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A Baseline Analysis of Wellness at Johnson C. Smith University

As colleges and universities around the United States encounter financial hardships, they have felt a need to improve the quality and number of services offered on campus to attract new students. Some of these services include offering state-of-the-art wellness centers that complement and improve the overall campus experience. Universities also use these new facilities as recruiting tools (Strand et al., 2010). However, wellness is a word that has multiple definitions and encompasses multiple aspects of health and fitness.

Wellness is something that needs to be taught, encouraged, and valued within a community for it to be obtainable. This creates difficulty in creating a culture of wellness in any environment. Since Hettler originally defined wellness as multi-dimensional in 1976, multiple other wellness models have been created, complicating what people perceive to be wellness (Hettler, 1980; Ardell, 1985; Myers et al., 2000). In 2001, Corbin and Pangrazi adapted the definition of wellness as “a multi-dimensional state of being describing the existence of positive health in an individual as exemplified by quality of life and a sense of well-being” (Corbin et al., 2000). This statement best describes wellness, stating a correlation of health to quality of life and one’s personal sense of well-being.

It is estimated that only 15% to 30% of college students meet the recommended amount of physical activity (PA) that would positively affect their health (American College Health Association, 2012). Some universities are beginning to require new students to complete a course in personal wellness/fitness to assist students in meeting the required PA, and research indicates that this approach has been successful (Mack and Shaddox, 2004).

Preventable health disparities attributed to lack of PA continue to be a burden in predominantly African American communities. Preventative wellness programming has been shown to be successful for students, as well as employees, as long as it is culturally relevant, especially when working within a predominantly African American population (Izquierdo-Porrera et al., 2002).

This study established a baseline multidimensional analysis of wellness on the campus of Johnson C. Smith University that was in conjunction with the development of a new Wellness Department and opening of the *HealthPlex*, a facility that hosts free campus and community wellness programming, along with applied health research.

Setting and Population

This study was conducted on the campus of Johnson C. Smith University, in Charlotte, NC, USA. A total of 2,339 individuals who were active full-time and part-time faculty (159), staff (211), and students (1,669) were eligible for participation in this study. The overall university population demographics were: race (African American, 77.8%; Caucasian, 4.2%; Hispanic, 2.3%; Asian, .8%; Hawaiian or other Pacific Islander, .2%; two or more races, .9%; unknown race, 13.8%); average age of research participants (24), faculty (38), staff (32), and students (19). This study was able to secure 21% of the total campus population (496) with a fair representation of the underlying faculty (3.7%), staff (14.8%), and student (81.5%) population.

Data Collection

Participants were recruited through participation in university sponsored wellness programming and *HealthPlex* usage.

Participation in the research study was on a volunteer basis, no incentives or monetary funds were given for their participation. The use of a software package developed by *MicroFit* called *HealthWizard* captured and analysed three dimensions of wellness: (1) Health History, (2) Wellness Profile, and (3) Fitness Profile.

The Health History programme asked the seven questions of the Physical Activity Readiness Questionnaire (PAR-Q), which was developed by the Canadian Society for Exercise Physiology. Two supplemental questions were added, 1) Do you currently have, or getting treatment for Diabetes? 2) Do you currently have, or getting treatment for High Cholesterol? Health History was analysed by the total number of participants answering yes to the nine Health History questions as a percentage.

The Wellness Profile programme used a 46-question questionnaire that analysed the individual's current health behaviours with a focus on exercise, nutrition, safety, tobacco use, and stress. The participant's answers were analysed and processed by the *MicroFit* software package into a category scoring system: 0-100 points, with 0 being the lowest possible score and 100 meaning there is no way the participant can improve his/her score. Then each score was categorised with a rating of "room for improvement" (0-33), "fair" (34-66), or "excellent" (66-100).

The Fitness Profile software assessed 10 dimensions of fitness: body fat percentage, aerobic fitness, resting heart rate, systolic blood pressure, diastolic blood pressure, BMI, 1-minute curl-up max, 1-minute push-up max, sit and reach, and waist-to-hip ratio (WHR). The participant's answers were analysed and processed by the *MicroFit* software package against national fitness standards set by the American College of Sports Medicine (ACSM). Then each score was categorized within in one of four ratings, "needs work" (0-25), "fair" (26-50), "fit" (51-75), or "excellent" (76-100). Staff, faculty, and students were scored individually as groups, and an overall campus score was developed using the combined scores of the three groups.

