

Researchers Combine Evidence to Foster Study Enrollment: Perspectives on Putting into Practice what we Know for Studies Involving Black Women

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Abstract

To date, much research has been done on physical activity (PA) both in generally healthy individuals as well as in those with chronic diseases. Because we understand some of the most common benefits of exercise, such as improved mood, prevention or management of chronic diseases (hypertension, diabetes, and hyperlipidemia), increased energy, and more restful sleep, PA is now considered a common disease prevention and management modality and is addressed within current clinical practice guidelines for a number of chronic diseases. Yet, many investigators find it challenging to enroll and/or maintain enrollment of a segment of the population that could benefit greatly from PA—older Black women. We make the case here that attention to details of culture, lifestyle issues, and identifiable barriers can appropriately address some of the challenges researchers face in enrolling in studies this hard-to-reach population of sedentary older Black women who need to find ways to increase energy expenditure in their everyday activities, given their risk for the negative consequences of sedentary lifestyle [1], such as obesity, type 2 diabetes (T2D), and cardiovascular disease. Because the Black community is rife with health disparities resulting from sedentary lifestyle and obesity-related diseases such as cardiovascular disease and T2D, interventions that target Black study participants, in particular, older Black women, should consider multiple individual and community-based approaches.

Introduction

To date, interventions that have attempted to improve health outcomes in sedentary Black women have been mostly unsuccessful in getting these women to increase or sustain PA. The challenges to implementing efficacious PA programs are suspected to be multifactorial [2] with social and cultural influences playing an important role. These will be important in any new undertakings in obesity and PA research with Black women.

The African American Collaborative Obesity Research Network (AACORN), building on the National Institutes of Health's obesity research agenda, has cited the importance of considering social, cultural, and environmental contextual determinants when developing PA interventions in African American communities. Until now, PA interventions that used cultural tailoring techniques did so in terms of targeted media during the recruitment process and use of research personnel of similar ethnicity to the subjects. When planning PA programs for minority populations, however, as researchers we must identify even more broad influences, including sociocultural issues and perceived facilitators and barriers to PA. With limited or lack of availability of public recreational facilities, interventions for low income and minority community-dwellers need to be cost-effective and offer easy access.

Understanding the barriers to PA that researchers and participants have to overcome is important to study success. Issues such as how Black women understand the significance of their weight, body image, and lifetime history of physical disease; how they negotiate competing family responsibilities, how they demonstrate strength in face of multiple stressors; how they respond to perceived racism; and a historical legacy of forced labor have been noted in previous qualitative PA studies [3,4] in AA women, yet much remains to be discovered about the correlates of PA in Black women. Deeply rooted issues are generally negative and have an impact on self-identity and the way Black women see themselves. Thus, research involving any form of PA

needs to proceed with the knowledge that PA and exercise behavior can be mediated by self-perceptions.

As a group, Black people of African descent have had positive shared experiences with leisure time PA, particularly dance. In Africa, particularly West Africa, dance affirmed fertility and health, was seen as a form of worship, and helped to control tensions [5]. For centuries, during slavery, dance was linked to holidays and respite from hard labor. "Saturday dances" were sometimes allowed as rewards to slaves who were granted special passes to visit neighboring plantations for dancing on certain weekends. "Shouting [6]," an ecstatic, religious style of dancing originated among the slaves who were granted permission to hold prayer meetings on Sunday, providing opportunities for expression and emotional release. Thus, historically, dance has been associated with favorable experiences, which bodes well for future success with dance as a PA.

Support for dance-based PA is building, giving researchers an exceptional opportunity to intervene in a meaningful way with older Black women. In qualitative studies, Black women and their daughters preferred dancing and non-competitive games to sports and other competitive activities [7], further supporting the undeveloped potential for dance-based PA interventions and providing an opportunity to link music therapy with dance and other forms of PA such as yoga.

