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Using Community Insight to Understand Physical Activity Adoption in Overweight and Obese African American and Hispanic Women: A Qualitative Study

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Abstract

Ecologic models suggest that multiple levels of influencing factors are important for determining physical activity participation and include individual, social, and environmental factors. The purpose of this qualitative study was to use an ecologic framework to gain a deeper understanding of the underlying behavioral mechanisms that influence physical activity adoption among ethnic minority women. Eighteen African American and Hispanic women completed a 1-hour in-depth interview. Verbatim interview transcripts were analyzed for emergent themes using a constant comparison approach. Women were middle-aged (age $M = 43.9 \pm 7.3$ years), obese (body mass index $M = 35.0 \pm 8.9$ kg/m²), and of high socioeconomic status (88.9% completed some college or more, 41.2% reported income $> \$82,600/\text{year}$). Participants discussed individual factors, including the need for confidence, motivation and time, and emphasized the importance of environmental factors, including their physical neighborhood environments and safety of and accessibility to physical activity resources. Women talked about caretaking for others and social support and how these influenced physical activity behavior. The findings from this study highlight the multilevel, interactive complexities that influence physical activity, emphasizing the need for a more sophisticated, ecologic approach for increasing physical activity adoption and maintenance among ethnic minority women. Community insight gleaned from this study may be used to better

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understand determinants of physical activity and develop multilevel solutions and programs guided by an ecologic framework to increase physical activity in ethnic minority women.

Keywords

community; exercise; incentive; minority health; participatory research; social environment

Physical inactivity is an ongoing challenge in the United States, particularly among women and minorities (Ward, Schiller, & Freeman, 2014), and is related to four of the leading causes of death, including heart disease, stroke, diabetes, and cancer (Centers for Disease Control and Prevention, 2008). Although self-reported measures suggest that nearly half of the adult population fail to meet aerobic leisure-time physical activity recommendations of at least 150 minutes of moderate-intensity aerobic activity each week (Ward et al., 2014), objective measurement via accelerometry reveals that only 5% meet recommendations (Troiano, 2007). Adult women are less physically active than men, and African American and Hispanic men and women are less physically active than Caucasians (Ward et al., 2014), putting ethnic minorities at greater risk for numerous chronic health conditions related to physical inactivity.

Despite strategies to increase physical activity, individually focused programs fail to achieve substantial, sustained improvements (Sallis, Kraft, & Linton, 2002). This may be because individually focused programs target unsupported mediators of physical activity, such as knowledge or attitudes, and do not acknowledge that there are many levels of influence across a wide range of behavioral, social, and environmental factors that may also influence physical activity (Bauman et al., 2012). Individually focused interventions also fail to account for the dynamic linkages among these levels of influence. Recent behavioral intervention research has moved beyond individual factors toward multilevel approaches (Fleury & Lee, 2006; Huberty et al., 2008). The ecologic model of physical activity (EMPA; Figure 1) accounts for intrapersonal factors, dynamic interpersonal relationships, and the physical environment and, how they influence physical activity independently and in combination with other factors (Spence & Lee, 2003). According to the EMPA, the environment plays a larger role in determining physical activity through dynamic and interacting multiple levels of influence, including the micro-, meso-, exo-, and macro-environments (Spence & Lee, 2003). Previous studies within the micro-environment have shown that people who live in close proximity to physical activity resources are more likely to use them and do physical activity than people who do not have resources nearby (Cohen et al., 2007; Lackey & Kaczynski, 2009). Together, meso- and exo-environments make up the social environment and include the dynamic social and physical linkages among people and places, which has also been shown to be important for physical activity in women and youth (Carroll-Scott et al., 2013; Wen & Zhang, 2009). Last, the macro-environment includes factors that influence behavior at a population level, such as policies implemented to improve features of the built environment (e.g., sidewalks or bicycle lanes, sidewalk improvements, landscaping) to increase physical activity (Gustat et al., 2013).