University Health History Results

Health data indicated 0.6% (3 students) responded that they have a heart condition and should be exercising only under the recommendation of their doctor; 5.4% (1 staff, 26

students) reported chest pain when participating in physical activity; 4.8% (2 staff, 1 faculty, 21 students) reported chest pain even when not participating in physical activity; 4.2% (3 staff, 18 students) of participants experienced loss of balance due to dizziness or had lost consciousness 5.6% (3 staff, 2 faculty, and 23 students) reported having a bone or joint problem that could be made worse by a change in physical activity; 5.4% (15 staff, 3 faculty, and 9 students) reported that they currently are taking prescription drugs for blood pressure or a heart condition; 1% (1 staff, 4 students) indicated that there were other reasons that they should not do physical activity; 1.6% (4 staff, 4 students) indicated that they currently have or are getting treatment for diabetes; and 3% of participants (8 staff, 3 faculty, and 4 students) indicated that they currently have or are getting treatment for high cholesterol (see Table 1).

This indicates four existing health factors that would be of concern: (1) bone and joint problems that could affect their participation in an exercise programme, (2) 5.4% currently taking prescription medication for blood pressure or a heart condition, (3) 5.4% having chest pain when participating in physical activity, and (4) 4.8% having chest pain even when not participating in physical activity. Three of the four major health concerns are key indicators for cardiovascular disease.

University Wellness Profile Results

Overall wellness profile results indicated that four categories placed into the "fair" rating: exercise (41), nutrition (41), safety (61), and stress (59); tobacco received a rating of "excellent" (86). The overall campus wellness score was 58 of 100, with 27.3% scoring "excellent," 67.7% scoring "fair," and 5% scoring "room for improvement." The exercise score was 41 of 100, nutrition score was 41 of 100, safety score was 61 of 100, stress score was 59 of 100, tobacco score was 86 of 100 (Table 2).

The lowest scores were in exercise (41) and nutrition (41). Past research has shown numerous barriers for physical activity for men and women in the African-American community (Henderson and Ainsworth, 2003). Exercise has been identified as beneficial, but many African Americans lack the time and motivation to participate in regular physical activity. Participants cite family responsibilities and duties, and environmental, personal, and social factors as reasons for not meeting the

daily required amount of physical activity. Social factors may be the most important factors in promoting adherence to an exercise programme in African Americans as these factors were cited most often for why they do not participate in a regular physical activity (Trost et al., 1997). All of this suggested that physical activity intervention strategies need to place value on family and cultural responsibilities when dealing with an African-American population.

Not only are the barriers to exercise and physical activity great, but the perception seems to be an issue as well. African Americans have been identified for their unique perception of what is healthy. Studies have shown that significant proportions of African-American individuals are unaware of their risk for certain health conditions, such as hypertension and diabetes due to their lifestyle choices (Graham et al., 2006). Until exercise becomes a norm in the African-American community, it is believed that this number will remain one of the lowest reported wellness scores.

Eating habits in the African-American community run deep. This could explain why the nutrition score was tied for the lowest scoring wellness score as it would be difficult to encourage African Americans to eat healthier food or change their diet due to their strong cultural beliefs and social ties in regards to food. To encourage healthier eating habits, it would be best to involve teaching university food providers, employees, and students to cook soul food in healthier and less-expensive ways so they can enjoy soul food and eat healthier at the same time.

Tobacco, stress, and safety reported satisfactory scores with 89.7%, 89.3%, and 88.3%, respectively, with the majority of participants scoring "fair" or "excellent," respectively. These results strengthen the need to focus time and resources on preventive wellness programming that will increase the amount of daily physical activity that one completes and improving nutritional habits.

University Fitness Profile Results

The overall fitness score was 48 of 100 (needs work), with 0% falling into the "excellent" category, 21.3% "fit," 49.1% "fair," and 29.6% in the "needs work" category. Overall results show that six of the 10 fitness dimensions reported the

highest percentage of participants in the "needs work" category (body fat, aerobic fitness, BMI, curl-ups, sit and reach, and WHR), three dimensions in the "fair" category (resting heart rate, systolic blood pressure, and diastolic blood pressure), and one dimension in the "excellent" category (push-ups). Overall combined campus scores that will be watched were: average blood pressure (133/81), and BMI (28.0). Aerobic fitness (29.3ml/kg/min), body fat percentage (29.3), resting heart rate (78), WHR (.81), sit and reach (31cm), and curls-ups (31) all fell into normal standards. Push-ups (30) exceeded standards.

