do not have enough free time"	2.94 $\pm$ 1.26	2.68 $\pm$ 1.33	3.41 $\pm$ 0.97**
"I am not motivated to be physically active"	2.77 $\pm$ 1.26	2.46 $\pm$ 1.28	3.33 $\pm$ 1.03**
"I do not have experience because I have never been physically active"	1.51 $\pm$ 0.78	1.26 $\pm$ 0.60	1.96 $\pm$ 0.89**
"I am not concerned about gaining weight"	2.18 $\pm$ 1.28	2.10 $\pm$ 1.23	2.33 $\pm$ 1.38
"I consider exercise to be a predominantly 'white' behavior"	1.56 $\pm$ 1.07	1.50 $\pm$ 0.97	1.67 $\pm$ 1.24
"I do not fully understand the health benefits of exercise"	1.77 $\pm$ 1.07	1.76 $\pm$ 1.13	1.78 $\pm$ 0.97
"I do not define being overweight as being unhealthy"	2.00 $\pm$ 1.17	1.94 $\pm$ 1.13	2.11 $\pm$ 1.25
"I do not think exercise will help me achieve my body ideal"	1.60 $\pm$ 0.87	1.40 $\pm$ 0.63	1.96 $\pm$ 1.12**
"I do not believe that the campus recreation center is set up for beginners"	1.91 $\pm$ 1.16	1.80 $\pm$ 1.05	2.11 $\pm$ 1.34
"I think the campus recreation center is too crowded"	2.55 $\pm$ 1.38	2.38 $\pm$ 1.32	2.85 $\pm$ 1.46
"My family and friends do not support my physical activity"	1.69 $\pm$ 0.97	1.52 $\pm$ 0.78	2.00 $\pm$ 1.20*
"I am afraid of being perceived as a tomboy"	1.45 $\pm$ 0.80	1.40 $\pm$ 0.85	1.56 $\pm$ 0.69
"I do not like the pressure to conform to a specific standard of beauty"	2.27 $\pm$ 1.34	2.20 $\pm$ 1.37	2.41 $\pm$ 1.30
"I cannot find convenient locations for exercise"	1.61 $\pm$ 0.78	1.50 $\pm$ 0.61	1.81 $\pm$ 1.00
"I don't like to exercise in front of other people"	2.21 $\pm$ 1.23	2.08 $\pm$ 1.20	2.44 $\pm$ 1.28
"I don't feel comfortable working out in front of men"	2.22 $\pm$ 1.29	1.96 $\pm$ 1.12	2.70 $\pm$ 1.46*
"It is too time consuming to re-do my hair when I'm done"	2.84 $\pm$ 1.54	2.56 $\pm$ 1.52	3.37 $\pm$ 1.47*
"I'm afraid of becoming too muscular"	1.94 $\pm$ 1.06	1.90 $\pm$ 1.11	2.00 $\pm$ 1.00
"It is difficult to get ready at the campus recreation center"	1.95 $\pm$ 1.02	1.84 $\pm$ 1.01	2.15 $\pm$ 1.02
"I don't feel like the current programs at the campus recreation center are marketed to me"	2.13 $\pm$ 1.18	2.08 $\pm$ 1.19	2.22 $\pm$ 1.18
"The current programs at the campus recreation center are not interesting to me"	1.94 $\pm$ 0.99	1.86 $\pm$ 0.94	2.07 $\pm$ 1.07

*p<.05; **p<.01