Although several studies have examined correlates from different levels of the EMPA, the associations explored have been solely informed by previous research and theory and rarely include community perceptions. Participatory and qualitative research strategies allow researchers to gain a community perspective of health problems, which may be the key to truly understanding behavior among groups at risk of physical inactivity, including ethnic minority women. Qualitative research may provide key insights regarding sociocultural factors associated with physical activity and barriers and facilitators to doing it (Farag et al., 2010; Jurkowski, Mosquera, & Ramos, 2010), which epidemiologic studies may miss because of response bias or measurement errors (Stack & Murthy, 2008). Qualitative findings may be used to improve intervention design in high-risk groups and improve physical activity adoption and maintenance (Pate et al., 1995).

The purpose of this study was to gain community insight into individual, social, and environmental factors that influence physical activity adoption and maintenance in African American and Hispanic women using the ecological model as a guiding framework, which accounts for interactions among individuals and their social and physical environments. Qualitative methods were used in an effort to go beyond what research and theory alone tell us, with the goal of developing a community-informed conceptual model. This model could inform the development of multilevel interventions which may offer greater success and lead to increased physical activity and improved health among overweight and obese African American and Hispanic women.

Method

Design and Setting

Health Is Power (HIP) was a randomized controlled trial to improve health behaviors in African American and Hispanic women in Houston and Austin, Texas, two large, urban metropolitan areas, and took place between June 2006 and July 2008. Women participated in a physical activity or dietary habits intervention group over 6 months. Details of the HIP project, assessments, and procedures have been described previously (Lee, Mama, et al., 2011; Lee, Medina, et al., 2011). All study procedures and materials were approved by the University of Houston's Committee for the Protection of Human Subjects, and participants provided written informed consent to participate.

Participants

Previous HIP participants were invited by phone or e-mail to participate in the current study. A purposive sampling strategy was used to recruit African American and Hispanic women in Houston who actively participated and completed all HIP assessments and were thus more likely to schedule and complete an in-depth interview. We initially contacted 32 women to participate in the study with the goal of completing 20 interviews or until theoretical saturation was reached (Marshall, 1996). Eighteen women (African American $n = 11$, Hispanic $n = 7$) enrolled in the current qualitative study and saturation was reached, meaning no new themes emerged from the interviews.

Data Collection

Women completed a 60-minute in-depth interview between November 2012 and February 2013. In-depth interviews were conducted to assess participants' perceptions of individual, social, and environmental factors that might influence their physical activity or the physical activity of women like them. The final semistructured interview guide included 10 open-ended, nonleading questions about factors related to physical activity, such as "Tell me about your day-to-day activities as an African American or Hispanic or Latina woman," "Tell me in your own words what you think makes you want to be or not want to be physically active," "How do your relationships with friends, coworkers or family members or your social network affect your physical activity habits," and "How does your neighborhood environment or the physical environment around you affect your physical activity?" Interviews were conducted by a trained and experienced researcher in qualitative research methods. All interviews were audiotaped and transcribed. On completion of the interview, participants completed a brief survey including demographic information and were asked if they had been physically active since HIP (yes/no). Participants were compensated with a \$50 gift card for their time and effort.

Qualitative Analysis

Interview recordings were transcribed by a professional medical and research coding company and compared with recordings for accuracy. Transcribed data were managed using ATLAS.ti Version 6.2 and analyzed for emergent themes by a single coder using a constant comparison approach (Bernard & Ryan, 2010) guided by the EMPA. This approach not only allows for the development of explanations through patterns but also allows the coder to use theory and prior knowledge or research to answer a research question (Bernard & Ryan, 2010). As each transcript was read, repeated ideas and important quotes were identified and organized into groups of related concepts and a list of themes emerged. During a second reading of interview transcripts, each interview was compared and contrasted with the initial codebook, an organized list of codes and memos (Bernard & Ryan, 2010), and themes were confirmed, modified, or rejected. One final read found all categories saturated and identified no additional themes.