These results indicated that the highest percentage of participants fell into the "needs work" category in over half of the fitness dimensions (body fat, aerobic fitness, BMI, curl-ups, sit and reach, and WHR). Of these, three relate to participants carrying an unhealthy amount of excessive weight (body fat, BMI, and WHR). These data may be related to the body image perception among African Americans, which shows African Americans hold a less strict criterion of perceived body fat (Airhihenbuwa et al., 1996) and are more comfortable with "making what you've got work for you" (Rucker and Cash, 2006). Unfortunately, those who are overweight or obese are at a much greater risk than others for type 2 diabetes (Parker et al., 1995). It is not weight alone that increases health risks though; it is also how it is distributed along the body.

Blood pressure data gathered indicated that the combined blood pressure (BP) of participants on campus was 133/81, which is considered prehypertensive (BP 120/80 - 149/90). This coincides with the growing epidemic of hypertension (BP 140/90 and above) in African-American communities, where almost 30% have hypertension. Of those who have hypertension, only 43% have it under control (Mokdad et al., 2001). This number may be hard to change due to BP being affected greatly by one's lifestyle; and with the indicated low wellness scores in exercise and nutrition, it shows that the campus is not currently doing what is necessary to reduce the risk of developing hypertension. This is a major concern when comparing rates by race, as African Americans have shown higher coronary

heart disease death rates in the 45-74 age groups than women and men of other races (Rodgers et al., 2012).

Aerobic fitness (VO₂max) results indicate this quite clearly with VO₂max scores coming in within the 30th percentile for the participants' mean age (24) range of 20-29 (CDC, 2011). This indicates that little exercise is being done by the participants which would result in positive cardiovascular health benefits. There have been major efforts in reducing the amount of time that U.S. children and adults spend watching television, playing videos games, and using a computer. If these efforts can be paired with increases in physical activity, it could result in a substantial decrease of the onset of cardiovascular disease (Armstrong et al., 2006).

Sit-and-reach score results indicated that hamstring and low back tightness were worse than average. This can be associated with students and JCSU employees being in a seated position for prolonged periods of time, up to +6 hours a day.

Bringing Wellness to the University

Being able to implement free and sustainable preventive wellness programming is one step that Johnson C. Smith University can take to assist in the prevention and elimination of health disparities that predominantly affect African Americans. This research will be used to assist the *HealthPlex* in designing and implementing relevant preventable wellness programming that will meet needs of the participants. Such as expanding and redesigning current national, state, and county initiatives that strengthen cultural knowledge and promote a healthier lifestyle.

More value needs to be placed on the overall wellness of all members of Johnson C. Smith University by university stakeholders so to increase wellness perception within the university and within the African American community. Implementing the perfect overall wellness programme is difficult, having buy-in from the people you are trying to serve is even more difficult. Without a change in wellness perception, preventive wellness programming will never be fully successful. Success will only come from continued buy-in and the ability to

seek and accept feedback and being able to adjust wellness programming needs accordingly.

Investment in preventative wellness programming can assist the 50 percent of African Americans who suffer from a chronic disease that can be easily prevented simply from living a healthy lifestyle. New programming and initiatives can be costly, but a true commitment to wellness prevention most show a commitment to the one's being served and offers these programmes at no charge, exempting these benefits from deductibles and other cost-sharing requirements. This will ensure that all who seek help will have access to relevant services that will assist in preventing illness and disease before they require more costly treatment.

The fact that these findings were closely related to the national health reports of African Americans, with the reinforcement of the review of literature, should be a strong enough reason to continue to explore the health and wellness need and desires of African Americans. This study will, hopefully, bring more attention to the need to offer free-to-low cost preventable wellness programming that will increase the understanding and desire of African Americans to live healthy lifestyles, thus eliminating preventable health disparities within their communities.

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Table 1. Health History Question Results

Health History Question	Percentage of Respondents Answering "Yes"
Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?	0.6%
Do you feel pain in your chest when you do physical activity?	5.4%
In the past month, have you had chest pain when you were not doing physical activity?	4.8%
Do you lose balance because of dizziness or do you ever lose consciousness?	4.2%
Do you have a bone or joint problem that could be made worse by a change in your physical activity?	5.6%
Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?	5.4%
Do you know of any other reason why you should not do physical activity?	1.0%
Do you currently have, or getting treatment for Diabetes?	1.6%
Do you currently have, or getting treatment for High Cholesterol?	3.0%

Table 2. Campus Wellness Profile Score

Wellness Category	Score (0-100 scale)	Excellent	Fair	Room for Improvement
Exercise	41	27.3%	67.7%	5.0%
Nutrition	41	32.2%	13.5%	54.2%
Safety	61	7.9%	62.4%	29.7%
Stress	59	51.1%	38.2%	10.7%
Tobacco	86	36.2%	52.1%	11.7%
Overall Wellness	58	82.0%	7.7%	10.3%