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Yoga has the potential to improve the many risk factors associated with metabolic syndrome—a cluster of symptoms associated with increased risk of T2D, cardiovascular disease, and other chronic conditions. While studies have demonstrated this in interventions for older women [8] and women with T2D [9], yoga in Black women has been understudied. Seventy-five percent of yoga and yoga-based randomized, controlled trials reported improvements in blood pressure, with 10 mmHg reductions in systolic blood pressure and 5 mmHg reductions in diastolic blood pressure observed after as few as one session [10]. For every 10 mmHg reduction in systolic blood pressure, the risk for any complication related to diabetes is reduced by 12%, while reducing diastolic blood pressure from 90 mmHg to 80 mmHg in people with T2D reduces the risk of major cardiovascular events by 50%. In a qualitative study of a group of 28 Black community-dwelling elders coping with chronic conditions, yoga and karate were the only formal exercises offered by their community center; however, only one participant mentioned participating in yoga [11], and in adults with or at risk for T2D participating in an 8-week yoga-based clinical trial [12], all who continued to practice yoga did so in home or in work-based environments. Women with or at risk for T2D who participated in the trial conducted by Innes and colleagues [13] discussed readiness for continuing/integrating yoga into their daily lives and environmental support for yoga [14]. In older women, yoga practice, even for a short term, has the potential to decrease psychological and physiological risk factors for cardiovascular disease and may attenuate symptoms, reduce complications, and improve prognosis for those with clinical or underlying disease. Many older Black women with or at risk for metabolic syndrome seek out complementary therapies because allopathic pharmacologic therapy may inadequately address their symptoms or is not a good cultural fit. Black women generally underutilize yoga, primarily preferring prayer and herbal supplements as complementary therapies. Given that no studies have looked at the effectiveness of yoga in a sample of exclusively Black individuals, the reasons for its underuse are unknown, revealing a need to investigate its potential impact.

In its therapeutic and healing capacities, another movement exercise, dance, which can be combined with yoga, is one of the oldest forms of healing interventions and experiences known to mankind in ancient and pre-industrial cultures. According to Serlin [15], a dance therapist who works primarily with breast cancer patients, “dance therapy is essentially holistic.” Because of its holistic implications, dance therapy is becoming a legitimate complementary health care intervention. Lewis [16] espoused dance to be a form of holistic medicine first recognized by the Office of Alternative Medicine (now National Center for Complementary and Alternative Medicine/NCCAM). Therapeutic dance has been used as a complementary therapy to alleviate psychological symptoms in patients with cancer [17], victims of abuse [18], and patients with psychiatric disorders such as schizophrenia and depression [19]. Nursing professionals [20] have also begun to offer solutions involving dance as a viable option in the non-pharmacological and adjuvant treatment of clinical symptoms.

As an established healing art, dance offers an alternative method of improving health care outcomes, improving weight/BMI, blood pressure, blood sugar, cardiovascular disease risk, functional capacity, postoperative mobility, and recovery from substance dependency. Thus, dance holds great potential as a health-promoting activity behavior in Black women. It is an important mainstay of modern Black culture [21] Cultural and spiritual dance have been essential to many facets of modern Black life, including communication, cultural identity,

and expression of feelings. Much of modern Black culture is grounded in West African ideology and cultural dance is thought to encourage community solidarity, positive self-esteem, and cultural diversity while honoring indigenous cultural knowledge, thus providing a type of social/cultural healing of the “wounds of colonization [22].” The act of dancing, drumming, and singing is considered powerful spiritual medicine and the key to self-healing power.

We have evidence, too, that *African dance*, specifically, has potential for improving health-related outcomes. Health benefits of practicing *African dance* compared to Hatha yoga practice revealed *African dance* increased the participants’ positive affect scores and reduced their perceived stress scores on a level similar to that of yoga [23]. West *African dance* also has unique qualities that give emphasis to family/community, communication, esteem-building, and spirituality that make it desirable as a template upon which to integrate the beneficial properties of yoga.

For investigators who consider the foregoing information, we believe that they may be better able to overcome many of the barriers related to accrual of *difficult to enroll and/or to keep enrolled* study participants from a subset of the African American population. That is, attention to details of culture, lifestyle issues, and identifiable barriers that appropriately address the perceptions of sedentary older Black women who need to find ways to increase energy expenditure in their everyday activities can be a beginning point. We are taking into consideration our claim that *dance and yoga should be combined to bring about better mental and physical outcomes for older Black women in studies that we are planning*. Our goal with combining yoga and dance is to increase the sedentary older Black woman’s PA level to one that approximates the current PA recommendations [24] of 30 minutes a day for at least five days a week in the 60-74% target heart rate zone.

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