Results

Table 1 compares participant characteristics for the qualitative study with the total HIP sample. There were no significant differences between samples except for physical activity. Although women in the qualitative study did less physical activity at baseline compared with women in the total HIP sample, most women (77.8%) reported being physically active since the HIP project at their in-depth interview. Of those who reported being active, 64.3% were African American and 35.7% were Hispanic. The four themes and quotes presented below represent individual, social, and environmental factors associated with physical activity most often cited by participants.

Theme 1: Intrapersonal Factors

Women talked about their lack of motivation for doing physical activity and struggled with the idea of not making the time for it despite all the evidence indicating it is important for health. One 48-year-old African American woman compared it to smoking:

I really, really, really do want to be. I just lack motivation, so when I think about sometimes you meet someone and they say, “Well, I know I need to stop smoking, I got cancer but I need to stop smoking”—I understand now, so I empathize with them because it’s not that you don’t care—it’s just something that you’re not changing. (African American, 48 years old)

An African American woman who also acknowledged the importance of physical activity framed her lack of motivation in terms of “will power” and went on to describe it this way:

... There is some type of apprehension in the back of my mind, and I’m trying to figure out why, but I really need to say, “Go ahead, start doing it.” I guess I feel that if I start, I’m going to have to continue. It’s going to change my routine. [And that] Moves me out of my comfort zone. (African American, 50 years old)

In general, most women cited a lack of time for doing physical activity and lacked motivation and confidence if or when time became available. The few women who were physically active emphasized the importance of making physical activity a priority and scheduling it purposefully into their day versus waiting for time to become available.

Theme 2: Interpersonal Relationships

Women talked about how intrinsic motivation and social support together influence physical activity. One African American woman, 38 years old, described support as a twoway street:

I think I’m a good influence ... I’m kind of a self-motivated person, but a lot of people want me to motivate them, so I have to call them. “Let’s go out and walk.” Nobody calls me. I’m the one. So maybe if I get somebody to tell me that also I’d go out more often.

When asked about how their family, friends and coworkers affected their physical activity, participants described the types of support they receive and gave examples of how their interpersonal relationships helped and hindered their physical activity habits. The majority of women discussed the importance of social support for physical activity:

... If you have someone that’s going to encourage you, say, “Come on, let’s go, let’s go do this,” or “Come on, it’s only going to take 10 minutes,” or something like that, then you go, “Okay, I’ll do it.” (African American, 56 years old)

... When I go home, I go and walk with my mom and dad, and we’ll walk for an hour no problem ... Whether it’s family or friends, it just doesn’t much matter to me. It’s just doing it with somebody else. (Hispanic, 45 years old)

Women also described how their social environment is related to their neighborhood environment. Supportive features cited included seeing people in their neighborhoods being active and having neighbors to do physical activity with:

We have people in my neighborhood that you can be leaving out at five in the morning, and they're walking. You can come in at six in the afternoon and there's another group walking... We have a monthly HOA [homeowners association] meeting— and sometimes in those meetings people just go, “Hey, I saw you walking. Can I join your group?” ... Generally when people are thinking in a positive manner and see other people achieving results, guess what? They go for it. (African American, 55 years old)

Women also discussed how members of their social networks hindered their ability to do physical activity. One Hispanic woman described how her husband and coworkers make it difficult for her to exercise:

My husband complicates it a little bit because at this point he's not working regular. And if he were working regular he'd go to work, and he'd come home, and then we'd be able to do something together... At work ... people look to me and say, “Come on, what are you going to do today?” Why does it have to be me who starts it? ... I just feel like there's too much pressure to get everybody going. I am not going to do that. (Hispanic, 54 years old)

Nearly all women discussed the role family support played in their decision to be physically active. One 30-year-old Hispanic woman said, “My family really isn't ... into a lot of physical activity. I guess that's why I'm also not too motivated at home ... to do physical activity.” Another Hispanic woman offers a reason why:

I really do believe that for me, and for a lot of people who are Hispanic and Black, it's education. The parents and the grandparents not teaching us as a young child... They were either cleaning, cooking, or working. And [physical activity] that wasn't the priority... Hopefully, we can change our children. I do talk to my children about exercising and being healthy for themselves and for the future... Health-wise [it] is the most important thing. To live a longer, healthier life. (Hispanic, 49 years old)

Most women discussed the importance and benefits of receiving social support, but some expressed that the social environment around them stops them from being physically active. Although both African American and Hispanic women talked about the positives and negatives of social support, Hispanic women strongly emphasized the role family plays in physical activity and that support from family can either drive or deter behavior.

Theme 3: Accessibility and Safety

Women who did not have access to a nearby physical activity resource at work or home described this as a barrier to doing physical activity. One 45-year-old African American woman states, “ ... If I could just walk outside, I think that'd be more easier ... Ain't got to worry about having enough gas to drive.” Alternatively, a Hispanic woman, 54 years old, talks about joining a gym as an alternative but said, “It's just everything's too far away from where we live. It's a hassle, and the gas is going up ... You start it, and then it fizzles out because of the distance.”

Most women commented on the safety of their neighborhood for physical activity. When asked to describe their neighborhood, several women used the word “quiet.” When asked what the word quiet means, one 53-year-old Hispanic woman said, “Quiet means that you see the regular people. ... You don’t see anybody different... . You don’t hear any arguing or anything like that. Everything is always the same.” Another African American woman, 48 years old, said “I don’t ever really hear about any crime in there—I’m not really sure if it does happen, but if so, we’re not on the news.” Others used the word “quiet” to indicate that their neighborhood was small, comfortable, safe, or had low traffic volume.

Perceived safety and criminal activity were the most commonly reported reasons why women found their neighborhoods unsupportive for physical activity. When asked how her neighborhood was unsupportive for physical activity, one Hispanic woman, 45 years old, described it this way:

... Where I live I have 2 parks, but I wouldn’t feel safe walking to either park ... Where I live, you do see people walking around but they’re not people I want to walk with ... I just wouldn’t do it. I’m not comfortable doing that. And I don’t want to have to get in my car and drive somewhere just to walk around and then constantly have to be looking over my shoulder to see if there’s someone coming up behind me. (Hispanic, 45 years old)

Although asked what makes the physical environment around them supportive and unsupportive for physical activity, women mostly talked about the negative features of their neighborhood environment and how those features contributed to physical inactivity. Women talked about supportive features in a descriptive way but rarely commented on how these features promoted physical activity.

Theme 4: Caretaking for Others

Both African American and Hispanic women talked about their responsibilities as parents and women and how they prevented them from being physically active or caring for themselves. More women mentioned not making physical activity a priority than those who did. One Hispanic woman, 49 years old, said, “I’m constantly doing stuff for other people... . It’s not for me ... I’m waiting to get an [hair] appointment right now. But it’s just things like that, that get put off ... ” Women who mentioned being mothers talked about how their day was consumed by their children’s activities, preventing them from taking the time to do things they enjoy, such as exercise:

... In general for me, time is an issue for everything, with my house, with myself, with exercising. Driving my 2 kids... . I have a mother who doesn’t drive, so I have to make sure I go see her once or twice a week, take her to the store. I have a friend whose mother passed away recently from Lou Gehrig’s, who I’m trying to see once a week ... to get her active and out. It’s just things like that, that cause me not to make the time for myself. (Hispanic, 49 years old)

If I start [doing physical activity], I’m going to probably like it and I’m going to have to continue... . As a mom, I think of this falls in the category of everything else before us, and that’s part of my biggest detraction from exercise. You know,

the “I need to go do this. I have to do that, so I can’t do this now.” Instead of putting me first. (African American, 50 years old)

When asked about other barriers related to time or scheduling, one 51-year-old African American woman said “Now, that’s the problem. I do too much ... for other people.” Although one Hispanic woman, 54 years old, cited the same barrier to being physically active, she also provided a solution:

... What works for me is walking. That’s the only thing that really works. It makes my daughter, who also is headed toward weight problems-it gives her something completely different. She’s trying to do half marathons now. So, we’re both-we see ourselves working into way more activity, even at this age. Even my husband’s getting into it... . So, it’s really become a family affair kind of thing... . Because that’s the only way I think we’re going to keep it going. (Hispanic, 54 years old)

Overall, African American and Hispanic women seemed to share the sentiment that their families and sometimes friends come first and that they come second. Women would often mention feeling guilty for making time for them and seemed to consider physical activity a luxury or guilty pleasure versus a necessity despite being aware of the health benefits.

Discussion

The purpose of this study was to gain community insight into the individual, social, and environmental factors that contribute to physical activity adoption in African American and Hispanic women through qualitative research methods using the ecological model as a guiding framework. Regardless of activity level, women discussed intrapersonal factors related to physical activity and the need for motivation, confidence, and time. The idea of lacking motivation and time to be physically active among African American and Hispanic women has been previously reported in the literature (Booth, Lowis, Dean, Hunter, & McKinley, 2013; Withall, Jago, & Fox, 2011). A similar qualitative study among Brazilian, Latin American, and Haitian women in the United States found that women felt a lack of control over their time, which contributed to their unhealthy behaviors (Tovar et al., 2013).

Both African American and Hispanic women talked about their interpersonal relationships and how they positively and negatively affect their behavior. Nearly all women mentioned social support as important for physical activity and cited several sources of support (i.e., spouses, friends, family, and neighbors) consistent with previous findings (Eyler et al., 2002). However, Hispanic women placed greater emphasis on the importance of family support from their spouse or children. This is consistent with previous work, which suggests that social support may create social interaction opportunities and social reinforcement for physical activity (Carson et al., 2013; Treiber et al., 1991) and that “familismo,” meaning the family is at the center of daily activities, is an important characteristic of Hispanic culture (Ziebarth et al., 2012).

In the environment, women described how their neighborhoods were supportive or unsupportive for physical activity and commented on the relationships among street-scale elements, access to physical activity resources, and neighborhood safety and physical activity. Women who described their neighborhood as “quiet” and safe were more likely to

say they did physical activity than women who were apprehensive about the safety of their neighborhood or being outdoors. Although the relationship between seeing people being active and being less sedentary is well documented (Dunton & Robertson, 2008), the relationship between physical activity and neighborhood cohesion or support from neighbors is less understood. In a recent study, Beenackers, Kamphuis, Mackenbach, Burdorf, and van Lenthe (2013) found that those with a larger social network in the neighborhood were more likely to do physical activity. Other studies have established the relationship between social cohesion and perceived safety (De Jesus, Puleo, Shelton, & Emmons, 2010), further supporting an indirect relationship between neighborhood cohesion and physical activity and underscoring the importance of exploring the interactions among factors in this vulnerable population.

Although most of the factors identified by women fit within one level of the EMPA or another, caretaking for others was described as something that encompassed and influenced behavior across all levels and connected individual, social, and environmental factors. Women described caretaking as a dynamic social and physical linkage among people and places that affected their physical activity. Although women were largely aware of the benefits of physical activity, caring for others led to a lack of time to care for themselves, which contributed to inactivity. Both African American and Hispanic women talked about the importance of caring for others, the demand on their time, and how it helped or disrupted their physical activity. Previous studies have found that physical activity in both African American and Hispanic women is curtailed because of family responsibilities, such as cooking for the family and caring for children (Greaney, Lees, Lynch, Sebelia, & Greene, 2012; Russell, Maraj, Wilson, Shedd-Steele, & Champion, 2008).

Strengths and Limitations

This study was conducted to explore individual, social, and environmental factors and how they directly and indirectly influence physical activity among ethnic minority women. Community perspectives gleaned from the current study contribute to the growing literature on perceived facilitators and barriers for physical activity in African American and Hispanic women. However, this study is not without limitations. Participants in this study were volunteers from a larger randomized controlled trial. Thus, results represent individuals who were interested and motivated to participate in a health intervention and this qualitative study, which took place 5 years after the completion of HIP. Women also had high socioeconomic status and were middle-aged and overweight or obese, further limiting generalizability of findings to all African American and Hispanic women. Contacting previous Hispanic HIP participants was an ongoing challenge, presenting another limitation. Therefore, findings may be biased and may not be inclusive of all HIP participants. Last, the use of a single coder because of time and cost constraints was a significant limitation in the current study. However, this likely did not affect reliability of findings because this study included only 18 transcripts and used an issue-focused analysis, which requires a fewer number of coders (Weiss, 1994). In addition, the single coder was highly trained and experienced in conducting and analyzing qualitative research and completed the interviews. This gave the single coder additional insight into the nuances of the responses and helped with the understanding of the context and meanings, which facilitated coding and analyses.

The single coder was able to discuss themes with coauthors to further improve reliability (Bernard & Ryan, 2010).

Implications for Practice

Findings from this study support the use of ecologic models to explore the direct effect of individual, social, and environmental factors on physical activity and the dynamic indirect influences through one or more levels of the model. Although previous research has explored how caretaking for others influences behavior, this study highlighted how caretaking for others interacts with other individual, social, and environmental factors to link people and places and influence physical activity in African American and Hispanic women. However, additional research is needed to fully understand the mechanisms through which caretaking for others influences behavior. Similar to previous studies, lack of motivation was the most commonly cited barrier to physical activity (Mansfield, Ducharme, & Koski, 2012). However, all of the solutions described focused on factors external to the individual, such as support and encouragement from family and friends or a supportive neighborhood environment. This suggests that external social and environmental factors may help women to be more physically active by alleviating individual burden and responsibility and providing motivation (Chang, Nitzke, Guilford, Adair, & Hazard, 2008). Health practitioners should use this information when encouraging patients to become physically active and providing recommendations and resources to increase physical activity. Programs which incorporate social support from family members, particularly spouses, and use the built environment within one's neighborhood through a multilevel approach may be most effective for addressing barriers at the individual level in African American and Hispanic women and increasing and maintaining physical activity in these specific groups of adult women.

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Figure 1.
Adapted ecologic model of physical activity.
Source. Adapted from Lee, Medina, et al. (2011).

Table 1

Participant Characteristics at Baseline in the Total HIP Sample and Qualitative Subsample.

Participant characteristic	<u>HIP sample (N = 410)</u>	<u>Qualitative subsample (N = 18)</u>
	<i>M (SD)</i>	<i>M (SD)</i>
Age (years)	45.2 (9.4)	43.9 (7.3)
Body mass index (kg/m ²)	34.7 (8.5)	35.0 (8.9)
Percentage body fat	42.8 (7.1)	41.8 (8.5)
Systolic blood pressure (mmHg)	125.0 (13.8)	122.1 (12.5)
Diastolic blood pressure (mmHg)	78.7 (9.6)	77.7 (11.1)
Resting heart rate (beats/minute)	73.6 (8.8)	74.4 (6.7)
Moderate-to-vigorous physical activity (minutes/day) ^a	18.8 (19.4)	7.7 (8.6)
	Percentage (<i>n</i>)	Percentage (<i>n</i>)
Some college or college graduate	88.7 (346)	88.9 (16)
Greater than 400% of the federal poverty level ^b	49.3 (182)	41.2 (7)

Note. HIP = Health Is Power trial.

^aIndicates significant difference between groups ($p < .05$).

^bIncome presented as percentage of federal poverty level for a family of four in 2007, which was \$20,650.